I.K GUJRAL PUNJAB TECHNICAL UNIVERSITY
ਆਈ.ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ
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SYSTEM REQUIREMENT SPECIFICATION

OF

IKGPTU – 2016 WEB COUNSELLING

for

Admission to Engineering Degree Courses in the Colleges under Inder Kumar Gujral Punjab Technical University, Jalandhar, Maharaja Ranjit Singh Punjab Technical University, Bathinda and Punjab Agricultural University, Ludhiana

Submitted to

Technical Committee

Inder Kumar Gujral Punjab Technical University (IKGPTU)

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Submitted by

Education Informatics Division

National Informatics Centre

Ministry of Communication & Information Technology

Government of India

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New Delhi– 110003

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Amendment Log

Sr No	Version	Date of Release	Changes	Remarks/Change description
1	3.0	18/04/2016	Ist edition	•
2	3.1	07/05/2016	Appendix	• List of Colleges have been removed and it will be followed by Government notification
3	3.2	01/06/2016	University / Institution mapping	• Mapping of Colleges have been incorporated as per changes.
4	3.3	02/06/2016	10+2 Counselling	• Inclusion of Procedure for students participating under 10+2 inter se merit.

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1. Introduction

The Inder Kumar Gujral Punjab Technical University(IKGPTU) was established in the year 1997 under The Punjab Technical University Act, 1996 (Punjab Act No. 1 of 1997) to provide for the establishment and incorporation of a University for the advancement of technical education and development thereof in the State of Punjab and for matters connected therewith. In pursuance of this Act, the University started its journey with 09 engineering colleges and few management colleges affiliated to it. Since then the University has come in a long way and during the Academic Session 2015-16, the University has affiliated 65 Engg. Colleges, 109 management and Computer Application courses, 33 institutions imparting Pharmacy education, 08 colleges imparting hotel management education, 06 colleges providing Architecture Education, 11 Regional Centres for M.Tech and Ph.D. in different branches of Engineering and Management and 01 Regional Centre for M. Pharmacy. The IKGPTU is responsible for producing quality technical manpower in the field of Engineering and Technology through AICTE approved Govt. / Govt. Aided / Self-financed Institutions and University Departments. The norms and standards prescribed by AICTE are being followed.

For admission to various technical courses namely B.Tech / Degree Pharmacy, the state government used to conduct entrance tests viz. CET. As result of entrance tests, manual computerized counselling were conducted by different institutions/nominated agencies for completion of the admission process for various courses, which was very cumbersome & tiresome process.

Keeping in view the generic problems faced by the candidates, their parents and by the state administration, it was decided to give up the manual counselling system and adoption of modern web based online off campus counselling system to bring in transparency & efficiency for making merit based admissions.

The National Informatics Centre (NIC), the premier Science & Technology organization of Government of India under Union Ministry of Information Communication & Technology is entrusted to accomplish the task of Software development, testing & implementation of Web based e-Counselling for admissions to B.Tech, B.Arch and B.Pharmacy Degree courses being run in all type of institutions in the State.

1.1 Purpose

This document outlines the Software requirements Specification (SRS) for the project of web based e-Counselling and requirement for finalization and approval of:

- The functional areas of counselling
- The online seat allotment procedure
- The Seat matrices as per the reservation policy /distribution of seats
- Conversion/merging of reserved seats
- INPUT/OUTPUT layouts & Data Requirements
- Required Hardware software interfaces
- Infrastructure and resource requirement at PI & CCR.

- Process and Procedure for counselling

For development of software package for **e-Counselling** of IKGPTU, Punjab, SRS has been prepared to facilitate the team of software developer and to apprise the user regarding all aspects of Web based counselling.

Once approved, the SRS document will be referred as a base document for design and software development by IKGPTU and NIC software development team. SRS is the outcome of the feasibility and analytical study of the counselling system.

1.2 Scope

The main scope of the SRS is to identify the processes and procedures that will meet the specified requirements and also available from the technical, economical, logistical and operational point of view. It is also required to establish whether the project will be implemented successfully not only to meet meaningful rationale but also in aspects to withstand legal, economical and technical viability as well. This SRS will enhance the likelihood of success, reduces project risks and minimizes shortcomings due to shortsightedness caused by the lack of research, in-depth study and analysis of various aspects of the project.

The scope of the proposed web based counselling shall be applicable to all the courses offered by following institutions as listed below.

i. Inder Kumar Gujral Punjab Technical University's affiliated Engineering / Institutions for Engineering & Technology.

ii. Maharaja Ranjit Singh Punjab Technical University affiliated Engineering / Institutions for Engineering & Technology

iii. Punjab Agricultural University, College of Agricultural Engineering, Ludhiana for Engineering Courses

Engineering Four Years Degree Courses:

Course Code	Course Name	Short Name
1	APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING	AEIE
2	AUTOMOBILE ENGINEERING	AE
3	BIO MEDICAL ENGINEERING	BME
4	BIO TECHNOLOGY	BT
5	CHEMICAL ENGINEERING	CHE
6	CIVIL ENGINEERING	CIVIL
7	COMPUTER ENGINEERING	CE
8	COMPUTER SCIENCE & ENGINEERING	CSE
9	ELECTRICAL ENGINEERING	EE

10	ELECTRICAL AND ELECTRONICS ENGINEERING	EEE
11	ELECTRONICS & COMMUNICATION ENGINEERING	ECE
12	ELECTRONICS AND ELECTRICAL COMMUNICATION ENGINEERING	EECE
13	ELECTRONICS AND INSTRUMENTATION ENGINEERING	EIE
14	FOOD TECHNOLOGY	FT
15	INDUSTRIAL ENGINEERING	IE
16	INFORMATION TECHNOLOGY	IT
17	INSTRUMENTATION AND CONTROL ENGINEERING	ICE
18	MECHANICAL ENGINEERING	ME
19	PRODUCTION ENGINEERING	PE
20	TEXTILE CHEMISTRY	TXC
21	TEXTILE ENGINEERING	TXE
22	AGRICULTURAL ENGINEERING	AGR

Note: NIC shall provide the complete database of all the candidates, applied and registered on line to IKGPTU. IKGPTU will process the data as per admission rules and criteria and prepare the merit list of all eligible candidates along with reserved category candidates. IKGPTU will provide the same database to NIC after inserting merit rank of eligible candidates**.**

1.3 Objectives

This year, 7th time in a row, Web based counselling for admissions to all B.Tech, B. Arch AND B.Pharma courses in all technical institutes under participating universities is being conducted in the State after constitution of IKGPTU with following main objectives;

- To bring in 100% transparency in seats allotment and admissions.
- To build strong public interface to minimize travel burdens on counselees & their parents for counselling.
- Providing enough time to counselees for submission, change, delete, re-ordering of multiple choices from anywhere any time.
- Availability of required information, queries, reports at different levels.
- Centralized database and centralized monitoring.
- Less Paper counselling and Increase in number of registrations and allotments
- Secured and controlled data access at every level.

- Provide fair chance of allotment to eligible candidates following the merit list in case seat are vacated by other candidates on the top of merit. Otherwise, in physical counselling it is allotted in the subsequent allotments, the meritorious candidate will be denied of his choice and the seat will be allotted to a candidate, who is lower in the merit.

1.4 Key words Definitions

Web based e-Counselling	Online Form Filling & Submission of Choices from any Internet point
Provisional Admissions at PI.	Verification of documents, fees and acknowledging provisional admission
Participating Institute (PI)	An Institute participating in counselling.
Help Center	An Institute providing help to the candidate for training, registration, choice selection, saving etc.
Course/stream	Stream like Engineering
Branch	Discipline under which candidate would be offered a seat
Counselees	Candidates Qualified for Counselling
Seat Allotment	Seat allotted on the basis of merit Number (Rank) provided by the IKGPTU
Bank	A bank designated by IKGPTU for collection of counselling fee
Registration fee	As per Appendix V
Open Category	Seat available for all
Reserved categories	SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others
Seat matrix	A table showing the available seats and their bifurcation among different categories as per the reservation policy of the state. The seat matrices are institute, course/ branch and categories wise
MERIT NUMBER(RANK)	Unique Position of the counselees as defined and provided by IKGPTU
Intake	Sanctioned Intake as per AICTE (seats in a discipline)

1.5 Abbreviations & Acronyms

AICTE	All India Council of Technical Education
JEEMAIN	All India Engineering Entrance Examination
BA	Backward Area
BC	Backward Class of Punjab
BR	Border Area
CC	Counselling Centre
CCR	Central Control Room of IKGPTU
DF	Children/Widows of Defense Personnel
DP-Others	Disabled Persons others
DP-Deaf	Disabled Persons deaf
DP-Blind	Disabled Persons blind
FF	Children /Grand Children of Freedom Fighter
GEN	General
NIC	National Informatics Centre
PI	Participating Institutes
PM	Children/Widows of Para military forces
IKGPTU	Punjab Technical University
RT	Terrorists Affected/Riots Affected
SP	Sports Persons
SC/ST	Scheduled Caste & Schedule Tribes
SRS	System Requirement Specifications
TS	Tsunami effected persons.
MRSPTU	Maharaja Ranjit Singh State Technical University
PAU	Punjab Agriculture University
WD	Widows/ Divorced Women

1.6 References

Following documents have been referred during preparation of SRS;

- Specifications/Requirements document by the Core Committee constituted by IKGPTU
- Seat Matrices provided by IKGPTU
- Feedback from various Meetings held with IKGPTU and concerned officers.
- IKGPTU Prospectus 2016 and Notifications for different courses

2. Functional Areas / System Requirements

2.1 functional activities

a) The SRS has been prepared for development, testing, implementation and certification of counselling software.

b) **Core Committee has been constituted by IKGPTU** for helping in finalization of Process and Procedures of Counselling and for the approval of regulatory requirements and software specifications (SRS) etc.-placed on **appendix-I (appendix-I contains name of the Core Committee and Technical Committee members)**

c) Roles and responsibilities for NIC & IKGPTU are described in **Appendix-II**

d) Counselling **process and methodology to be** approved by the IKGPTU

e) Circulation of counselling Procedure, Process & Instructions to PIs along with requirement of hardware, software, connectivity, infrastructure and manpower for conducting of training, submission of choices by candidates and making their admissions as per the allotments of seats.

f) Infrastructure in terms of hardware, software & connectivity for PI /Help Centers and IKGPTU.

g) Finalization of information brochures for placing on websites and due publicity

h) Finalization of counselling schedule-placed at **appendix-IV**

i) Finalization of **seat matrices,** institution & branch wise as per the state reservation policy.

j) IKGPTU will provide fees data well in advance for uploading on web. The data will include Roll no, Name of the candidate, Date of Birth, Application Form No., JEEMAIN rank, Name of Bank, Date of deposit of fee & Fee Amount etc with in minimum possible time enabling the candidates to register on the counselling website for exercising of choice. Filling up of the fee related data in the prescribed format should be the responsibility of the candidate. The designated bank branches need to be listed in all documents to be read by Candidates, PIs, IKGPTU and NIC.

k) **Development & testing of counselling** software package by NIC and approval by IKGPTU. Seat allotment algorithm also will be certified by IKGPTU and complete user acceptance test will be done by IKGPTU.

l) Awareness training for core committee PIs & Help Centers members on counselling software.

m) Training to the identified officials of selected PIs/Help Centers on identified locations in the presence of core-committee members to operate the counselling software for successful counselling and further to train the remaining officials of Help Centers and candidates for choice making and saving.

n) Candidates shall be given time as per the counselling schedule decided by IKGPTU to exercise their choices during counselling's as per the counselling schedule decided by IKGPTU

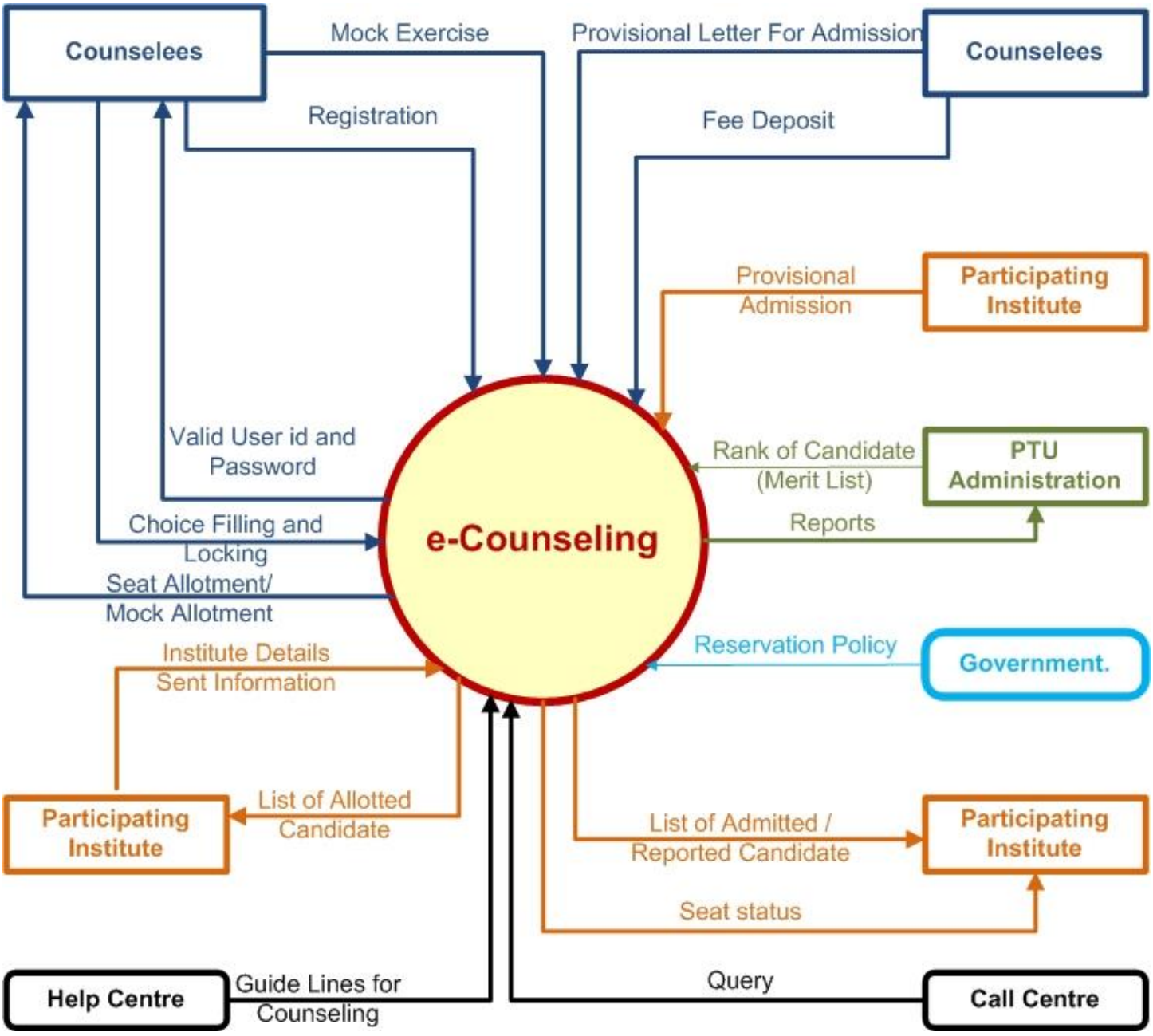
o) Allotment of seats shall be done as per the seat allotment procedure and seat matrices provided by the IKGPTU. The results shall be published on the counselling website after choice saving period of each round of counselling.

p) *Concerning PIs shall provisionally admit the candidates after verification of credentials and documents. If any candidate does not report to PI for provisional admission with in stipulated period as per the counselling schedule, her/his seat allotment will be treated as cancelled.*

q) Concerning PI will update admission status on the website and IKGPTU shall declare unfilled/leftover seats-instructions.

r) Withdrawal of Seats will be taken care of by IKGPTU Administrator through Admin module.

2.2 Context Diagram



2.3 User Interface

2.3.1 Candidates Interface

While operating the counselling website by the candidates for online form registration, choice filling & saving etc, On-line help is provided which explains about every function of the software i.e. How candidates should exercise their choices. Designated Trained officials identified by IKGPTU shall be available at Participating Institutes to help the candidates during counselling.

Candidates can also exercise their choices from cyber cafes and other nearby Internet gateways.

Following software interface shall be available for candidates during "web based e-counselling"

- **New Candidate Registration**: – New candidates will register through the registration form and get the userid and password. All the candidates will have to register on the website provided they have deposited requisite counselling Fee in the designated bank. The system will ask for details like roll no, rank, date of birth etc for cross-verification. It will ask for other details like category, sub-category, Priority etc. It will then ask the candidate to create the password. Candidates will be directed to read the reservation policies of participating universities and Government notifications and give their acceptance. The successful completion of above will complete the registration process.
- If there is any change from the already available information, candidate has to report to the IKGPTU with necessary documentary proofs and IKGPTU Administrator will modify/ update the data.
- Registered candidate can view his data from view profile. If the necessary change does not reflect in view profile, he/she has to contact CCR.
- **Registered Candidate Sign In / Login**
- Change Password
- Registration details
- Choices Available
- Standard Template for Choice with User Defined Scroll up/down on Template without change Original Template after Copied into Choice Fill
  - Branch wise
  - College wise
- Choices Edit – Interchange(Swap)
- Choices Edit – Rearrange(Move)
- Choices Delete
- Save choices
- Choices Print (report format)
- Result
- Withdrawal of Seat
- **Generation and printing of Allotment letter**
- Log out

2.3.2 PI Interface

- Candidates Reported at PIs
- Online candidate information Display (for verification)
- Online Fee verification
- Provisional Admission
- Document verification with generation of document verification checklist and signed by candidate and PI.
- Printing of Admission Letter.
- Updation of admission status on the counselling website.

2.3.3 Administrator Interface

- List of Institutes, Institute Profile & Institute Course Summary
- Seat Matrix Entry , Seat Matrix Summary and different views
- Candidate Details (Registered Candidate) and Edit Registration
- Message Entry, Counselling Schedule
- Candidate Original Information (Unregistered Candidate)
- Admission Status (Course Wise Details, Name Wise Allotment, Admitted Candidate List, Candidate Who Got Refund, Admission Withdrawal and Vacancy Position)

2.4 System External interface

2.4.1 Data requirement from IKGPTU and Bank

- System will have seamless interface with candidate's data obtained by IKGPTU and Bank as under.

    a. Candidate Record (detailed data)

    b. Valid Merit Number (Rank) Database

    c. Payment Details from the Bank.

Note: Databases obtained by IKGPTU will be hosted on counselling website for registration and counselling process

2.4.2 Data requirement from IKGPTU

[a] Information Brochure for all courses and **Institutes Profiles** will be supplied by IKGPTU to NIC for uploading it to the above-mentioned counselling websites along with the counselling procedure & seat matrices.

[b] IKGPTU will provide following information as well as database to NIC:

- **Participating Institutes** Information, categorization with Govt. / University/ self-finance/Pvt. Institutes, Engineering /Pharmacy wise.
- **Course/Branches wise list** containing branches/disciplines finance/self finance wise.
- **Unique Merit Number (Rank) and detailed data** of candidates appeared in All India Engineering Entrance Examination.
- **Seat Matrix** – for every technical institute having category wise breakup of seats as applicable (SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others)
- **Eligibility criteria's** & **Reserve Categories master**

2.5 Overview of the proposed project

The proposed system of counselling is web based and shall be applicable for admissions to all AICTE approved technical professional courses run by different technical institutes in the state (Govt./Aided/University Departments/self-financed/Private Institutes) to overcome the problems faced by the candidates during manual system.

To meet the requirements of web based counselling, the website **http://ptuadmissions.nic.in** shall be launched. The website shall keep following required links for different activities of counselling.

1. Counselling Website (procedural) with URL: **http://ptuadmissions.nic.in** shall contain procedures and information for counselling w.r.t institutes, availability of seats in different disciplines and categories, profile of institutes, eligibility criteria and counselling procedure.
2. Counselling website with URL: **http://ptuadmissions.nic.in** for registration, exercising of choices and saving/saving the choices during actual counselling and for publishing of results of counselling etc **(**The link shall be activated during actual counselling days).
3. Actual Admission intranet website, URL: **http://intraptu.nic.in** , which shall be accessible through a prescribed User-ID and Password.

All above websites links shall perform following functions:

- After paying the counselling fees, students can register themselves on the website
- Information relating to Institutes, disciplines (Engineering), branches (e.g. Civil Engineering or Computer Science etc.) and categories (General, SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others) should be displayed through relevant menus.

- Secure user/password based Login and the system will provide the facility to add, change, re-order, delete the choices in respect of institutions and branches.
- Candidate can save their choices, when ever required using <Save Choices> button.
- Candidate can get print of their choices after Final saving, but list of choices and indicative seat matrix can be printed, when ever required.
- The system shall process the submitted choices and generate the indicative seat Matrix (latest positions of seat availability)
- Processing for Seat allotment & final seat allotment shall be published on Website.
- Candidates shall print their allotment letter and will report to the PIs for admission with in prescribed time period.
- Document Verification, generation of document verification checklist and updation of final admissions by Institutes will be done by PIs on the Website.
- The system shall provide required online query/Reports.
- After completion of admission period for counselling, the leftover/unfilled seats shall be transferred for consequent counselling.
- Online Withdrawal facility will be managed by IKGPTU Administration. Candidates, who are willing to withdraw from Counselling after taking admission in allotted college, will give the request to IKGPTU administration.
- Subsequent counselling's based on the vacant seats/leftover /unfilled / merged seats

2.6 Assumptions and dependencies

- All Counselling's based on IKGPTU merit list(JEEMAIN for B.Tech**, IKGPTU Rank for B.Arch and B.Pharma).
- Merit Numbers (Rank) for each candidate should be UNIQUE (i.e. no two candidates can have same Merit Number (Rank) in a stream).
- IKGPTU will finalize/provide and upload all required master data including seat matrices(of all the colleges/streams/branches, comprising of the distribution of the seats in absolute terms as per the state reservation policy), Institute profile etc well in advance before the start of the counselling.
- Eligible Candidates, who have paid counselling fees, will register online and obtain unique-ID based on roll number and password (as given by the candidate at the time of registering on the web) prior to exercising of choices.
- Seat allotment as per the seat matrices given by IKGPTU according to reservation policy of the state.
- IKGPTU shall reserve all right pertaining to any changes in any master data including candidate master. Changes in **Candidates' Master Database**, like **DOB, Gender,** etc. Permitted through web interface by authorized IKGPTU officials.
- A candidate shall be able to fill unlimited choices as decided by IKGPTU
- Saving of Choices by Candidates is a must for the seat allotment. Unsaved choices will be considered as deemed choice.
- Saving of Choices by Candidates is to be taken as the last choices submitted by the candidate. In case the candidate does not explicitly lock the choices, the choices submitted till last moment of the last cut-off time shall be taken as the final choices by that candidate.

- All the PIs should have the prescribed computer infrastructure, trained manpower and Internet connectivity through an Internet Service Provider (ISP) with specific IP addresses (obtained from the ISP by the PIs) for accessing secured databases for making admissions and updating of admission data on website.
- Updation from PIs will not be allowed.
- IKGPTU will provide all functional, regulatory and non-functional requirements for the project.
- Students data base shall be the property of IKGPTU

** After allotting seats in B.Tech on the basis of JEEMAIN in 2nd Round, remaining seats will be processed for B.Tech students on the basis of 10+2 Inter se Merit.

2.7 Nonfunctional requirements

2.7.1 Performance

During entire period of e-counselling the web server & database server shall remain accessible to the candidates, the PIs and to IKGPTU on 24x7 hours operational basis through the counselling website. To access the counselling website, performance shall also depend on the mode & capacity of Internet connectivity used by candidates, PIs and IKGPTU. For satisfactory performance the Internet connectivity should be as mentioned in the section 4 of this document.

2.7.2 Security

1. **Client Side security**: The PIs will be given role based unique user IDs and passwords for authorization and controlled access to the website of counselling. The PIs will be required to use Digital Signature Certificates for accessing the website.
2. **Database level security:** NICs web server and database server are well secured on SAN (Storage area networks).
3. **Network based security**
   a. **Auditing and Testing:** Before final launching of the site, it will be audited and tested for Vulnerabilities by the experts.
   b. Finally, provision has been kept for certification of the website from 3rd agency.

3. Software product functions.

Following are the functional areas with regards to the **"e-counselling"** for all technical courses in the state.

[a] Web based counselling & entry/saving of final choices
[b] Online Seat allotment and declaration of result on the net
[c] Administration of PIs & Admissions
[d] Seat Availability, vacant, filled status.
[e] Data Administration and overall control module for IKGPTU

[a] Web based counselling shall comprises of following functions.

FN001: New Candidate Registration Screen

FN002: **Candidate basic credential entry Screen**

FN003: **Eligibility criteria of all participating Universities Screen**

FN004: Online Form Filling – Registration **Screen**

FN005**: Registration Confirmation Screen**

FN006: **Registered candidate Sign In /Login**

FN007: **Password Change Screen**

FN008: Forgot Password screen

FN009: **Available Choices screen**

FN010: **Choice Submission screen**

FN011: **Choice Edit – Swap screen**

FN012: **Choice Edit – Rearrange / reordered (Move) screen**

FN013: **Choice Delete screen**

FN014: **Choice Save & Continue screen**

FN015: **Choice Saving & Exiting Screen**

FN016: **Logout Screen**

FN017: **Seat Allotment & Publishing of Result screen**

FN018: **SMS Alert to Candidates**

FN019: **Printing of Allotment Letter**

FN020: **Withdrawal of Seat and Printing of Refund Letter**

FN021: **Subsequent Round Undertaking Screen**

FN022: **Subsequent Round Choice Filling direction screen**

[b] Administration of CCR & Provisional Admissions

FN001: Candidates Reported at PIs - Admin user can see details of reported candidate of the PIs.

FN002: Online candidate information Display (for verification)

FN003: Provisional Admission Screen

[c] Seat availability, leftover & filled status and reports

FN001: Institute Wise Total Seat Availability/filled/leftover

FN002: Category Wise & Branch wise Seat Availability/filled/leftover in all institutions

FN003: Institution/branch/Category wise Seat Availability/filled/ leftover

[d] Administration of PIs

FN001: Viewing of Branch Wise Seat Availability/filled/leftover

FN002: Document verification Screen

FN003: Printing of provisional Admission Letter

FN004: Category wise breakup of Seat Matrix

[e] Data Administration and overall control module for IKGPTU

FN001: Counselling registration Admin

FN002: **Secured interface for uploading/updating of seat matrices.**

[f] Seat Allotment Module

FN001: User Manager
FN002: Seat Allotment Processing
FN003: MIS (Institute wise, Rank wise Candidates) Reports
FN004: Login/Logout

4. Resource Requirements

4.1 At Participating Institutes / Help Centre

Hardware, Software, connectivity & Manpower requirement

- 10-20 Sets of latest computers with original Operating System, IE 7.0 or above and Antivirus on **UPS & Power generators**

- **2-3 network laser printers** or stand alone heavy duty laser printers connected with the clients for choice saving printing
- 2-5 number of trained officials under supervision of HoD/ Sr. faculty/programmer of Computer /Electronics departments for handholding of candidates
- Required **Internet connectivity ranging from 512 kbps to 1 MBPS using** (Broad Band or RF Link or Lease Line or VSAT based) if not available, it can be obtained from nearest Internet Service Provider to ensure 24x7 connectivity. Also provision of backup of connectivity needs to be made to meet the link breakdown situations.
- Updation of admission status on the web site
- Proper Seating, Cooling and drinking water facility for the Candidates
- Required Consumables like CD, Floppy, Printer toners/Ribbons and stationeries.

4.2 Counselee's side

1. The Client must have Internet browser i.e. IE 6.0 or above version or Mozilla Firefox 3.0 or above to access the websites. He should also ensure that his machine is up to date in all respects.

4.3 Establishment of Control Rooms

One control room at IKGPTU will be made and called as **Central Control Room (CCR). It** will be equipped with computer machines/printer connected with internet on **24x7** hours operational during the counselling period to respond/resolve queries of candidates and PIs. It will be managed by team of IKGPTU officers concerned.

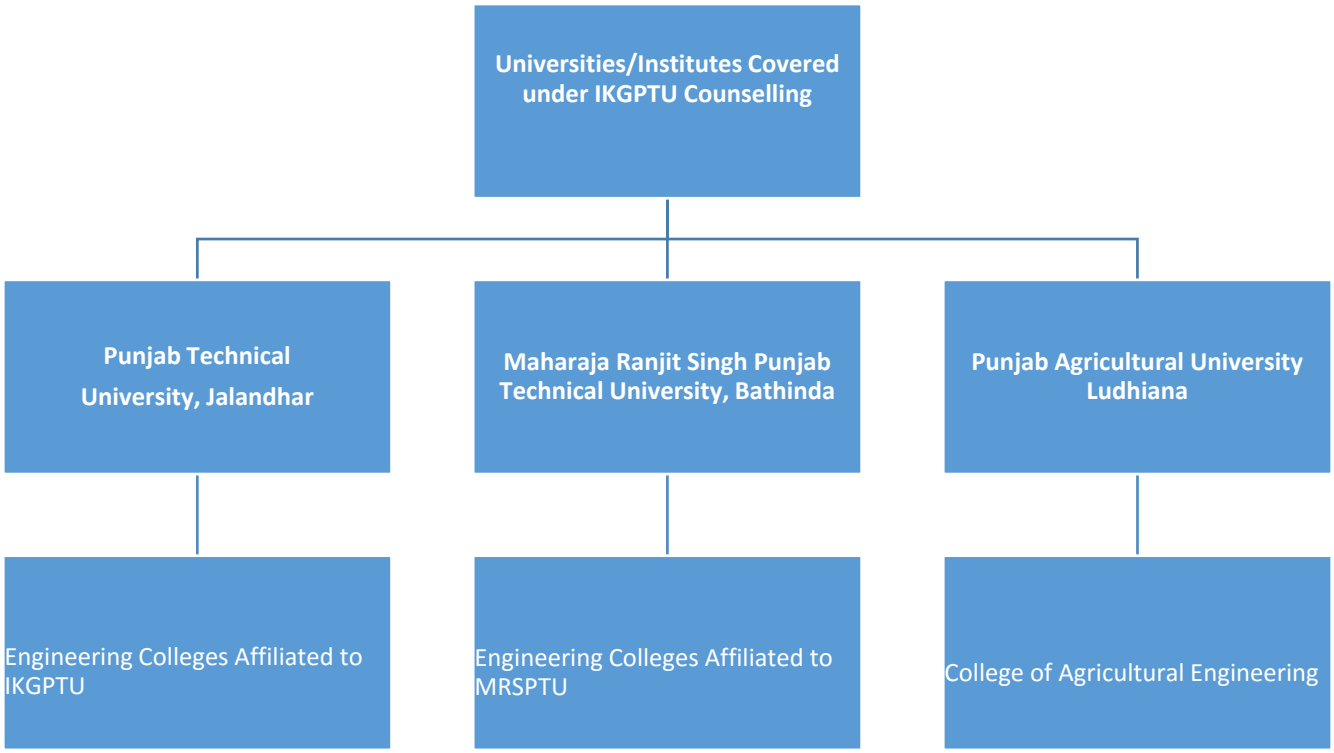
One control room also needs to be established at NIC HQ New Delhi in the counselling division.

Control Room should equipped with following infrastructure requirements,

- Proper Seating Facility with AC environment
- 4-6 Computers with 2 GB RAM & TFT Monitors, anti virus loaded and patches injected
- Network Printers connected with Computers
- 2 MBPS lease line with alternate backup of Internet
- All computers must be connected with UPS of proper Backup
- Fax Machine with STD Telephone Facility
- 4-6 Telephone Line
- Mobile for Officers of IKGPTU seats in control room
- Photocopy
- Necessary consumable like Paper, CD, Tanner etc.

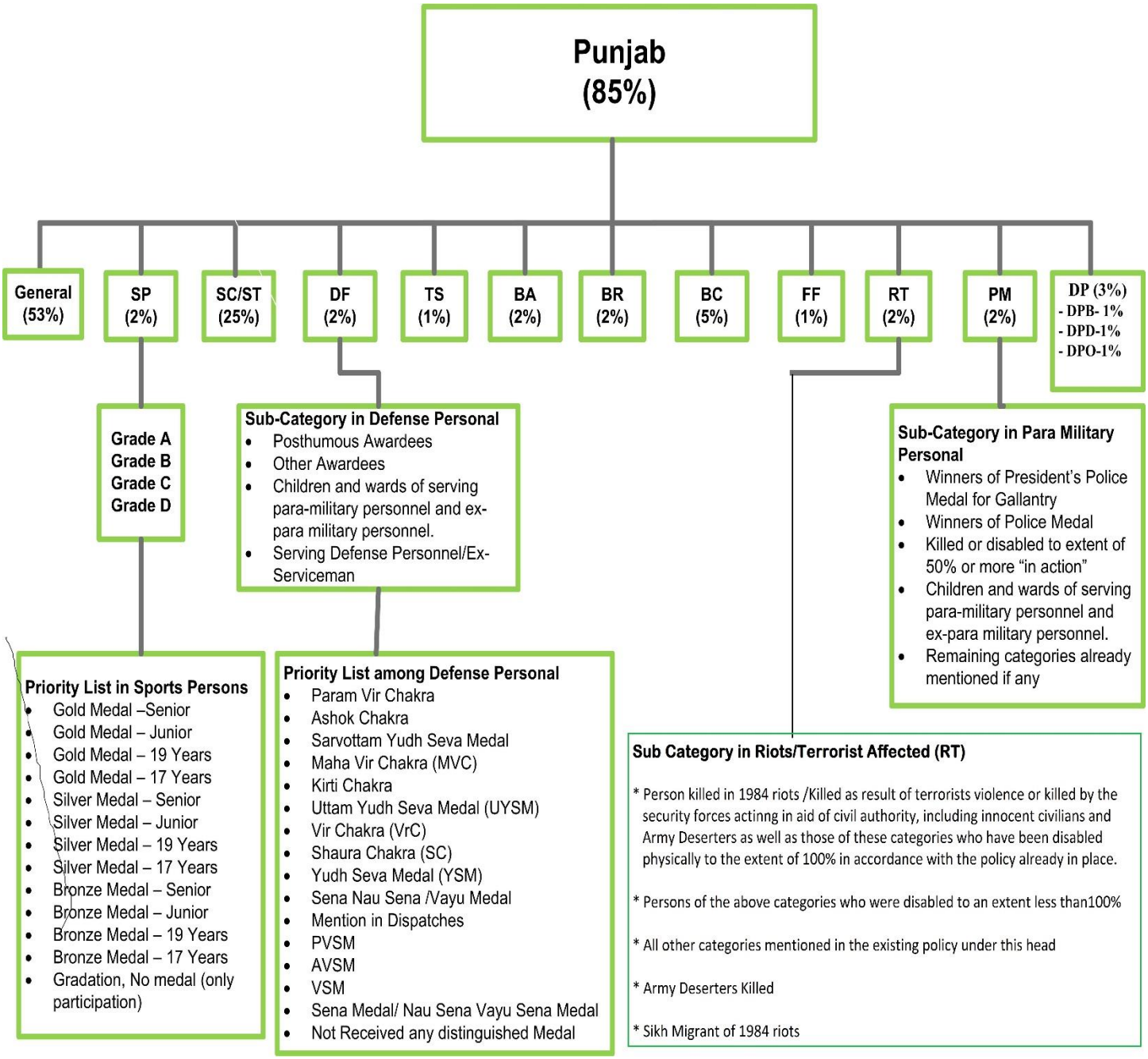
5.0 Seat Reservation Distribution and Reservation Policies

Universities/Institutes where Admission will made through JEEMAIN-2016



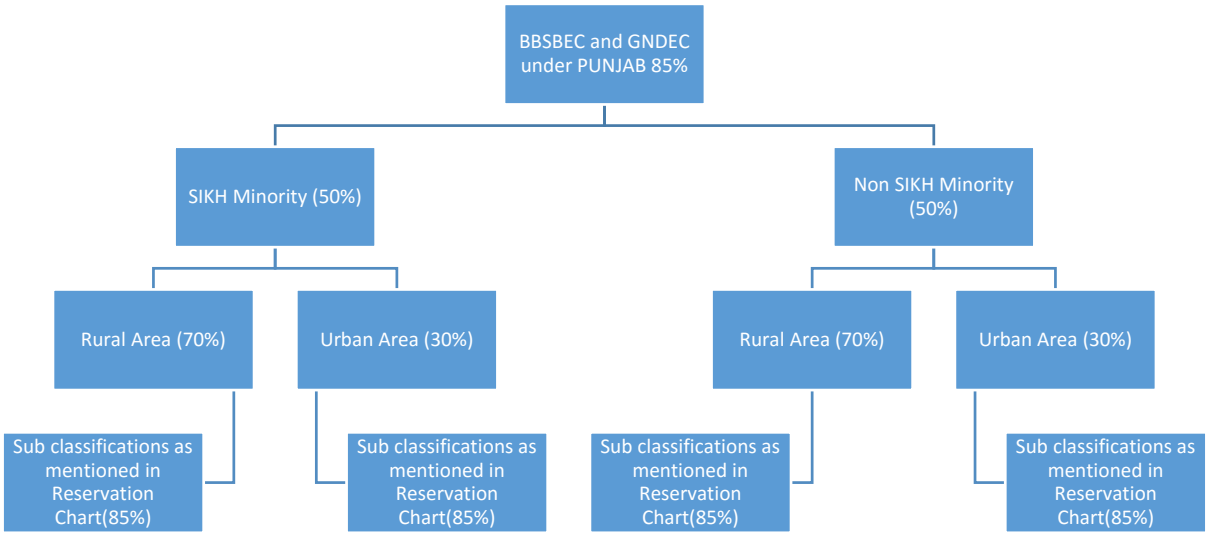
Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU

Punjab 85% based on JEEMAIN Ranking / 10+2 Inter Se Merit



As per Notification

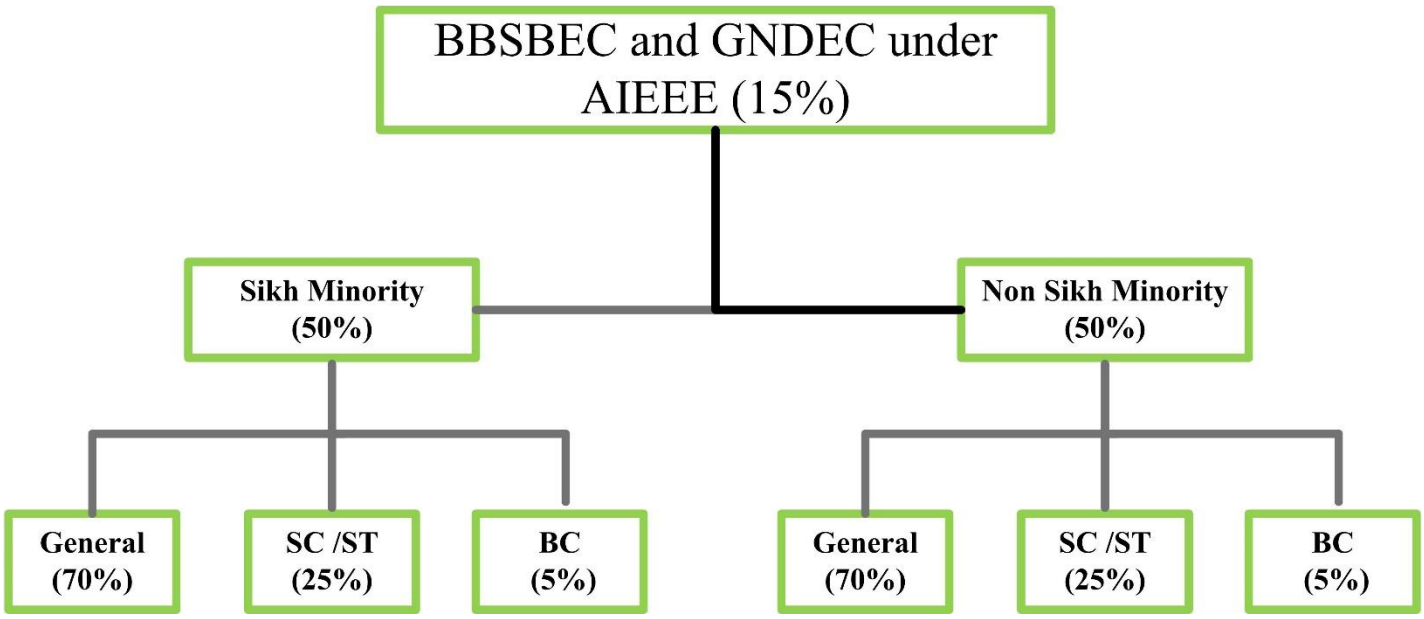
Sikh Minority in Punjab(85%)



Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU (2)

Reservation Chart for 15 % Other State Quota based on JEEMAIN Ranking/ 10+2 Inter Se Merit

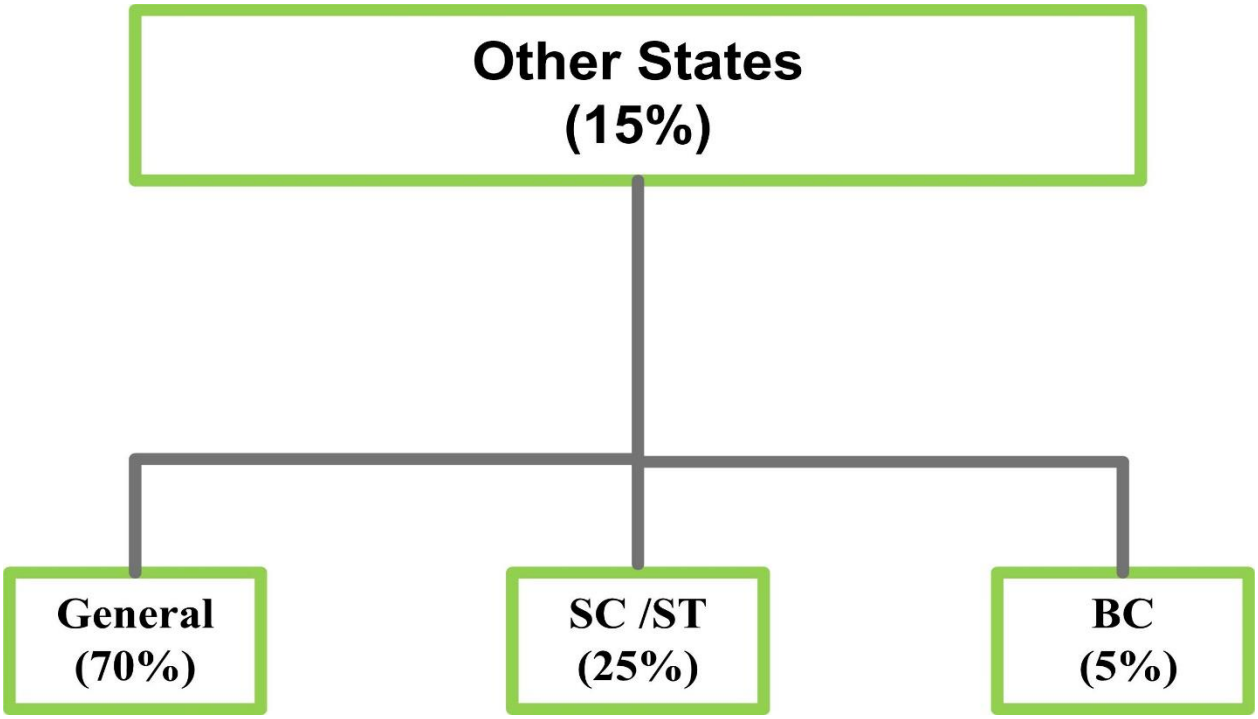
(Bifurcated into Sikh Minority & Non Sikh Minority)



 Signatures of Technical Committee Members:

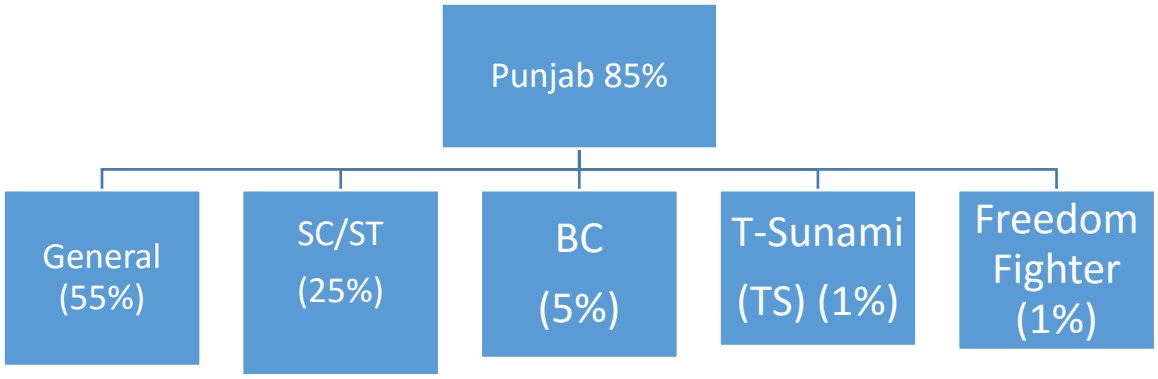
Reservation Chart for 15 % Other State Quota in IKGPTU/MRSPTU

Other State 15 % based on JEEMAIN Ranking



Reservation Policies for Institute Affiliated to Punjab Agricultural University (PAU)

Punjab 85% based on JEEMAIN Ranking



6.0 Counselling Process & Methodology

6.1 Functionalities of Candidate Module

The candidates declared eligible for counselling have to visit the website http://ptuadmissions.nic.in . This website will give them static information about the Participating Universities including affiliated Institutes, various courses offered by then, Government notifications, Counselling schedule, Process Flow, FAQs and User Manual, Notice Board apart from New Registration and Login section.

6.1.1 Registration Module & Choice Filling in 1st round (for B.Tech courses based on JEEMAIN)

a. Candidate is required to click on the New Registration link on the Home Page.
b. He/ She has to fill five authentication parameters for gaining access.
   - Roll No.
   - Rank
   - Candidate Name
   - Date of Birth as printed in Admit Card
   - Security Pin as shown on the screen

System will insist students to read eligibility criteria of all participating universities before proceeding further. On pressing OK button, the above data submitted by candidate will be verified with the JEEMAIN 2016 database. It will also check for Counselling fee submitted by the candidates. If system finds entry of Counselling fee and information provided by candidate matches with the JEEMAIN 2016 database, then the candidate will be permitted to register.

Online Form Filling – Candidate can choose/fill his state of eligibility, Main category, sub category, Sikh minority status, Rural Area, Qualifying marks, etc. He will also choose Password as per Password policy for getting the valid userid and password for login to e-Counselling. Candidate can change this information as per his wish till he does not confirm it. Once this personal data is Verified and Confirmed by the candidate, candidate cannot change the personal data. At the end of the process, a registration receipt will be generated on the screen. Candidate can take a print out the registration receipt. For subsequent access to the website, Registered users will use Sign In /Login section.

Password Change facility:- System will facilitate registered Candidates for changing the password. After successful login, the candidate can change his/her password by entering the Old Password, followed by New Password and Confirm New Password. Password policy will be enforced at every level.

In case, the candidate has forgotten the password, he/she is required to enter the Roll Number, Rank, Name and Date of Birth as per their JEEMAIN-2016 Rank card and secret answer to the question selected during registration process. The above data submitted by candidate will be verified with the registered candidate Database. If it matches, then only the candidate will be permitted to change his/her password and proceed further.

Registration Module in 1st round (for B.Tech courses based on 10+2 Inter se Merit)

a) Candidate is required to click on the New Registration link on the Home Page.
b) He/ She has to fill five authentication parameters for gaining access.
   - Fee Slip Roll No.

- Candidate Name
- Father Name
- Date of Birth
- Security Pin as shown on the screen

System will insist students to read eligibility criteria of all participating universities before proceeding further. On pressing OK button, the above data submitted by candidate will be verified with the 10+2 Fee data. If system finds entry of Counselling fee and information provided by candidate, then the candidate will be permitted to register.

Category-wise Seat selection criteria for Engineering Stream Under 85% Punjab quota and 15% Outside State quota

A. **If candidate has Punjab domicile and under 85% quota with any of the following Category(B.Tech Candidates)**

Input Parameters - Roll No., Rank, Category, State Code, Sex

If Candidate is Male then seats under General category and Category specific (if applicable) in Coeducation colleges will be selected by system. No seats of Girls colleges will be selected for a Male candidate

If Candidate is Female, then seats under General category and Category specific (if applicable) in Coeducation colleges + Girls Colleges will be selected by system.

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU General + MRSPTU General + PAU General
2.	SC /ST	☑	IKGPTU General, SC + MRSPTU General, SC + PAU General, SC
3.	BC	☑	IKGPTU General, BC + MRSPTU General, BC + PAU General, BC
4	T-Sunami	☑	IKGPTU General, TS + MRSPTU General + PAU General, TS
5.	Freedom Fighter	☑	IKGPTU General, FF + MRSPTU General, FF + PAU General, FF
6.	Backward Area	☑	IKGPTU General, BA + MRSPTU General, BA + PAU General
7	Defence Personnel	☑	IKGPTU General, DF + MRSPTU General, DF + PAU General
8	Terrorist / Riots Victims (RT)	☑	IKGPTU General, RT + MRSPTU General, RT + PAU General
9	Para Military forces (WPP)	☑	(IKGPTU General, WPP + MRSPTU General, WPP + PAU General)
10	Handicapped blind (DPB)	☑	(IKGPTU General, DPB + MRSPTU General, DPB + PAU General)

11	Handicapped Deaf and Dumb (DPD)	☑	(IKGPTU General, DPD + MRSPTU General, DPD + PAU General)
12	Handicapped Others(DP).	☑	(IKGPTU General, DP + MRSPTU General, DP + PAU General)
13	Widows / Divorced Women	☑	(IKGPTU General + MRSPTU General, DW + PAU General) ***No male candidate will fall under this category and these seats are exclusively for Female candidates***

Rural Area Category/Status

University	General	Rural Status opted	Seats to be shown
PAU Ludhiana	☑	☒	General

Sports Category

University	General	Sports Category	Seats to be shown
PAU Ludhiana	☑	☒	General seats
IKGPTU	☑	☑	General + sports category seats
	☑	☒	General seats
MRSPTU	☑	☑	General + sports category seats
	☑	☒	General seats

Border Area Seats

University	General	Border Area Category	Seats to be shown
PAU Ludhiana	☑	☒	General
IKGPTU	☑	☑	General + Border Area category seats
	☑	☒	General
MRSPTU	☑	☑	General + Border Area category seats
	☑	☒	General

Special Case for Fee Waiver Category Seats under IKGPTU/MRSPTU

For incorporating seats under Fee Wavering in B.Tech Courses, as per discussion with IKGPTU Officials, these seats will be added separately for each courses and shown as a separate course. These seats will be made available to those students, who at the time of registration opted for Fee Waiver scheme. These students will also be eligible for B.Tech Courses normal seats as well.

Category	Eligibility for IKGPTU & MRSPTU opted by the Candidate	Seats to be shown
Fee Waiver	☑	(IKGPTU+MRSPTU Fee Waiver Category)

Special Case for Rural Seats and Sikh Minority Seats under IKGPTU (Guru Nanak Dev Engineering College, GNDEC – Evening shift & Baba Banda Singh Bahadur EC)

University	Sikh Minority + **Sikh Test passed** *				Sikh Minority + **Sikh Test Not passed** = Non Sikh Minority(Normal Classes) **$**				Seats to be shown
	Rural *.1		Urban *.2		Rural $.1		Urban $.2		
	General 1	SC/ST, BC, BA, SP etc 2	General 3	SC/ST, BC, BA, SP etc 4	General 5	SC/ST, BC, BA, SP etc 6	General 7	SC/ST, BC, BA, SP etc 8	
IKGPTU / MRSPTU	☑								1+3+5+7
		☑							1+2+3+4+5+6+7+8
			☑						3+7
				☑					3+4+7+8
					☑				5+7
						☑			5+6+7+8
							☑		7
								☑	7+8

Hint – Where Sikh Test passed is ticked, seats (1 to 8) are applicable.
Where Sikh Test passed is **NOT ticked,** seats (5 to 8) are applicable

B. **If candidate has other State domicile and under 15% JEEMAIN quota with any of the following Category (APPLICABLE FOR B.Tech Course, B.Tech 10+2 Course only)**

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU General + MRSPTU General + PAU General
2.	SC /ST	☑	IKGPTU General,SC + MRSPTU General,SC + PAU General,SC
3.	BC	☑	IKGPTU General, BC + MRSPTU General, BC + PAU General, BC

Special Case for Sikh Minority Seats under IKGPTU & MRSPTU (Guru Nanak Dev Engineering College, GNDEC – Evening shift & Baba Banda Singh Bahadur EC)

University	Sikh Minority + **Sikh Test passed Urban Seats only**		Sikh Minority + **Sikh Test Not passed** = Non Sikh Minority(Normal Classes) **Urban Seats Only**		Seats to be shown
	General 1	SC/ST, BC 2	General 3	SC/ST, BC 4	
IKGPTU / MRSPTU	☑				1+3
		☑			1+2+3+4
			☑		3
				☑	3+4

Available Choices:
After successful login and on clicking the link "Available Choices", the systems internally retrieve the credentials of the candidate like gender, category, subcategory, state of eligibility and eligibility remarks from the candidate's database and the available choices specific to the candidate based on his/her credentials.

All the choices of B.Tech Courses (includes both Fee waiver B.Tech Courses and non Fee waiver B.Tech Courses) will be displayed in choice filling section for these candidates and they can select choices as per their priority. The candidates may opt same course for fee wavering scheme and as well as for Non fee wavering Scheme.

Choice Submission:
On clicking the "Choice Submission" button, the available choices to the candidate will be displayed in the left side frame and on clicking the add button, it will be removed from the left frame and will be added into right frame. User can sort their choices University-wise also.

Choice Edit – Swap / Move Choice / Delete Choice:

System will provide the students with option of swapping already selected choice, setting their order(moving the choices or deleting the choices.

Save Choices

During choice selection, Candidate can click on "Save Choices" button to save his choices. System will save the choices and keep the screen open for Candidate to select more choices.

Save and Exit

Clicking on Save and Exit button will save the choices filled by candidate during the session and close the screen. It will take Candidate to **Displaying Filled Choices** section, where Candidate can take a printout of saved choices, which includes Choice saving date time and IP address.

After saving the choices, if a candidate logs in again, then the saved choices given by the candidate will be displayed and can be modified or altered by the Candidate.

Seat Allotment & Publishing of Result

Seat Allotment will be done by IKGPTU Technical Team by downloading the choices filled by registered candidates and processing as per approved algorithm. After verification and approval by the technical team, the result will be uploaded into the website.

SMS Alert to Candidates

Successful candidates, who get a seat in the Counselling round will get a SMS indicating the seat allotted and College details.

Printing of Allotment Letter

Candidate who gets a seat, can login to his portal and take printout of the Provisional Allotment Letter, which he will produce at the allotted College during admission period.

Seat Withdrawal

Admitted candidate, if wishes to surrender his seat during reporting time in both round and upto 7 days after completion of counselling, can do so by giving his consent absolving concerned University.

Subsequent 2nd round student access methodology

In the subsequent rounds, new students, who wish to join Counselling for the first time will go through the same process as given above for the Ist round. Students who are already registered and exercised their choices can access the system in following fashion.

Candidate will fill five authentication parameters for gaining access.

- Roll No.
- Rank (JEEMAIN or IKGPTU generated)
- Candidate Name
- Date of Birth as printed in Admit Card
- Security Pin as shown on the screen

If all the five parameters are valid and match the Candidate database, then a new Re-registration/Confirmation screen will appear. In which candidate will give an undertaking that

"Before participating in the second counselling, I have understood that if I am allotted a seat in the second counselling, my previous seat in 1st counselling shall automatically be cancelled and replaced by the seat allotted in second counselling. My claim for previously allotted seat stand forfeited. I shall have claim only on the seat allotted in second counselling. I have further understood that I should fill only those choices which are preferred over the already confirmed seat in first counselling. " On accepting the Declaration, candidate will be registered in the system. System will give following information.

"In the second round, Candidate can also fill College/Branch even if Available seats section shows Zero(0) seats. In case any candidate, who has been allotted the seat in 1st round vacates the seat during 2nd round, the same will be made available to other candidates in the 2nd Round itself."

6.1.2 Procedure for B.Tech students based on 10+2 Inter se Merit

During 1st round of B.Tech Counselling, students registered under B.Tech 10+2 Inter se merit course will be permitted to register themselves. After completion of 1st round of B.Tech , Rank will be prepared of registered candidates as per following procedure and PTU verification team will check and approve the Rank. On approval, the rank will be uploaded into the course.

Tie Breaking

In case of tie the same shall be decided as follows

i. The candidate scoring higher marks in Compulsory subjects shall be higher in merit
ii. In case of tie in (i) above, candidates scoring higher marks in Physics shall be higher in merit.
iii. In case of tie in (ii) above, candidates scoring higher marks in Mathematics shall be higher in merit.
iv. In case of tie in (iii) above, candidates senior in age shall rank higher in order of merit.
v. In case of tie in (iv) above, candidates scoring higher marks in 10th examination shall be higher in merit.

2nd round for B.Tech course and B.Tech 10 + 2 Inter se merit Course will run simultaneously. After closure of Choice filling period of both courses, first choices of students in B.Tech course will be processed and allotted seats. Once all students under B.Tech and B.Tech Fee Waiver course are allotted seats depending upon their Choices, leftover seats will be processed for students under 10+2 Inter Se Merit course based on their choices, eligibility criteria and Universities Rules.

Both the results will be declared simultaneously and students can take admission during reporting period.

6.2 Seat Allotment procedure for First Counselling for candidates of Punjab 85% and Other State 15% JEEMAIN Rank-wise Seat Allotment procedure for First and subsequent counselling.

Assumption:

a. Candidate has to register himself and fill choices. If candidate does not fill any choices, he will not be eligible for counselling.
b. Seat Matrix is to be uploaded fresh before the start of counselling.
c. Based on JEEMAIN test Rank will be unique i.e. no two candidates will have same rank in general merit list. The general merit list will include candidates of all categories.
d. Candidates from Punjab residents will be considered under Punjab 85%.
e. Candidates from Chandigarh UT are only eligible to participate in online counselling through 15% JEEMAIN quota. However only in case of PAU, PUNJAB and Chandigarh are considered as One State. For rest of the Universities i.e. IKGPTU, GNDU and PU Punjab and Chandigarh are different states.

Algorithm:

1. Sort the candidate's data stored in Registration table rank wise with condition where choices have been locked.
2. Process the data of first candidate.
3. Store the value of sex, category code, sub-category code, in the temporary variables.
4. Identify eligible categories, subcategories on the basis of category, subcategory and Priority as applicable of candidate and store it in arrays.
5. Process the choices of candidate for each category in the same sequence as described elsewhere in the document.
6. If seat is available then allocate the seat to candidate
7. Update the seat master and reduce the value of seats available in the seat matrix by 1 against the particular institute
8. Repeat above steps for all candidate.

6.2.1. Algorithm for Seat Allocation Procedure for 85% Punjab Candidates

For 85% Punjab Candidates: Following categories/sub-categories exist;

- General
- SC/ST
- Backward Class (BC)
- T-Sunami(TS)
- Border Area(BR)
- Backward Area (BA)
- Sports Person (SP)
- Widows of Defense Personnel (DF)
- Widow / Divorced Women
- Terrorists/Riots victims (RT)
- Children/Widows of Para military forces (PM)
- Freedom Fighter (FF)
- Disabled Person-Blind (DPB)
- Disabled Person -Deaf (DPD)
- Disabled Person-Others (DPO)

Seat Allocation sequence for 85% Punjab Quota

Following rules shall be applicable for seat allotment for counselling for 85% Punjab category for all the institutions under IKGPTU/GNDU/PU/PAU participating in counselling located in Punjab.

In case of IKGPTU, seats under Fee Waiver Category will be processed as a separate category depending upon choices filled by the Candidate.

Counselling for seats for the Children /Widows of Defense Personal category, Sports Person, under Para Military Forces Personal and under Terrorist/Riot affected category is done in the order of sub-category, priority, rank (as applicable) and eligibility condition.

The following cases are checked and searched for a Candidate until seat is allotted or options are exhausted for JEEMAIN merit Rank.

FOR General Merit List :

The seats based on rank wise list, will be allotted in the following sequence:

Case 1: If candidate has opted for Fee Waiver and filled Fee waiver seat choices (Applicable for B.Tech only)
Candidate can fillup Fee waiver seat choices in addition to his category based choices. Check the seat for **Fee Waiver**, if it is available then seat is allotted else go to candidate's next choice. Repeat till a seat is allotted or all the choices are processed.

Case 2: If candidate is General, no subcategory
Check the seat for **General (Open quota)**, if it is available then seat is allotted else go to candidate's next choice. Repeat till a seat is allotted or all the choices are processed.

Case 3: If candidate is having any one of the reserved category, following is the seat allotment criteria
All the reserve category candidates will first be considered in General Category. In this case JEEMAIN Rank is the allotment criteria. Check the seat for **General (Open quota)**, if it is available then seat is allotted else check the seat in respective Reserve Category(SC/ST,BC, T-Sunami(TS)/BA/ BR/ FF). If seat is available then allot the seat else go to candidate's next choice. Repeat this process till a seat is allotted or all the choices are processed.

- ✓ If candidate is DF then allocation is done on the basis of sub-category and priority.
- ✓ If candidate is PM then allocation is done on the basis of sub-category.
- ✓ If candidate is RT then allocation is done on the basis of sub-category.
- ✓ If the candidate is SP than allocation is done on the basis of subcategory and eligibility criteria of the participating universities.
- ✓ If candidate is DPB/DPD/DPO, then allocation is done on the basis of respective category(i.e. DPB/DPD/DPO) and checking for leftout seats in any of (DPB/DPD/DPO) categories.

Fee Waiver	General	***Category*** (SC/ST,BC, T-Sunami(TS) / DF/ BA/ BR/ FF /RT/ PM/ DPB/ DPD/ DPO)	Sequence of Allotment
√			**Fee Waiver**
	√		***General (Open)***
		√	***General (Open), (SC/ST,BC, T-Sunami(TS)/ DF/BA/BR/FF/SP / RT/ PM / DPB/DPD/DPO/WD)*** 1. For Categories (DF, SP, PM, RT) Seat Allotment Sequence will be General, category of Candidate (In General category seat

			allotment will be done on the basis of Rank whereas in his own Category allotment will be done on the basis of sub-category, priority , rank and eligibility criteria of participating universities). 2. In all other category (General, SC/ST,BC,T-Sunami(TS), BA, BR, FF,WD) JEEMAIN Rank is the allotment criteria. 3. In Handicap categories (DPB/DPD/DPO), Seat allotment sequence will be General, category of Candidate and balance seats of any of DPB/DPD/DPO) categories. JEEMAIN Rank is the allotment criteria.

Note: In Sports Category selection criteria for participating universities is as follows

Inder Kumar Gujral Punjab Technical University, Jalandhar	Accepts Grade A, Grade B, Grade C & Grade D and Priorities of Medals (Gold/Silver/Bronze/Participation)
Maharaja Ranjit Singh Punjab Technical University, Bathinda	Accepts Grade A, Grade B, Grade C & Grade D and Priorities of Medals (Gold/Silver/Bronze/Participation)

6.2.2 Rural Area Seats Allocation under IKGPTU & MRSPTU

1. Special reservation criteria/policy exists in the case of Guru Nanak Dev Engineering College, Ludhiana and Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib. There are separate reservation of 70% and 30% separately for Rural and Urban categories respectively. The reservation for all the categories and sub-categories is followed separately under these and allotment of seats is made accordingly as per the state policy**.**

Algorithm for Seat Allocation Procedure for GNDEC, LDH and BBSBEC, FGS in Rural Area

Following rules shall be applicable for seat allotment in Guru Nanak Dev Engineering College, Ludhiana and Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib.

Case type	Candidate belonging to	Seat allotment Sequence
Case 1	General Category, Urban	1. General Category, Urban
Case 2	General Category, Rural	1. General Category, Urban 2. General Category , Rural
Case 3	Specific Category, Urban	1. General Category, Urban 2. Specific Category, Urban
Case 4	Specific Category, Rural	1. General Category, Urban 2. General Category , Rural 3. Specific Category, Urban 4. Specific Category, Rural

Algorithm for Seat Allocation Procedure for GNDEC, LDH and BBSBEC, FGS in Sikh Minority

Following rules shall be applicable for seat allotment in Guru Nanak Dev Engineering College, Ludhiana and Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib.

Case type	Candidate belonging to	Seat allotment Sequence
Case 1	Sikh Minority, General Category, Urban	1. SM General Category, Urban

		2. NSM General Category Urban
Case 2	Sikh Minority General Category, Rural	1. SM General Category, Urban 2. NSM General Category, Urban 3. SM General Category, Rural 4. NSM General Category, Rural
Case 3	Sikh Minority Specific Category, Urban	1. SM General Category, Urban 2. NSM General Category, Urban 3. SM Specific Category, Urban 4. NSM Specific Category, Urban
Case 4	Sikh Minority Specific Category, Rural	1. SM Urban General 2. NSM Urban General 3. SM Rural General 4. NSM Rural General 5. SM Urban Category Specific 6. NSM Urban Category Specific 7. SM Rural Category Specific 8. NSM Rural Category Specific

SM – Sikh Minority, NSM – Non Sikh Minority

6.2.3 Algorithm for Seat Allocation Procedure for 15% JEEMAIN General for candidates outside Punjab

Following rules shall be applicable for seat allotment for counselling for 15% JEEMAIN All India category for all the institutions under IKGPTU/MRSPTU participating in counselling located in Punjab

- For 15 % seats (Other State): Following categories/sub-categories exist;
  General, SC/ST, BC
- Under the 15% All India category further reservation is provided for 70% General, 25% SC/ST category and 5% for BC category.
- All the cases, irrespective of the category, will be dealt one by one as per rules and regulations applicable and as per the case/category.

Case 1: If candidate is General and under Non Sikh Minority

Check the seat for **Non Sikh Minority General (Open i.e. from 70% quota)**, if it is available then the seat is allotted else his/her next choice is searched for.

Case 2: If candidate is from any one of the Non Sikh Minority reserved category, following is the seat allotment criteria

Check the seat from Non Sikh Minority general quota if seat is not available then check the seat from respective Non Sikh Minority reserved category.

Case 3 : If Candidate is under Sikh Minority and General

Check the seat for **Sikh Minority General (i.e. from 70% quota)**, if it is available then seat is allotted else check the seat from Non Sikh Minority General else his/her next choice is searched for.

Case 4: If candidate is from any one of the Sikh Minority reserved category, following is the seat allotment criteria

Check the seat from Sikh Minority general quota if seat is not available then check from Non Sikh Minority general quota if seat is not available there then check the seat from respective Sikh Minority

reserved category else check from Non Sikh Minority reserved category . If seat is available than it will be allotted to the candidate else his/her next choice is searched for.

6.3 Seat Allotment procedure for Second Counselling for candidates of 85% / 15% (2nd Round)

Pre-requisites/Assumptions:

a. Candidates falling under 85% / 15% quota will be eligible for 2nd Round of Counselling. Candidate has to reconfirm his registration for the 2nd counselling and fill fresh choices. Candidates, who have participated in 1st counselling, need not pay counselling fee again, whereas new candidates appearing in counselling for the first time will have to deposit counselling fee and register themselves in the website. If candidate does not fill any choice for 2nd counselling, then he will not be eligible for 2nd counselling.

b. Candidate can also include the same choice in 2nd counselling against which he is allotted seat in the first counselling. In such case choices which are listed before this choice will be processed. For example a candidate has filled 5 choices in 2nd counselling and choice no 3 is same for which candidate is allotted seat in first counselling. In this case first two choices will be processed.

c. Seat Matrix will be uploaded afresh before the start of second counselling.

d. Seat Allocation will be done exactly as per rules adopted in Ist round of Counselling, i.e. no seats will be merged.

e. If a candidate has been admitted against his allotted seat in his category(reserve) in previous counselling, the seat will not be changed in the subsequent round of counselling for the Same branch and Institute with regards to category.

Note: Candidates once opted a category can not change his category without the permission of Chief Co Ordinator(admission).

Algorithm:

a. Sort the candidate's data rank wise once the choices are locked
b. Process the data of first candidate.
c. Store the value of sex, sub-category, and category temporarily.
d. Identify eligible categories, subcategories on the basis of category and subcategory of candidate, priority(as applicable) and store it in arrays.
e. Process the choice's of candidate for each category in the same sequence as described in first counselling.
f. If seat is available then temporarily allocate the seat to candidate
g. Update the Seat matrix and reduce the value of seats available for the particular branch by 1 against the particular institute
h. Transfer the seat allotted to the candidate in the first counselling to vacant pool.
i. Repeat above steps for all candidate. (first iteration is complete)
j. Next iteration will start and will repeat all the above steps till vacant pool seats become 0.

6.4 Participating Institute and Administrator Module

6.4.1 On-Line Admission Reporting by the Participating Institutions:

General Assumptions

- Individual candidate shall print a "Provisional allotment letter" and shall report to the PIs for admission. In case of any type of problem candidate has to contact Central Control Room of IKGPTU.

In case candidate fails to take admission during the slotted time period, his seat shall remain vacant and shall be declared as vacant for next counselling.

- Credential and documents shall be verified with online data by the designated PI officials.
- If candidate is found eligible, PI will issue provisional admission letter to the candidate.
- In case of up gradation by the candidate he/she will have to participate in subsequent counselling for re-scheduling and saving of choices.
- If a candidate has been allotted a seat or fail to report within specified time limit at PIs shall be allowed to participate in the subsequent phase of counselling, if candidate opts for up gradation against the available vacant seats, declared vacant by various institutions on the counselling website and compiled by the system (as per counselling schedule). If a candidate has not been allotted any seat from his/her choices, such candidate shall be allowed to participate in subsequent round of counselling.
- The candidates, who would like to upgrade their earlier allotted seats, will also be permitted to participate in the subsequent counselling, provided they give a declaration, while they are getting themselves registered for the subsequent counselling, to the effect that they would be vacating the seat allotted to them in the previous counselling. For the subsequent round of counselling, candidate will have to give his/her consent and fill fresh choices. If the candidate shall not get the admission seat from new choice of the subsequent round in such a case, his/her previous admission shall be continued.

Reporting process will start after the allotment of seats as in the previous step and this process will comprise of following steps:

a. After allotment of the seat, the candidate is required to report to the allotted institute for admission within the date specified in the allotment letter. The administrator website will have PI module secured by separate user id and password for each PIs.
b. The credentials and certificates of the candidates are to be verified by PIs as part of the admission process at the reported Institute. If the credentials and certificates are found wrong the allotment will be canceled and the admission is denied otherwise the admission is granted.
c. Candidates are required to pay the fees in the prescribed form at the designated bank.
d. The authorized institutes can access candidates' details who have been allotted to a specific institution. All the PIs are required to update the successful candidates' data on web to complete the process of admission. It will facilitate to compile filled and vacant seats.
e. On successful verification of the documents, Institute designated officials will generate an admission slip. One part of the slip will be handed over to the candidate and second part will be retained by the Institute.
f. PIs can also generate reports on admitted candidate course wise round wise or roll no wise, list of vacant seats etc.

6.4.2. Administrator Module :- IKGPTU Administrator will be responsible for technical conduct of the counselling including initial seat matrix creation, schedule preparation, uploading of static contents, message management and interaction with NIC Hqrs Counselling helpline etc. He/she will login to the website http://intraptu.nic.in using two level userid and password.

IKGPTU Administrator will have following facility in his account.

1. Creation of Participating Userid and details thereof
2. Seat availability, leftover & filled status and reports
3. Category Wise & Branch wise Seat Availability/filled/leftover in all institutions
4. Category wise breakup of Seat Matrix
5. Candidate Information Updation
6. Candidate Seat Allotment Details
7. Secured interface for uploading/updating of seat matrices.
8. Online Withdrawal/Cancellation of Candidates' Admission
9. List of Candidates who withdrew their seats

Seat Allotment Module

Since the allotment of seats is to be done by the software using the seat matrices and seat allotment procedure, therefore every bit of required procedure is need to be coded. As per the study and detailed discussions with the user/core committee, following procedure has been designed.

For allotment of a seat, Merit Number (Rank) is not only the criteria but also the eligibility and reservation criteria of candidates are checked. The admissions shall be subjected to the verification of credential and documents in the allotted institution.

For any course, before the allotment starts, Candidate must complete following steps

Step-1: The candidate should deposit the counselling fees of Rs. 2000/- non-refundable.
Step-2: The candidate has to fill up the choices and save it successfully. The candidate is advised to give as many choices as desirable. There is no maximum limit for the choices.

The offline processing module gives the feature of round wise processing and generation of MIS (Institute wise, Rank wise Candidates) Reports

Core & Technical Committee - **Appendix-I**

Various Committees have been formed by Chief Coordinator, IKGPTU Admissions 2016, vide its letter no IKGPTU/REG/116 dated 02/06/2016.

I. K. Gujral Punjab Technical University, Jalandhar

(Office of Registrar)

Ref. No. : IKGPTU/Reg/116 Dated : 02-06-2016

Office Order

Sub : Committees for Centralized Online Counselling for Academic Session 2016-17

The following Committees have been constituted for Admissions to various Courses through Centralized Online Counselling during Academic Session 2016-17.

1. **Chief Coordinator :** Dr. Buta Singh, Dean (Academics)

2. **Core Committee**
   (1) Dr. Buta Singh Sidhu, Dean (IKGPTU)
   (2) Dr. N. P. Singh, Dean (IKGPTU)
   (3) Dr. A. P. Singh, Dean (IKGPTU)
   (4) Dr. S. K. Mishra, Finance Officer (IKGPTU)
   (5) Dr. Amanpreet Singh, Registrar (IKGPTU)
   (6) Dr. Balkar Singh, Director (IKGPTU)
   (7) Mr. Paramjit Singh, CoE (IKGPTU)
   (8) Dr. Ekonkar Singh Johal, Deputy Registrar (IKGPTU)
   (9) Dr. Sanjeev Aggarwal, Associate Prof. (MRSPTU)
   (10) Er. Naveen Singla, Associate Prof. (MRSPTU)
   (11) Dr. Rohnish Khurana, Associate Prof. PAU, Ludhiana

3. **Technical Committee**
   (1) Dr. Buta Singh Sidhu, Dean (IKGPTU)
   (2) Dr. Balkar Singh, Director (IKGPTU)
   (3) Dr. Ekonkar Singh Johal, Deputy Registrar (IKGPTU)
   (4) Er. Sunil Kumar, Deputy Registrar (IKGPTU)
   (5) Mr. Naresh Kumar, Assistant Registrar (IKGPTU)
   (6) Mr. Palwinder Singh, Lab. Supdt. (MRSPTU)
   (7) Mr. Jagdip Singh, Sr. Technician (MRSPTU)
   (8) Dr. Rohnish Khurana, Associate Prof. ,PAU, Ludhiana

4. **Data validation, Rank Verification and Checking of allotment of seats before declaration of final allotment for B.Tech. and Fee Waiver Result (1st Year and lateral entry) / B.Arch./ B.Pharma (1st year and lateral entry)**
   (1) Mr. Naresh Kumar, Assistant Registrar (Incharge)
   (2) Er. Reetipal Singh, Associate Professor
   (3) Mr. Dheeraj Kumar, Senior Assistant
   (4) Mr. Vijay Kumar, Senior Assistant
   (5) Mr. Balwant Singh, Senior Assistant
   (6) Mr. Harpal Singh, Senior Assistant
   (7) Ms. Manjeet Kaur, Senior Assistant (Lib)
   (8) Mr. Sukhchain Singh, Office Assistant
   (9) Ms. Baljinder Kaur, Office Assistant
   (10) Ms. Rekha Rani, Office Assistant

5. **Data validation, Rank Verification and Checking of allotment of seats before declaration of final allotment for / MBA/MCA (1st Year & Lateral Entry) M. Tech. (FT & PT) / M. Pharma (FT)**
   (1) Ms. Paramjit Kaur, Assistant Registrar
   (2) Mr. Rakesh Kumar, Senior Assistant

 Signatures of Technical Committee Members:

(3) Mr. Mittar Dev, Senior Assistant
(4) Ms. Jasvir Kaur, Senior Assistant
(5) Mr. Sarwan Singh, Senior Assistant
(6) Mr. Angrej Singh, Senior Assistant
(7) Mr. Parveen Kumar, Senior Assistant
(8) Mr. Amit Goyal, Senior Assistant
(9) Mr. Rajinder Singh, Clerk
(10) Mr. Rakesh Kumar, Office Assistant
(11) Ms. Jagir Kaur, Attendant

6. **Coordination Committee for Participating Institutions (PI's)**

(1) Dr. Ekonkar Singh Johal, Deputy Registrar
(2) Mr. Naresh Kumar, Assistant Registrar
(3) Mr. Gaganjot Singh, Assistant Registrar
(4) Mr. Dheeraj Kumar, Senior Assistant
(5) Mr. Mittar Dev, Senior Assistant
(6) Mr. Sukhchain Singh, Office Assistant
(7) Mr. Rakesh Kumar, Office Assistant

7. **Software Verification Committee**

(1) Er. Sunil Kumar, Deputy Registrar (Chairman)
(2) Mr. Naresh Kumar, Assistant Registrar
(3) Er. Sandeep Mehmi, Assistant Registrar
(4) Mr. Jatinderbir Singh, Senior Assistant
(5) Mr. Raghav Talwar, Senior Assistant

8. **Uploading of information on website**

(1) Er. Sunil Kumar, Deputy Registrar (Incharge)
(2) Mr. Jatinderbir Singh, Senior Assistant
(3) Mr. Dheeraj Kumar, Senior Assistant
(4) Mr. Manish Kumar, Senior Assistant

9. **Seat Matrix**

(a) Preparation

(1) Mr. Naresh Kumar, Assistant Registrar
(2) Ms. Paramjit Kaur, Assistant Registrar
(3) Mr. Rakesh Kumar, Senior Assistant
(4) Mr. Mittar Dev, Senior Assistant
(5) Mr. Angrej Singh, Senior Assistant

(b) Checking and Uploading of seat matrix on website

(1) Mr. Dheeraj Kumar, Senior Assistant
(2) Mr. Harpal Singh, Senior Assistant
(3) Mr. Maninder Singh, Senior Assistant
(4) Mr. Parveen Kumar, Senior Assistant
(5) Mr. Balwant Singh, Senior Assistant (Navy)
(6) Mr. Sarwan Singh, Senior Assistant
(7) Mr. Kamal Mittal, Senior Assistant (Lib)
(8) Ms. Rajbir Kaur, Senior Assistant
(9) Mr. Sukhchain Singh, Office Assistant
(10) Mr. Rakesh Kumar, Office Assistant
(11) Mr. Kamal Kishor, Office Assistant

(2)

10. **To Keep and Maintain the Control Room Centre**

(1) Mr. Naresh Kumar, Assistant Registrar (Incharge)
(2) Mr. Rakesh Kumar, Senior Assistant
(3) Mr. Dheeraj Kumar, Senior Assistant
(4) Mr. Mittar Dev, Senior Assistant
(5) Mr. Maninder Singh, Senior Assistant
(6) Mr. Harpal Singh, Senior Assistant
(7) Mr. Rakesh Kumar, Office Assistant
(8) Mr. Sukhchain Singh, Office Assistant

11. **Counselling Fee Committee**

(1) Mr. Dinesh Juneja, Deputy Registrar
(2) Mr. Parvesh Aspal, Assistant Registrar
(3) Mr. Naresh Kumar Kansal, Senior Assistant
(4) Mr. Arvind Kumar, Office Assistant

12. **Refreshment Committee**

(1) Mr. Naresh Kumar, Assistant Registrar (Incharge)
(2) Mr. Dheeraj Kumar, Senior Assistant
(3) Mr. Sukhchain Singh, Office Assistant
(4) Mr. Deepak Kumar, Office Assistant
(5) Mr. Jaswant Singh, Office Assistant
(6) Mr. Sukhwinder Singh, Office Assistant, C&D Section

13. **Press and Publicity Committee**

(1) Mr. Rajneesh Sharma, PRO
(2) Mr. Naresh Kumar, Assistant Registrar
(3) Mr. Sunil Kumar, Clerk
(4) Mr. Bikramjit Singh, Office Assistant

14. **Printing and Designing Committee**

(1) Mr.Rajneesh Sharma, PRO
(2) Mr.Naresh Kumar, Assistant Registrar
(3) Mr. Gaganjot Singh, Assistant Registrar

15. **Maintenance and General Administration Committee**

(1) Er. Harvinder Pal Singh, XEN
(2) Mr. Devinder Kumar, Assistant Registrar
(3) Mr. Vishal Beri, EO

This committee will look after the following activities:-

(1) Liasioning with Local Government Administration
(2) Security arrangement at Counselling site
(3) Discipline inside and outside premises

16. Mr. Narender Kumar (Sr. Asstt.), Mr. Roop Singh (OA), Mr. Sukwinder Singh, Office Assistant (ESM), Mr. Om Parkash, Attendant and Mr. Ram Krishan (Driver) will assist Chief-Coordinator.

All these committees will work in coordination with Mr. Naresh Kumar, Assistant Registrar

2/6/16

Registrar

Copy to :
1. SVC - for the kind information of Hon'ble Vice-Chancellor
2. Dean Academic-cum-Chief Coordinator Admissions 2016-17
3. All Concerned
4. File

(3)

Functions of the Core Committee:

1. Recommendations for finalization of
   - Process and procedure, contents development for website.
   - SRS approvals.
   - Testing of developed software
   - Acceptance of software

2. Verifying the sanctioned seat for allotment / approved institutions before publication

3. Finalization of training requirement / needs

4. Monitoring and coordinating the training

5. Inspecting the facilities of participating institutions regarding online counselling.

6. Coordinating with various concerned agencies related with counselling / admissions

7. Coordination with participating institutions, other Govt. departments / private agencies and various committees

8. All other jobs assigned by the Chief Coordinator and Vice Chancellor cum Chairman, IKGPTU.

Appendix-II

Roles and Responsibilities of IKGPTU & NIC

IKGPTU:

1. IKGPTU/Core committee will approve the SRS and software functionality.
2. IKGPTU shall provide the soft copies of institutions' profiles, seat matrix of all the participating institutions, counselling schedule etc by 20th June, 2016 so as to complete the software development in time.
3. IKGPTU will approve and certify the acceptance of the application software as well as the responsibility of seat allotment will be with IKGPTU
4. IKGPTU shall provide the Merit Number (Rank)s of all the qualified candidates. For B.Tech, JEEMAIN rank will be used, whereas for B.Arch, B.Tech 10+2 Inter Se Merit and B.Pharmacy ;., IKGPTU verification team will verify and approve the Rank prepared by NIC.
5. IKGPTU will identify the PI and their officials so that those could be trained for conducting counselling smoothly at every PI. Also the trained officials of PI shall further educate the candidates for submission of choices.
6. IKGPTU will ensure readiness of the PI, these include required computer hardware, operating software, establishment of LAN, uninterrupted power supply, leased line Internet connectivity. A list of PIs and their respective officials identified for execution of counselling shall be provided to NIC for placing on the website.
7. IKGPTU will take all proactive actions as needed from time to time for proper upkeep of the systems and also for their smooth operations.
8. Making available of all consumables such as computer stationery, CD & toners etc. required for the above services will be the responsibility of PI. PI will be procuring all such items out of their own funds as per the norms/procedures applicable.
9. IKGPTU will provide all the facilities to NIC personnel at par with other personnel deputed for the conduct of counselling, NIC is not making any budget provision in this regard.
10. IKGPTU will make provision in the schedule of counselling for conversion of seats from one category to another and to generate the resultant seat matrix.
11. There may be sufficient time between subsequent counselling's for verification of resultant seat matrices and their uploading on the website other related matters.
12. IKGPTU will provide the Final Candidate Master (JEEMAIN examination) at least Seven days before the actual start of the counselling. At later stage, if required, IKGPTU will itself make changes to the candidate master.
13. IKGPTU will be responsible for unsaving of any final locked choices on request of candidates, and shall inform NIC about the same before processing the seat allotment module.
14. IKGPTU will be responsible for making changes in candidate master, if required.

16 IKGPTU shall provide all the procedure and processes for counselling to put on website for the use of all concerned

17 The PI will also Verify the documents and credentials online, acceptance of admission fees online and updating of admission status of candidates online

18 IKGPTU shall deal with the designated bank to sort out all related problems. In case counselling registration fee deposited by a candidates does not gets uploaded the counselling website, the bank shall sort out the mater. Also the bank shall provide the list of participating branches.

19 IKGPTU shall pass on necessary instructions for successful counselling to the PI s and other stakeholders.

20 IKGPTU will decide the amount of counselling fee to be deposited in the account of IKGPTU (Fee structure as per **Appendix-V**)

NIC:

1. NIC will
   a. Design, develop and implement the software for online form filling, to be used in on-line counselling
   b. Provide Technical Support and advice to Technical Committee during the counselling process.
2. NIC will develop and implement the software package on the servers & LAN provided by IKGPTU and PI on need basis
3. NIC will provide training as per the mutually agreed schedule to the identified officials of PIs and Technical committee members at the identified locations for helping the candidates in submission of their choices, handling PI level provisional admission process and required operation of the counselling software packages.
4. NIC will give utmost priority and put up dedicated teams for timely completion of tasks as per the timeframes envisaged provided necessary inputs are made available by the IKGPTU in time.
5. NIC will ensure the required security of the data and the databases as per the current technology standards.

Appendix-III

State Codes

State code	State Name
01	Punjab
02	Other States

Master List of Categories/Sub-Categories/Sub-Sub-Categories (Priorities)

Category	Description
General	General
SC/ST	Scheduled Caste/Scheduled tribe
BC	Backward Class
TS	T-Sunami Victims
FF	Wards of Political Sufferers/ Freedom Fighter
BA	Backward Area
BR	Border Area
SP	Sports Person
DF	Children/Widows of Defense Personnel
RT	Terrorist/Riots affected victims
PM	Children/Widows Para military forces
DPB	Handicapped- Blind
DPD	Handicapped- Deaf & Dumb
DPO	Handicapped- Others
RURAL	RURAL
URBAN	Urban
SM	Sikh Minority
WD	Widows/ Divorced Women

Sub-Category for Defense Personnel

Subcategory Code	Description
01	Posthumous Awardees
02	Other Awardees
03	Children/Wards of the Defence Personnel killed or disabled to the extent of 50% or more
04	Serving Defense Personnel/Ex-Serviceman

Priority(Sub-Sub-Category) for Defense Personnel

Priority Code	Description
1	Param Vir Chakra
2	Ashok Chakra
3	Sarvottam Yudh Seva Medal
4	Maha Vir Chakra (MVC)
5	Kirti Chakra
6	Uttam Yudh Seva Medal (UYSM)

7	Vir Chakra (VrC)
8	Shaura Chakra (SC)
9	Yudh Seva Medal (YSM)
10	Sena Nau Sena /Vayu Medal(Gallentry only)
11	Mention in Despatches
12	PVSM
13	AVSM
14	VSM
15	Sena Medal/ Nau Sena/Vayu Sena Medal
16	No Received any distinguished Medal

Sub-Category for Terrorist/Riots affected victims Quota

Subcategory Code	Description
01	Persons killed in 1984 riots / killed as a result of terrorist violence or killed by the security forces acting in aid of civil authority, including innocent civilians and Army Deserters as well as those of these categories who have been disabled physically to the extent of 100% in accordance with the policy already in place
02	Person who were disabled to an extent less than 100%
03	All other categories mentioned in the existing policy under this head

Sub-Category for PM (Children/Widows Para military forces) Quota

Subcategory Code	Description
01	Winners of President's Police Medal for Gallantry
02	Winners of Police Medal
03	Killed or disabled to extent of 50%
04	Children of serving para-military personnel and ex-para military personnel
05	Remaining categories already mentioned

Sub-Category for SP(Sports Person)

Subcategory Code	Description
01	Grade A
02	Grade B
03	Grade C
04	Grade D

Priority(Sub-Sub-Category) for Sports Persons

Priority Code	Description
1	Gold Medal –Senior
2	Gold Medal – Junior
3	Gold Medal – 19 Years
4	Gold Medal – 17 Years
5	Silver Medal – Senior

6	Silver Medal – Junior
7	Silver Medal – 19 Years
8	Silver Medal – 17 Years
9	Bronze Medal – Senior
10	Bronze Medal – Junior
11	Bronze Medal – 19 Years
12	Bronze Medal – 17 Years
13	Gradation, No medal (only participation)

Appendix-IV

Counseling Schedule

(B.Tech. and B.Tech Fee Waiver)

(85% Punjab & 15% Other States)

Activity	***B.Tech alongwith Fee Waiver***	
	Start Date	End Date/Actual
Registration	04-07-2016 11.00 am	07-07-2016 05.00 pm
Choice Filling	Choice filling will start simultaneously with Registration.	
Ist Round Result	**08-07-2016, 11.00 am**	
Reporting in Allotted Institution	09-07-2016 11.00 am	12-07-2016 05.00 pm
2nd Round (85% Punjab and 15% Other states)		
Registration	13-07-2016 11.00 am	17-07-2016 05.00 pm
Choice Filling	Choice filling will start simultaneously with Registration	
2nd Round Result	**19-07-2016 11.00 am**	
Reporting in Allotted Institution	19-07-2016 11.00 am	22-07-2016 05.00 pm

(B.Tech. 10+2 Inter se Merit Fee Waiver)

(85% Punjab & 15% Other States)

Activity	***B.Tech alongwith Fee Waiver***	
	Start Date	End Date/Actual
Registration	04-07-2016 11.00 am	11-07-2016 05.00 pm
Rank Preparation	12-07-2016 11.00 am	
2nd Round (85% Punjab and 15% Other states)		
Choice Filling	13-07-2016 11.00 am	17-07-2016 05.00 pm
Result	**19-07-2016 11.00 am**	
Reporting in Allotted Institution	19-07-2016 11.00 am	22-07-2016 05.00 pm

Appendix V

Institutions wise list of courses, eligibility criteria of participating Universities and Counselling Fees will be as per Government notifications No. 13/105/10-1TE2/225 dated 18-03-2016 for B. Technology issued by Government of Punjab, Department of Technical Education and Industrial Training(Technical Education Branch II)

I.K GUJRAL PUNJAB TECHNICAL UNIVERSITY
ਆਈ.ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ
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www.ptu.ac.in

SYSTEM REQUIREMENT SPECIFICATION

OF

IKGPTU – 2017 WEB COUNSELLING

for

Admission to Engineering Degree Courses in the Colleges under Inder Kumar Gujral Punjab Technical University, Jalandhar, Maharaja Ranjit Singh Punjab Technical University, Bathinda and Punjab Agricultural University, Ludhiana

Submitted to
Technical Committee
Inder Kumar Gujral Punjab Technical University (IKGPTU)

Version 3.6
May 2017

Submitted by
e-Counselling and e-Admission Division
National Informatics Centre
Ministry of Communication & Information Technology
Government of India
A – Block, C.G.O Complex
New Delhi– 110003

Amendment Log

Sr No	Version	Date of Release	Changes	Remarks/Change description
1	3.0	18/04/2016	Ist edition	•
2	3.1	07/05/2016	Appendix	• List of Colleges have been removed and it will be followed by Government notification
3	3.2	01/06/2016	University / Institution mapping	• Mapping of Colleges have been incorporated as per changes.
4	3.3	02/06/2016	10+2 Counselling	• Inclusion of Procedure for students participating under 10+2 inter se merit.
5	3.6	05/05/2017	Online Fee Payment	• Inclusion of Online Fee Payment module for all courses

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1. Introduction

The Inder Kumar Gujral Punjab Technical University(IKGPTU) was established in the year 1997 under The Punjab Technical University Act, 1996 (Punjab Act No. 1 of 1997) to provide for the establishment and incorporation of a University for the advancement of technical education and development thereof in the State of Punjab and for matters connected therewith. In pursuance of this Act, the University started its journey with 09 engineering colleges and few management colleges affiliated to it. Since then the University has come in a long way and during the Academic Session 2015-16, the University has affiliated 65 Engg. Colleges, 109 management and Computer Application courses, 33 institutions imparting Pharmacy education, 08 colleges imparting hotel management education, 06 colleges providing Architecture Education, 11 Regional Centres for M.Tech and Ph.D. in different branches of Engineering and Management and 01 Regional Centre for M. Pharmacy. The IKGPTU is responsible for producing quality technical manpower in the field of Engineering and Technology through AICTE approved Govt. / Govt. Aided / Self-financed Institutions and University Departments. The norms and standards prescribed by AICTE are being followed.

For admission to various technical courses namely B.Tech / Degree Pharmacy, the state government used to conduct entrance tests viz. CET. As result of entrance tests, manual computerized counselling were conducted by different institutions/nominated agencies for completion of the admission process for various courses, which was very cumbersome & tiresome process.

Keeping in view the generic problems faced by the candidates, their parents and by the state administration, it was decided to give up the manual counselling system and adoption of modern web based online off campus counselling system to bring in transparency & efficiency for making merit based admissions.

The National Informatics Centre (NIC), the premier Science & Technology organization of Government of India under Union Ministry of Information Communication & Technology is entrusted to accomplish the task of Software development, testing & implementation of Web based e-Counselling for admissions to B.Tech, B.Arch and B.Pharmacy Degree courses being run in all type of institutions in the State.

1.1 Purpose

This document outlines the Software requirements Specification (SRS) for the project of web based e-Counselling and requirement for finalization and approval of:

- The functional areas of counselling
- The online seat allotment procedure
- The Seat matrices as per the reservation policy /distribution of seats
- Conversion/merging of reserved seats
- INPUT/OUTPUT layouts & Data Requirements
- Required Hardware software interfaces
- Infrastructure and resource requirement at PI & CCR.

- Process and Procedure for counselling

For development of software package for **e-Counselling** of IKGPTU, Punjab, SRS has been prepared to facilitate the team of software developer and to apprise the user regarding all aspects of Web based counselling.

Once approved, the SRS document will be referred as a base document for design and software development by IKGPTU and NIC software development team. SRS is the outcome of the feasibility and analytical study of the counselling system.

1.2 Scope

The main scope of the SRS is to identify the processes and procedures that will meet the specified requirements and also available from the technical, economical, logistical and operational point of view. It is also required to establish whether the project will be implemented successfully not only to meet meaningful rationale but also in aspects to withstand legal, economical and technical viability as well. This SRS will enhance the likelihood of success, reduces project risks and minimizes shortcomings due to shortsightedness caused by the lack of research, in-depth study and analysis of various aspects of the project.

The scope of the proposed web based counselling shall be applicable to all the courses offered by following institutions as listed below.

i. Inder Kumar Gujral Punjab Technical University's affiliated Engineering / Institutions for Engineering & Technology.

ii. Maharaja Ranjit Singh Punjab Technical University affiliated Engineering / Institutions for Engineering & Technology

iii. Punjab Agricultural University, College of Agricultural Engineering, Ludhiana for Engineering Courses

Engineering Four Years Degree Courses:

Course Code	Course Name	Short Name
1	APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING	AEIE
2	AUTOMOBILE ENGINEERING	AE
3	BIO MEDICAL ENGINEERING	BME
4	BIO TECHNOLOGY	BT
5	CHEMICAL ENGINEERING	CHE
6	CIVIL ENGINEERING	CIVIL
7	COMPUTER ENGINEERING	CE
8	COMPUTER SCIENCE & ENGINEERING	CSE
9	ELECTRICAL ENGINEERING	EE

10	ELECTRICAL AND ELECTRONICS ENGINEERING	EEE
11	ELECTRONICS & COMMUNICATION ENGINEERING	ECE
12	ELECTRONICS AND ELECTRICAL COMMUNICATION ENGINEERING	EECE
13	ELECTRONICS AND INSTRUMENTATION ENGINEERING	EIE
14	FOOD TECHNOLOGY	FT
15	INDUSTRIAL ENGINEERING	IE
16	INFORMATION TECHNOLOGY	IT
17	INSTRUMENTATION AND CONTROL ENGINEERING	ICE
18	MECHANICAL ENGINEERING	ME
19	PRODUCTION ENGINEERING	PE
20	TEXTILE CHEMISTRY	TXC
21	TEXTILE ENGINEERING	TXE
22	AGRICULTURAL ENGINEERING	AGR

Note: NIC shall provide the complete database of all the candidates, applied and registered on line to IKGPTU. IKGPTU will process the data as per admission rules and criteria and prepare the merit list of all eligible candidates along with reserved category candidates. IKGPTU will provide the same database to NIC after inserting merit rank of eligible candidates**.**

1.3 Objectives

This year, 7th time in a row, Web based counselling for admissions to all B.Tech, B. Arch AND B.Pharma courses in all technical institutes under participating universities is being conducted in the State after constitution of IKGPTU with following main objectives;

- To bring in 100% transparency in seats allotment and admissions.
- To build strong public interface to minimize travel burdens on counselees & their parents for counselling.
- Providing enough time to counselees for submission, change, delete, re-ordering of multiple choices from anywhere any time.
- Availability of required information, queries, reports at different levels.
- Centralized database and centralized monitoring.
- Less Paper counselling and Increase in number of registrations and allotments
- Secured and controlled data access at every level.

- Provide fair chance of allotment to eligible candidates following the merit list in case seat are vacated by other candidates on the top of merit. Otherwise, in physical counselling it is allotted in the subsequent allotments, the meritorious candidate will be denied of his choice and the seat will be allotted to a candidate, who is lower in the merit.

1.4 Key words Definitions

Web based e-Counselling	Online Form Filling & Submission of Choices from any Internet point
Provisional Admissions at PI.	Verification of documents, fees and acknowledging provisional admission
Participating Institute (PI)	An Institute participating in counselling.
Help Center	An Institute providing help to the candidate for training, registration, choice selection, saving etc.
Course/stream	Stream like Engineering
Branch	Discipline under which candidate would be offered a seat
Counselees	Candidates Qualified for Counselling
Seat Allotment	Seat allotted on the basis of merit Number (Rank) provided by the IKGPTU
Bank	A bank designated by IKGPTU for collection of counselling fee
Registration fee	As per Appendix V
Open Category	Seat available for all
Reserved categories	SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others
Seat matrix	A table showing the available seats and their bifurcation among different categories as per the reservation policy of the state. The seat matrices are institute, course/ branch and categories wise
MERIT NUMBER(RANK)	Unique Position of the counselees as defined and provided by IKGPTU
Intake	Sanctioned Intake as per AICTE (seats in a discipline)

1.5 Abbreviations & Acronyms

AICTE	All India Council of Technical Education
JEEMAIN	All India Engineering Entrance Examination
BA	Backward Area
BC	Backward Class of Punjab
BR	Border Area
CC	Counselling Centre
CCR	Central Control Room of IKGPTU
DF	Children/Widows of Defense Personnel
DP-Others	Disabled Persons others
DP-Deaf	Disabled Persons deaf
DP-Blind	Disabled Persons blind
FF	Children /Grand Children of Freedom Fighter
GEN	General
NIC	National Informatics Centre
PI	Participating Institutes
PM	Children/Widows of Para military forces
IKGPTU	Punjab Technical University
RT	Terrorists Affected/Riots Affected
SP	Sports Persons
SC/ST	Scheduled Caste & Schedule Tribes
SRS	System Requirement Specifications
TS	Tsunami effected persons.
MRSPTU	Maharaja Ranjit Singh State Technical University
PAU	Punjab Agriculture University
WD	Widows/ Divorced Women

1.6 References

Following documents have been referred during preparation of SRS;

- Specifications/Requirements document by the Core Committee constituted by IKGPTU
- Seat Matrices provided by IKGPTU
- Feedback from various Meetings held with IKGPTU and concerned officers.
- IKGPTU Prospectus 2017 and Notifications for different courses

2. Functional Areas / System Requirements

2.1 functional activities

a) The SRS has been prepared for development, testing, implementation and certification of counselling software.

b) **Core Committee has been constituted by IKGPTU** for helping in finalization of Process and Procedures of Counselling and for the approval of regulatory requirements and software specifications (SRS) etc.-placed on **appendix-I (appendix-I contains name of the Core Committee and Technical Committee members)**

c) Roles and responsibilities for NIC & IKGPTU are described in **Appendix-II**

d) Counselling **process and methodology to be** approved by the IKGPTU

e) Circulation of counselling Procedure, Process & Instructions to PIs along with requirement of hardware, software, connectivity, infrastructure and manpower for conducting of training, submission of choices by candidates and making their admissions as per the allotments of seats.

f) Infrastructure in terms of hardware, software & connectivity for PI /Help Centers and IKGPTU.

g) Finalization of information brochures for placing on websites and due publicity

h) Finalization of counselling schedule-placed at **appendix-IV**

i) Finalization of **seat matrices,** institution & branch wise as per the state reservation policy.

j) IKGPTU will provide payment gateway in advance for facilitating students to deposit fees online. NO FEE will be accepted through Challan or in cash. Filling up of the fee related data in the prescribed format should be the responsibility of the candidate. The designated bank details need to be listed in all documents to be read by Candidates, PIs, IKGPTU and NIC.

k) **Development & testing of counselling** software package by NIC and approval by IKGPTU. Seat allotment algorithm also will be certified by IKGPTU and complete user acceptance test will be done by IKGPTU.

l) Awareness training for core committee PIs & Help Centers members on counselling software.

m) Training to the identified officials of selected PIs/Help Centers on identified locations in the presence of core-committee members to operate the counselling software for successful counselling and further to train the remaining officials of Help Centers and candidates for choice making and saving.

n) Candidates shall be given time as per the counselling schedule decided by IKGPTU to exercise their choices during counselling's as per the counselling schedule decided by IKGPTU

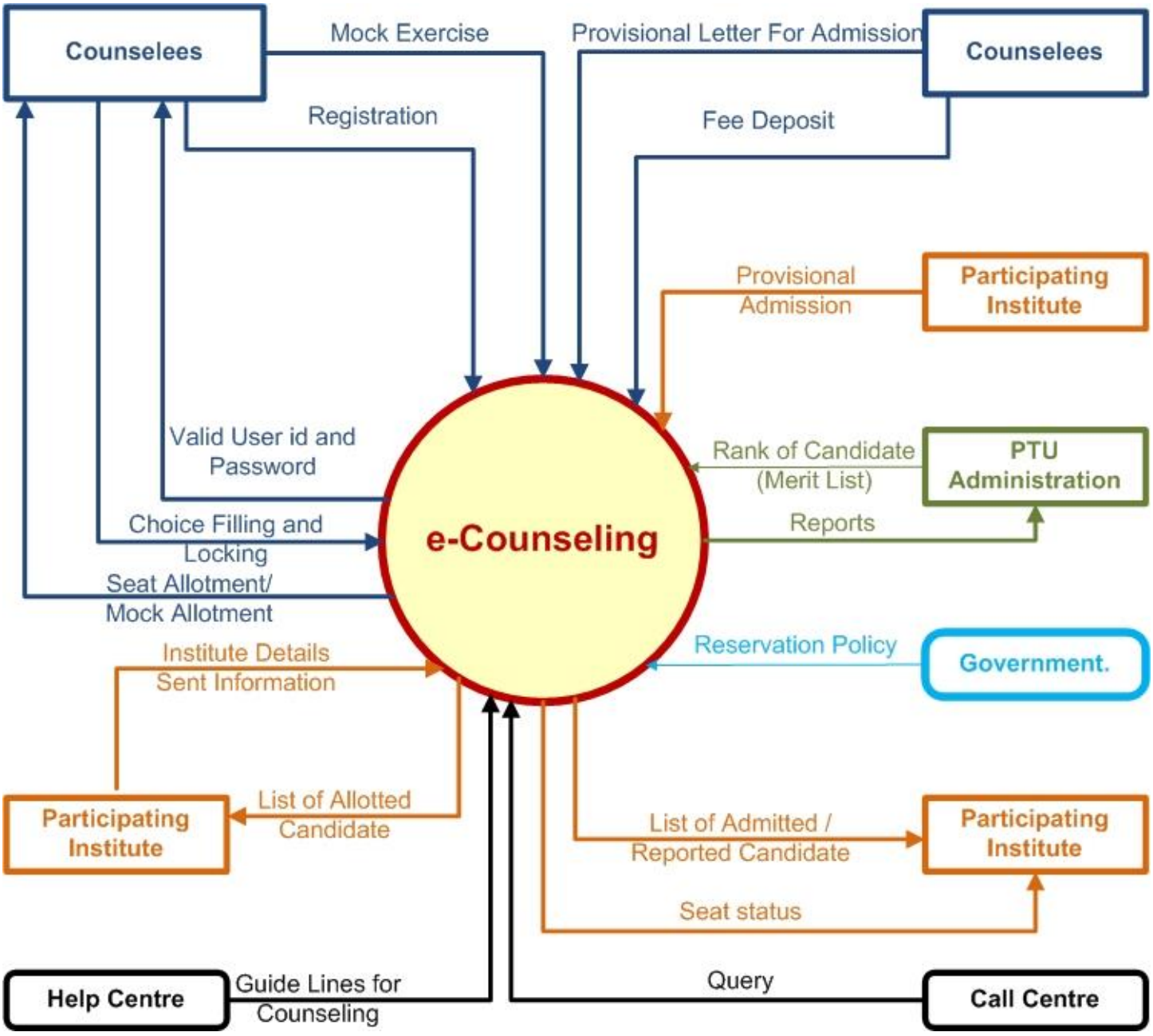
o) Allotment of seats shall be done as per the seat allotment procedure and seat matrices provided by the IKGPTU. The results shall be published on the counselling website after choice saving period of each round of counselling.

p) *Concerning PIs shall provisionally admit the candidates after verification of credentials and documents. If any candidate does not report to PI for provisional admission with in stipulated period as per the counselling schedule, her/his seat allotment will be treated as cancelled.*

q) Concerning PI will update admission status on the website and IKGPTU shall declare unfilled/leftover seats-instructions.

r) Withdrawal of Seats will be taken care of by IKGPTU Administrator through Admin module.

2.2 Context Diagram



2.3 User Interface

2.3.1 Candidates Interface

While operating the counselling website by the candidates for online form registration, choice filling & saving etc, On-line help is provided which explains about every function of the software i.e. How candidates should make online payment, exercise their choices. Designated Trained officials identified by IKGPTU shall be available at Participating Institutes to help the candidates during counselling.

Candidates can also exercise their choices from cyber cafes and other nearby Internet gateways.

Following software interface shall be available for candidates during "web based e-counselling"

- **Online Fee Payment :-** Candidates will be able to pay Fees through Online mode as provided by IKGPTU.
- **New Candidate Registration**: – New candidates will register through the registration form and get the userid and password. All the candidates will have to register on the website provided they have deposited requisite counselling Fee in the designated bank. The system will ask for details like roll no, rank, date of birth etc for cross-verification. It will ask for other details like category, sub-category, Priority etc. It will then ask the candidate to create the password. Candidates will be directed to read the reservation policies of participating universities and Government notifications and give their acceptance. The successful completion of above will complete the registration process.
- If there is any change from the already available information, candidate has to report to the IKGPTU with necessary documentary proofs and IKGPTU Administrator will modify/ update the data.
- Registered candidate can view his data from view profile. If the necessary change does not reflect in view profile, he/she has to contact CCR.
- **Registered Candidate Sign In / Login**
- Change Password
- Registration details
- Choices Available
- Standard Template for Choice with User Defined Scroll up/down on Template without change Original Template after Copied into Choice Fill
  - Branch wise
  - College wise
- Choices Edit – Interchange(Swap)
- Choices Edit – Rearrange(Move)
- Choices Delete
- Save choices
- Choices Print (report format)
- Result
- Withdrawal of Seat
- **Generation and printing of Allotment letter**

- Log out

2.3.2 PI Interface

- Candidates Reported at PIs
- Online candidate information Display (for verification)
- Online Fee verification
- Provisional Admission
- Document verification with generation of document verification checklist and signed by candidate and PI.
- Printing of Admission Letter.
- Updation of admission status on the counselling website.

2.3.3 Administrator Interface

- List of Institutes, Institute Profile & Institute Course Summary
- Seat Matrix Entry , Seat Matrix Summary and different views
- Candidate Details (Registered Candidate) and Edit Registration
- Message Entry, Counselling Schedule
- Candidate Original Information (Unregistered Candidate)
- Admission Status (Course Wise Details, Name Wise Allotment, Admitted Candidate List, Candidate Who Got Refund, Admission Withdrawal and Vacancy Position)

2.4 System External interface

2.4.1 Data requirement from IKGPTU and Bank

- System will have seamless interface with candidate's data obtained by IKGPTU and Bank as under.

    a. Candidate Record (detailed data)

    b. Valid Merit Number (Rank) Database

    c. Payment Details from the Bank.

Note: Databases obtained by IKGPTU will be hosted on counselling website for registration and counselling process

2.4.2 Data requirement from IKGPTU

[a] Information Brochure for all courses and **Institutes Profiles** will be supplied by IKGPTU to NIC for uploading it to the above-mentioned counselling websites along with the counselling procedure & seat matrices.

[b] IKGPTU will provide following information as well as database to NIC:

- **Participating Institutes** Information, categorization with Govt. / University/ self-finance/Pvt. Institutes, Engineering /Pharmacy wise.
- **Course/Branches wise list** containing branches/disciplines finance/self finance wise.
- **Unique Merit Number (Rank) and detailed data** of candidates appeared in All India Engineering Entrance Examination.
- **Seat Matrix** – for every technical institute having category wise breakup of seats as applicable (SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others)
- **Eligibility criteria's** & **Reserve Categories master**

2.5 Overview of the proposed project

The proposed system of counselling is web based and shall be applicable for admissions to all AICTE approved technical professional courses run by different technical institutes in the state (Govt./Aided/University Departments/self-financed/Private Institutes) to overcome the problems faced by the candidates during manual system.

To meet the requirements of web based counselling, the website **http://ptuadmissions.nic.in** shall be launched. The website shall keep following required links for different activities of counselling.

1. Counselling Website (procedural) with URL: **http://ptuadmissions.nic.in** shall contain procedures and information for counselling w.r.t institutes, availability of seats in different disciplines and categories, profile of institutes, eligibility criteria and counselling procedure.
2. Counselling website with URL: **http://ptuadmissions.nic.in** for registration, exercising of choices and saving/saving the choices during actual counselling and for publishing of results of counselling etc **(**The link shall be activated during actual counselling days).
3. Actual Admission intranet website, URL: **http://intraptu.nic.in** , which shall be accessible through a prescribed User-ID and Password.

All above websites links shall perform following functions:

- Provision for online Counselling fee payment.
- After paying the counselling fees, students can register themselves on the website
- Information relating to Institutes, disciplines (Engineering), branches (e.g. Civil Engineering or Computer Science etc.) and categories (General, SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others) should be displayed through relevant menus.

- Secure user/password based Login and the system will provide the facility to add, change, re-order, delete the choices in respect of institutions and branches.
- Candidate can save their choices, when ever required using <Save Choices> button.
- Candidate can get print of their choices after Final saving, but list of choices and indicative seat matrix can be printed, when ever required.
- The system shall process the submitted choices and generate the indicative seat Matrix (latest positions of seat availability)
- Processing for Seat allotment & final seat allotment shall be published on Website.
- Candidates shall print their allotment letter and will report to the PIs for admission with in prescribed time period.
- Document Verification, generation of document verification checklist and updation of final admissions by Institutes will be done by PIs on the Website.
- The system shall provide required online query/Reports.
- After completion of admission period for counselling, the leftover/unfilled seats shall be transferred for consequent counselling.
- Online Withdrawal facility will be managed by IKGPTU Administration. Candidates, who are willing to withdraw from Counselling after taking admission in allotted college, will give the request to IKGPTU administration.
- Subsequent counselling's based on the vacant seats/leftover /unfilled / merged seats

2.6 Assumptions and dependencies

- All Counselling's based on IKGPTU merit list(JEEMAIN for B.Tech**, IKGPTU Rank for B.Arch and B.Pharma).
- Merit Numbers (Rank) for each candidate should be UNIQUE (i.e. no two candidates can have same Merit Number (Rank) in a stream).
- IKGPTU will finalize/provide and upload all required master data including seat matrices(of all the colleges/streams/branches, comprising of the distribution of the seats in absolute terms as per the state reservation policy), Institute profile etc well in advance before the start of the counselling.
- Eligible Candidates, who have paid counselling fees, will register online and obtain unique-ID based on roll number and password (as given by the candidate at the time of registering on the web) prior to exercising of choices.
- Seat allotment as per the seat matrices given by IKGPTU according to reservation policy of the state.
- IKGPTU shall reserve all right pertaining to any changes in any master data including candidate master. Changes in **Candidates' Master Database**, like **DOB, Gender,** etc. Permitted through web interface by authorized IKGPTU officials.
- A candidate shall be able to fill unlimited choices as decided by IKGPTU
- Saving of Choices by Candidates is a must for the seat allotment. Unsaved choices will be considered as deemed choice.

- Saving of Choices by Candidates is to be taken as the last choices submitted by the candidate. In case the candidate does not explicitly lock the choices, the choices submitted till last moment of the last cut-off time shall be taken as the final choices by that candidate.
- All the PIs should have the prescribed computer infrastructure, trained manpower and Internet connectivity through an Internet Service Provider (ISP) with specific IP addresses (obtained from the ISP by the PIs) for accessing secured databases for making admissions and updating of admission data on website.
- Updation from PIs will not be allowed.
- IKGPTU will provide all functional, regulatory and non-functional requirements for the project.
- Students data base shall be the property of IKGPTU

** After allotting seats in B.Tech on the basis of JEEMAIN in 2nd Round, remaining seats will be processed for B.Tech students on the basis of 10+2 Inter se Merit.

2.7 Non functional requirements

2.7.1 Performance

During entire period of e-counselling the web server & database server shall remain accessible to the candidates, the PIs and to IKGPTU on 24x7 hours operational basis through the counselling website. To access the counselling website, performance shall also depend on the mode & capacity of Internet connectivity used by candidates, PIs and IKGPTU. For satisfactory performance the Internet connectivity should be as mentioned in the section 4 of this document.

2.7.2 Security

1. **Client Side security**: The PIs will be given role based unique user IDs and passwords for authorization and controlled access to the website of counselling. The PIs will be required to use Digital Signature Certificates for accessing the website.
2. **Database level security:** NICs web server and database server are well secured on SAN (Storage area networks).
3. **Network based security**
   a. **Auditing and Testing:** Before final launching of the site, it will be audited and tested for Vulnerabilities by the experts.
   b. Finally, provision has been kept for certification of the website from 3rd agency.

3. Software product functions.

Following are the functional areas with regards to the **"e-counselling"** for all technical courses in the state.

[a] Web based Counselling fee payment, counselling & entry/saving of final choices
[b] Online Seat allotment and declaration of result on the net
[c] Administration of PIs & Admissions
[d] Seat Availability, vacant, filled status.
[e] Data Administration and overall control module for IKGPTU

[a] Web based counselling shall comprises of following functions.

FN001: New Candidate Counselling Fee payment and Registration Screen

FN002: Candidate basic credential entry Screen

FN003: Eligibility criteria of all participating Universities Screen

FN004: Online Form Filling – Registration Screen

FN005: Registration Confirmation Screen

FN006: Registered candidate Sign In /Login

FN007: Password Change Screen

FN008: Forgot Password screen

FN009: Available Choices screen

FN010: Choice Submission screen

FN011: Choice Edit – Swap screen

FN012: Choice Edit – Rearrange / reordered (Move) screen

FN013: Choice Delete screen

FN014: Choice Save & Continue screen

FN015: Choice Saving & Exiting Screen

FN016: Logout Screen

FN017: Seat Allotment & Publishing of Result screen

FN018: SMS Alert to Candidates

FN019: Printing of Allotment Letter

FN020: Withdrawal of Seat and Printing of Refund Letter

FN021: Subsequent Round Undertaking Screen

FN022: **Subsequent Round Choice Filling direction screen**

[b] Administration of CCR & Provisional Admissions

FN001: Candidates Reported at PIs - Admin user can see details of reported candidate of the PIs.

FN002: Online candidate information Display (for verification)

FN003: Provisional Admission Screen

[c] Seat availability, leftover & filled status and reports

FN001: Institute Wise Total Seat Availability/filled/leftover

FN002: Category Wise & Branch wise Seat Availability/filled/leftover in all institutions

FN003: Institution/branch/Category wise Seat Availability/filled/ leftover

[d] Administration of PIs

FN001: Viewing of Branch Wise Seat Availability/filled/leftover

FN002: Document verification Screen

FN003: Printing of provisional Admission Letter

FN004: Category wise breakup of Seat Matrix

[e] Data Administration and overall control module for IKGPTU

FN001: Counselling registration Admin

FN002: **Secured interface for uploading/updating of seat matrices.**

FN003: Fee payment management

[f] Seat Allotment Module

FN001: User Manager
FN002: Seat Allotment Processing
FN003: MIS (Institute wise, Rank wise Candidates) Reports
FN004: Login/Logout

4. Resource Requirements

4.1 At Participating Institutes / Help Centre

Hardware, Software, connectivity & Manpower requirement

- 10-20 Sets of latest computers with original Operating System, IE 7.0 or above and Antivirus on **UPS & Power generators**
- **2-3 network laser printers** or stand alone heavy duty laser printers connected with the clients for choice saving printing
- 2-5 number of trained officials under supervision of HoD/ Sr. faculty/programmer of Computer /Electronics departments for handholding of candidates
- Required **Internet connectivity ranging from 512 kbps to 1 MBPS using** (Broad Band or RF Link or Lease Line or VSAT based) if not available, it can be obtained from nearest Internet Service Provider to ensure 24x7 connectivity. Also provision of backup of connectivity needs to be made to meet the link breakdown situations.
- Updation of admission status on the web site
- Proper Seating, Cooling and drinking water facility for the Candidates
- Required Consumables like CD, Floppy, Printer toners/Ribbons and stationeries.

4.2 Counselee's side

1. The Client must have Internet browser i.e. IE 6.0 or above version or Mozilla Firefox 3.0 or above to access the websites. He should also ensure that his machine is up to date in all respects.

4.3 Establishment of Control Rooms

One control room at IKGPTU will be made and called as **Central Control Room (CCR). It** will be equipped with computer machines/printer connected with internet on **24x7** hours operational during the counselling period to respond/resolve queries of candidates and PIs. It will be managed by team of IKGPTU officers concerned.

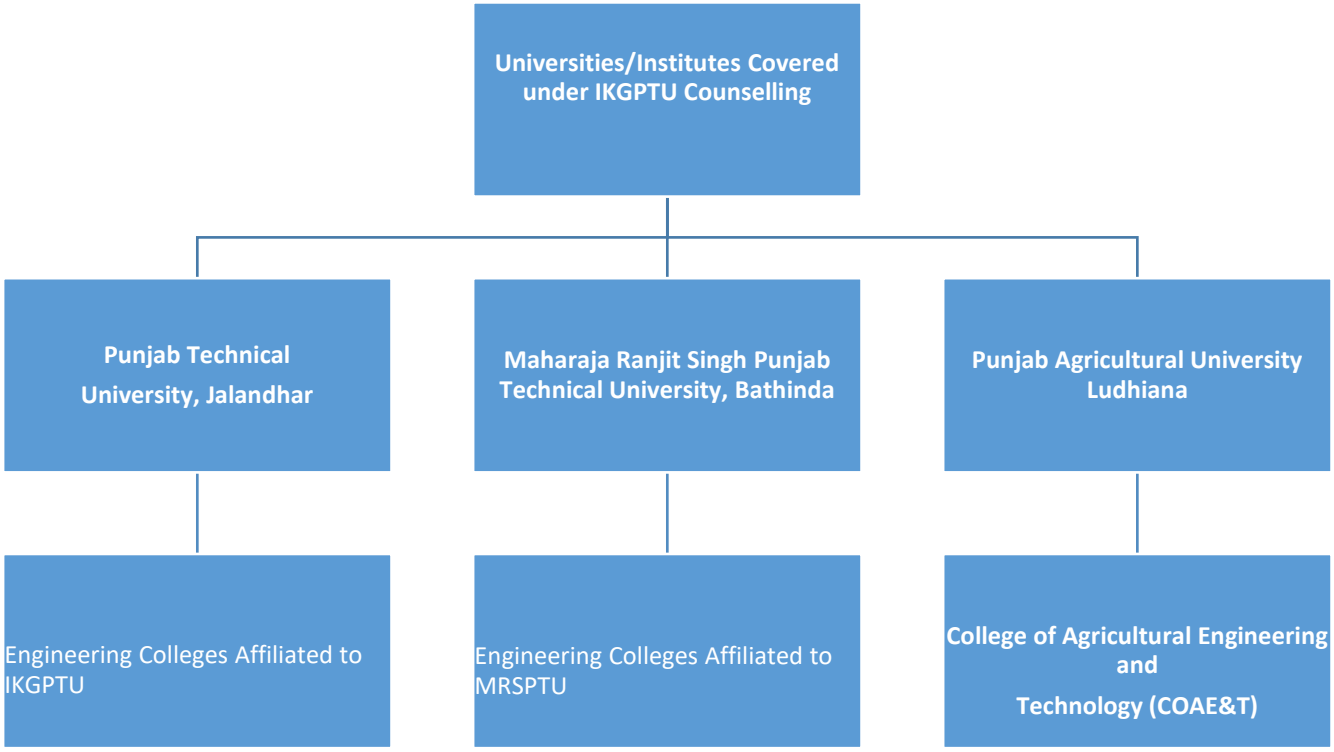
One control room also needs to be established at NIC HQ New Delhi in the counselling division.

Control Room should equipped with following infrastructure requirements,

- Proper Seating Facility with AC environment
- 4-6 Computers with 2 GB RAM & TFT Monitors, anti virus loaded and patches injected
- Network Printers connected with Computers
- 2 MBPS lease line with alternate backup of Internet
- All computers must be connected with UPS of proper Backup
- Fax Machine with STD Telephone Facility
- 4-6 Telephone Line
- Mobile for Officers of IKGPTU seats in control room
- Photocopy
- Necessary consumable like Paper, CD, Tanner etc.

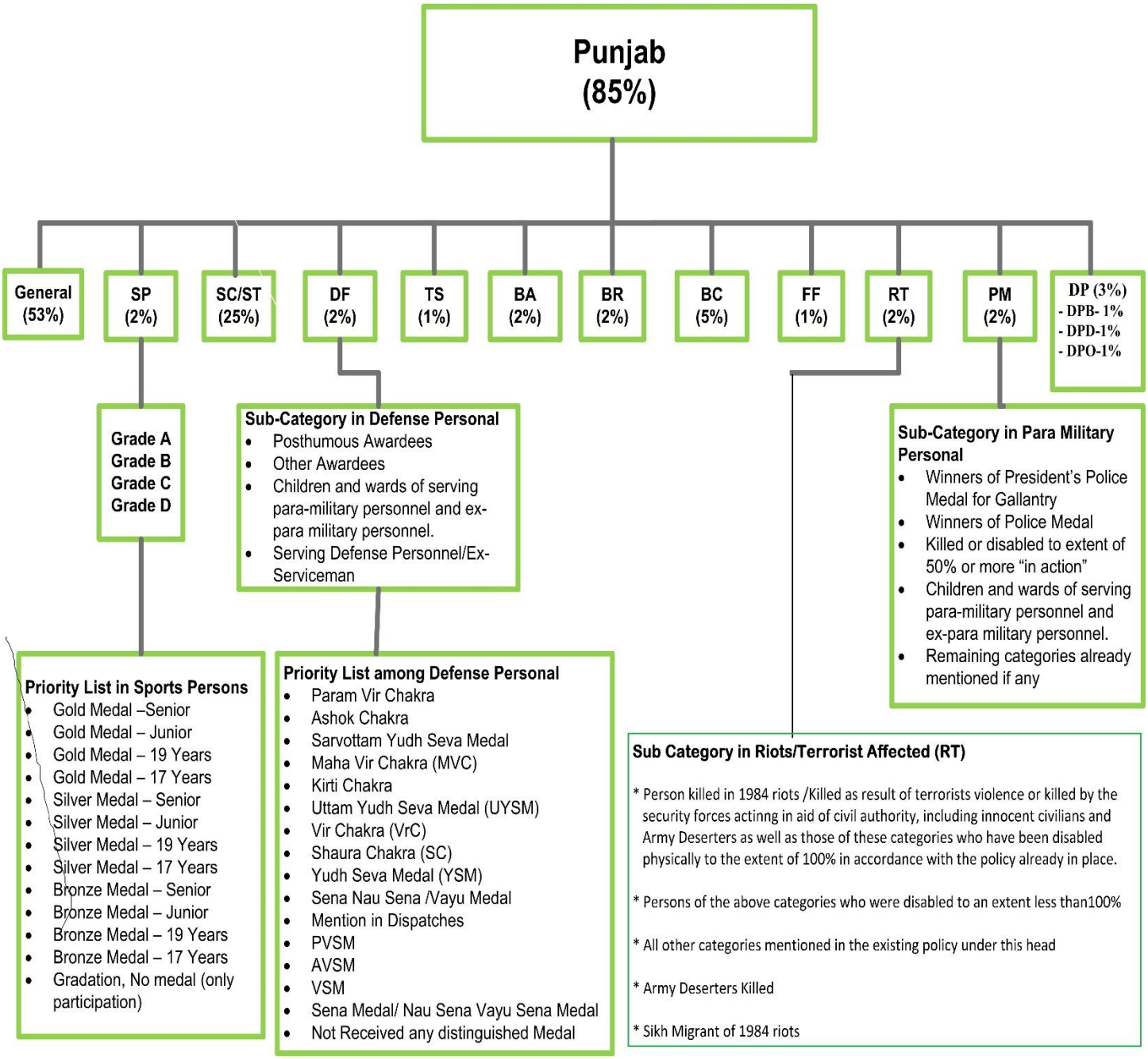
5.0 Seat Reservation Distribution and Reservation Policies

Universities/Institutes where Admission will made through JEEMAIN-2017



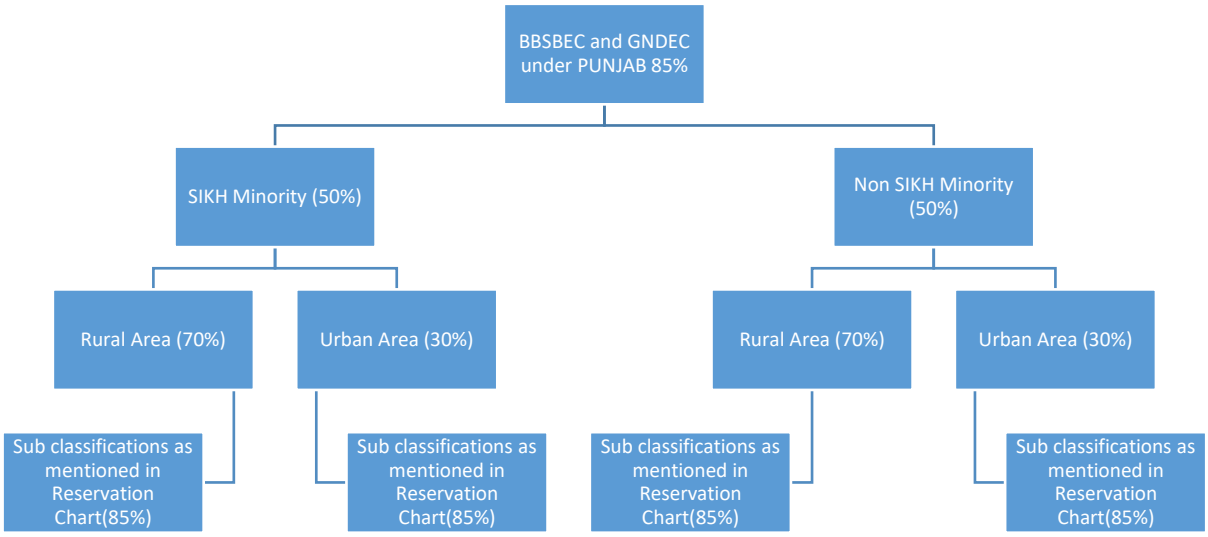
Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU

Punjab 85% based on JEEMAIN Ranking / 10+2 Inter Se Merit



As per Notification

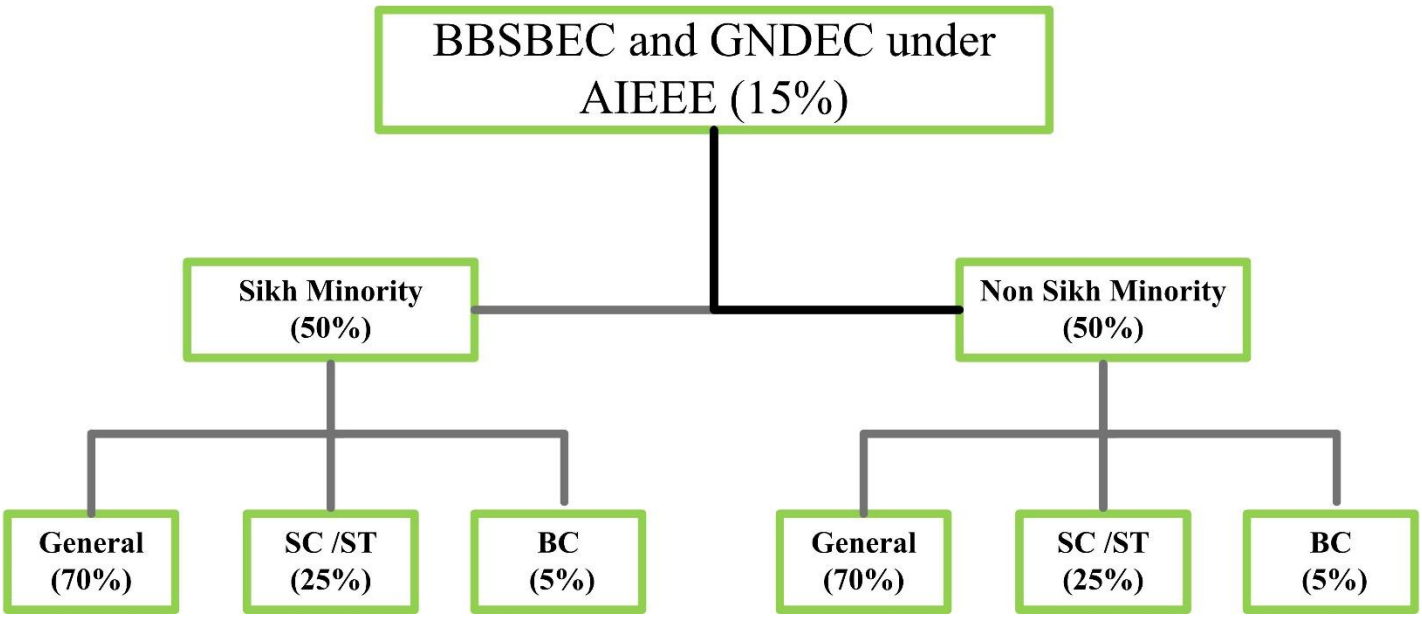
Sikh Minority in Punjab(85%)



Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU (2)

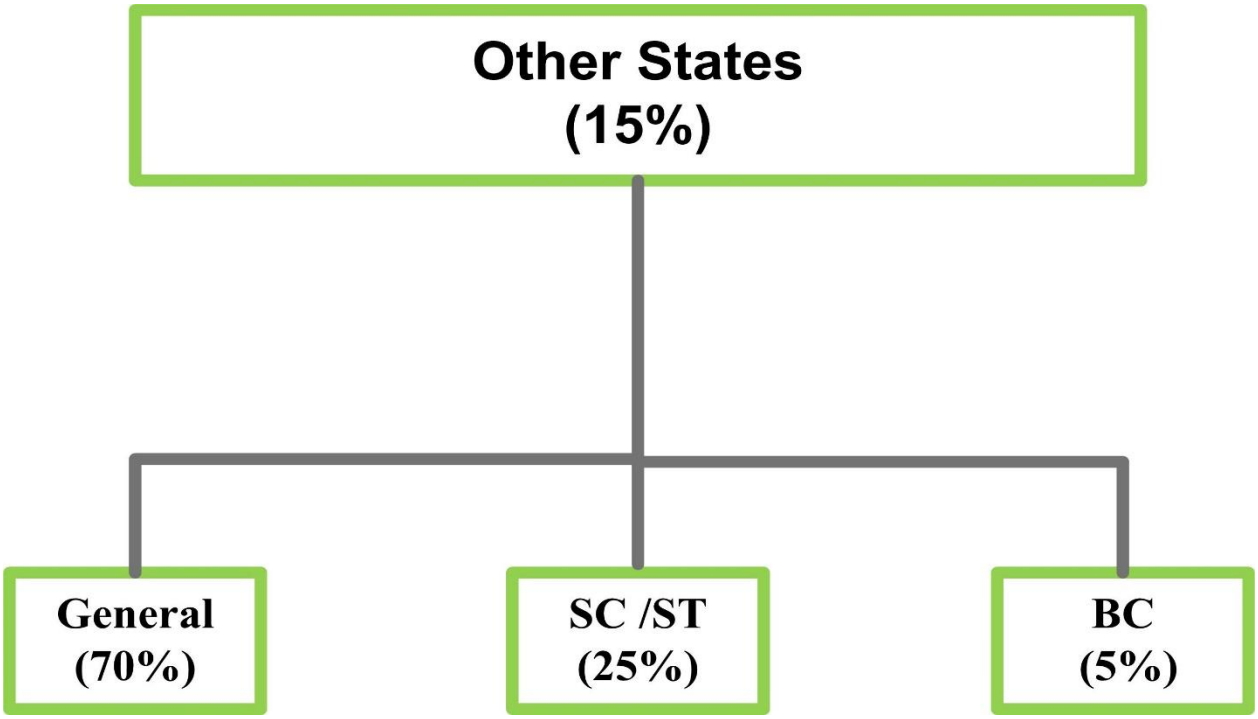
Reservation Chart for 15 % Other State Quota based on JEEMAIN Ranking/ 10+2 Inter Se Merit

(Bifurcated into Sikh Minority & Non Sikh Minority)



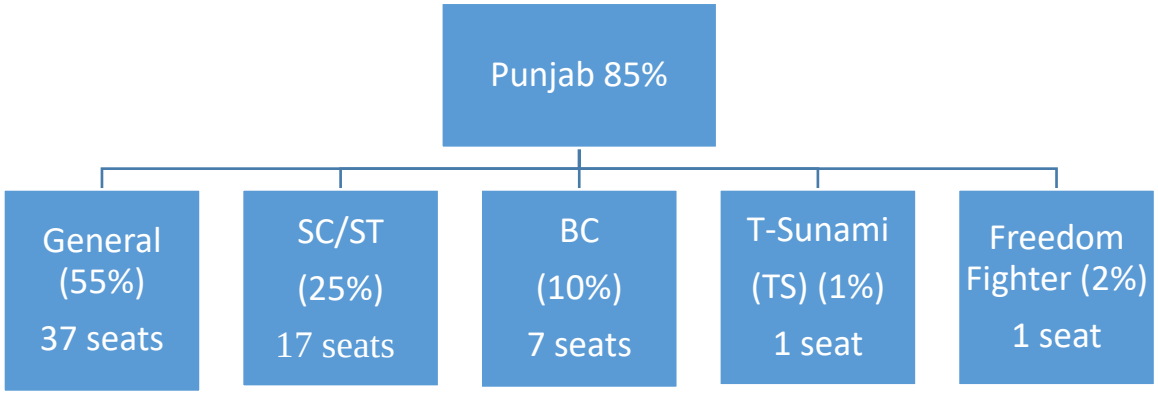
Reservation Chart for 15 % Other State Quota in IKGPTU/MRSPTU

Other State 15 % based on JEEMAIN Ranking



Reservation policies for the Constituent College of Punjab Agricultural University (PAU)

Punjab 85% based on JEEMAIN Ranking



6.0 Counselling Process & Methodology

6.1 Functionalities of Candidate Module

The candidates declared eligible for counselling have to visit the website http://ptuadmissions.nic.in . This website will give them static information about the Participating Universities including affiliated Institutes, various courses offered by then, Government notifications, Counselling schedule, Process Flow, FAQs and User Manual, Notice Board apart from New Registration and Login section.

6.1.1 Registration Module & Choice Filling in 1st round (for B.Tech courses based on JEEMAIN)

a. Candidate is required to click on the New Registration link on the Home Page.
b. He/ She has to fill five authentication parameters for gaining access.
   - Roll No.
   - Rank
   - Candidate Name
   - Date of Birth as printed in Admit Card
   - Security Pin as shown on the screen

System will insist students to read eligibility criteria of all participating universities before proceeding further. On pressing OK button, the above data submitted by candidate will be verified with the JEEMAIN 2017 database. It will also check for Counselling fee submitted by the candidates. If system finds entry of Counselling fee and information provided by candidate matches with the JEEMAIN 2017 database, then the candidate will be permitted to register.

Online Form Filling – Candidate can choose/fill his state of eligibility, Main category, sub category, Sikh minority status, Rural Area, Qualifying marks, etc. He will also choose Password as per Password policy for getting the valid userid and password for login to e-Counselling. Candidate can change this information as per his wish till he does not confirm it. Once this personal data is Verified and Confirmed by the candidate, candidate cannot change the personal data. At the end of the process, a registration receipt will be generated on the screen. Candidate can take a print out the registration receipt. For subsequent access to the website, Registered users will use Sign In /Login section.

Password Change facility:- System will facilitate registered Candidates for changing the password. After successful login, the candidate can change his/her password by entering the Old Password, followed by New Password and Confirm New Password. Password policy will be enforced at every level.

In case, the candidate has forgotten the password, he/she is required to enter the Roll Number, Rank, Name and Date of Birth as per their JEEMAIN-2017 Rank card and secret answer to the question selected during registration process. The above data submitted by candidate will be verified with the registered candidate Database. If it matches, then only the candidate will be permitted to change his/her password and proceed further.

Registration Module in 1st round (for B.Tech courses based on 10+2 Inter se Merit)

a) Candidate is required to click on the New Registration link on the Home Page.
b) He/ She has to fill five authentication parameters for gaining access.
   - Fee Slip Roll No.

- Candidate Name
- Father Name
- Date of Birth
- Security Pin as shown on the screen

System will insist students to read eligibility criteria of all participating universities before proceeding further. On pressing OK button, the above data submitted by candidate will be verified with the 10+2 Fee data. If system finds entry of Counselling fee and information provided by candidate, then the candidate will be permitted to register.

Category-wise Seat selection criteria for Engineering Stream Under 85% Punjab quota and 15% Outside State quota

A. **If candidate has Punjab domicile and under 85% quota with any of the following Category(B.Tech Candidates)**

Input Parameters - Roll No., Rank, Category, State Code, Sex

If Candidate is Male then seats under General category and Category specific (if applicable) in Coeducation colleges will be selected by system. No seats of Girls colleges will be selected for a Male candidate

If Candidate is Female, then seats under General category and Category specific (if applicable) in Coeducation colleges + Girls Colleges will be selected by system.

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU General + MRSPTU General + PAU General
2.	SC /ST	☑	IKGPTU General, SC + MRSPTU General, SC + PAU General, SC
3.	BC	☑	IKGPTU General, BC + MRSPTU General, BC + PAU General, BC
4	T-Sunami	☑	IKGPTU General, TS + MRSPTU General + PAU General, TS
5.	Freedom Fighter	☑	IKGPTU General, FF + MRSPTU General, FF + PAU General, FF
6.	Backward Area	☑	IKGPTU General, BA + MRSPTU General, BA + PAU General
7	Defence Personnel	☑	IKGPTU General, DF + MRSPTU General, DF + PAU General
8	Terrorist / Riots Victims (RT)	☑	IKGPTU General, RT + MRSPTU General, RT + PAU General
9	Para Military forces (WPP)	☑	(IKGPTU General, WPP + MRSPTU General, WPP + PAU General)
10	Handicapped blind (DPB)	☑	(IKGPTU General, DPB + MRSPTU General, DPB + PAU General)

11	Handicapped Deaf and Dumb (DPD)	☑	(IKGPTU General, DPD + MRSPTU General, DPD + PAU General)
12	Handicapped Others(DP).	☑	(IKGPTU General, DP + MRSPTU General, DP + PAU General)
13	Widows / Divorced Women	☑	(IKGPTU General + MRSPTU General, DW + PAU General) ***No male candidate will fall under this category and these seats are exclusively for Female candidates***

Rural Area Category/Status

University	General	Rural Status opted	Seats to be shown
PAU Ludhiana	☑	☒	General

Sports Category

University	General	Sports Category	Seats to be shown
PAU Ludhiana	☑	☒	General seats
IKGPTU	☑	☑	General + sports category seats
	☑	☒	General seats
MRSPTU	☑	☑	General + sports category seats
	☑	☒	General seats

Border Area Seats

University	General	Border Area Category	Seats to be shown
PAU Ludhiana	☑	☒	General
IKGPTU	☑	☑	General + Border Area category seats
	☑	☒	General
MRSPTU	☑	☑	General + Border Area category seats
	☑	☒	General

Special Case for Fee Waiver Category Seats under IKGPTU/MRSPTU

For incorporating seats under Fee Waver in B.Tech Courses, as per discussion with IKGPTU Officials, these seats will be added separately for each courses and shown as a separate course. These seats will be made available to those students, who at the time of registration opted for Fee Waiver scheme. These students will also be eligible for B.Tech Courses normal seats as well.

Category	Eligibility for IKGPTU & MRSPTU opted by the Candidate	Seats to be shown
Fee Waiver	☑	(IKGPTU+MRSPTU Fee Waiver Category)

Special Case for Rural Seats and Sikh Minority Seats under IKGPTU (Guru Nanak Dev Engineering College, GNDEC – Evening shift & Baba Banda Singh Bahadur EC)

University	Sikh Minority + **Sikh Test passed** *				Sikh Minority + **Sikh Test Not passed** = Non Sikh Minority(Normal Classes) **$**				Seats to be shown
	Rural *.1		Urban *.2		Rural $.1		Urban $.2		
	General 1	SC/ST, BC, BA, SP etc 2	General 3	SC/ST, BC, BA, SP etc 4	General 5	SC/ST, BC, BA, SP etc 6	General 7	SC/ST, BC, BA, SP etc 8	
IKGPTU / MRSPTU	☑								1+3+5+7
		☑							1+2+3+4+5+6+7+8
			☑						3+7
				☑					3+4+7+8
					☑				5+7
						☑			5+6+7+8
							☑		7
								☑	7+8

Hint – Where Sikh Test passed is ticked, seats (1 to 8) are applicable.
Where Sikh Test passed is **NOT ticked,** seats (5 to 8) are applicable

B. **If candidate has other State domicile and under 15% JEEMAIN quota with any of the following Category (APPLICABLE FOR B.Tech Course, B.Tech 10+2 Course only)**

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU General + MRSPTU General + PAU General
2.	SC /ST	☑	IKGPTU General,SC + MRSPTU General,SC + PAU General,SC
3.	BC	☑	IKGPTU General, BC + MRSPTU General, BC + PAU General, BC

Special Case for Sikh Minority Seats under IKGPTU & MRSPTU (Guru Nanak Dev Engineering College, GNDEC – Evening shift & Baba Banda Singh Bahadur EC)

University	Sikh Minority + **Sikh Test passed Urban Seats only**		Sikh Minority + **Sikh Test Not passed** = Non Sikh Minority(Normal Classes) **Urban Seats Only**		Seats to be shown
	General 1	SC/ST, BC 2	General 3	SC/ST, BC 4	
IKGPTU / MRSPTU	☑				1+3
		☑			1+2+3+4
			☑		3
				☑	3+4

Available Choices:
After successful login and on clicking the link "Available Choices", the systems internally retrieve the credentials of the candidate like gender, category, subcategory, state of eligibility and eligibility remarks from the candidate's database and the available choices specific to the candidate based on his/her credentials.

All the choices of B.Tech Courses (includes both Fee waiver B.Tech Courses and non Fee waiver B.Tech Courses) will be displayed in choice filling section for these candidates and they can select choices as per their priority. The candidates may opt same course for fee wavering scheme and as well as for Non fee wavering Scheme.

Choice Submission:
On clicking the "Choice Submission" button, the available choices to the candidate will be displayed in the left side frame and on clicking the add button, it will be removed from the left frame and will be added into right frame. User can sort their choices University-wise also.

Choice Edit – Swap / Move Choice / Delete Choice:

System will provide the students with option of swapping already selected choice, setting their order(moving the choices or deleting the choices.

Save Choices

During choice selection, Candidate can click on "Save Choices" button to save his choices. System will save the choices and keep the screen open for Candidate to select more choices.

Save and Exit

Clicking on Save and Exit button will save the choices filled by candidate during the session and close the screen. It will take Candidate to **Displaying Filled Choices** section, where Candidate can take a printout of saved choices, which includes Choice saving date time and IP address.

After saving the choices, if a candidate logs in again, then the saved choices given by the candidate will be displayed and can be modified or altered by the Candidate.

Seat Allotment & Publishing of Result

Seat Allotment will be done by IKGPTU Technical Team by downloading the choices filled by registered candidates and processing as per approved algorithm. After verification and approval by the technical team, the result will be uploaded into the website.

SMS Alert to Candidates

Successful candidates, who get a seat in the Counselling round will get a SMS indicating the seat allotted and College details.

Printing of Allotment Letter

Candidate who gets a seat, can login to his portal and take printout of the Provisional Allotment Letter, which he will produce at the allotted College during admission period.

Seat Withdrawal

Admitted candidate, if wishes to surrender his seat during reporting time in both round and upto 7 days after completion of counselling, can do so by giving his consent absolving concerned University.

Subsequent 2nd round student access methodology

In the subsequent rounds, new students, who wish to join Counselling for the first time will go through the same process as given above for the Ist round. Students who are already registered and exercised their choices can access the system in following fashion.

Candidate will fill five authentication parameters for gaining access.

- Roll No.
- Rank (JEEMAIN or IKGPTU generated)
- Candidate Name
- Date of Birth as printed in Admit Card
- Security Pin as shown on the screen

If all the five parameters are valid and match the Candidate database, then a new Re-registration/Confirmation screen will appear. In which candidate will give an undertaking that

"Before participating in the second counselling, I have understood that if I am allotted a seat in the second counselling, my previous seat in 1st counselling shall automatically be cancelled and replaced by the seat allotted in second counselling. My claim for previously allotted seat stand forfeited. I shall have claim only on the seat allotted in second counselling. I have further understood that I should fill only those choices which are preferred over the already confirmed seat in first counselling. " On accepting the Declaration, candidate will be registered in the system. System will give following information.

"In the second round, Candidate can also fill College/Branch even if Available seats section shows Zero(0) seats. In case any candidate, who has been allotted the seat in 1st round vacates the seat during 2nd round, the same will be made available to other candidates in the 2nd Round itself."

Procedure for B.Tech students based on 10+2 Inter se Merit

During 1st round of B.Tech Counselling, students registered under B.Tech 10+2 Inter se merit course will be permitted to register themselves. After completion of 1st round of B.Tech, Rank will be prepared of registered candidates as per following procedure and PTU verification team will check and approve the Rank. On approval, the rank will be uploaded into the course.

Tie Breaking

In case of tie the same shall be decided as follows

i. The candidate scoring higher marks in Compulsory subjects shall be higher in merit
ii. In case of tie in (i) above, candidates scoring higher marks in Physics shall be higher in merit.
iii. In case of tie in (ii) above, candidates scoring higher marks in Mathematics shall be higher in merit.
iv. In case of tie in (iii) above, candidates senior in age shall rank higher in order of merit.
v. In case of tie in (iv) above, candidates scoring higher marks in 10th examination shall be higher in merit.

2nd round for B.Tech course and B.Tech 10 + 2 Inter se merit Course will run simultaneously. After closure of Choice filling period of both courses, first choices of students in B.Tech course will be processed and allotted seats. Once all students under B.Tech and B.Tech Fee Waiver course are allotted seats depending upon their Choices, leftover seats will be processed for students under 10+2 Inter Se Merit course based on their choices, eligibility criteria and Universities Rules.

Both the results will be declared simultaneously and students can take admission during reporting period.

6.2 Seat Allotment procedure for First Counselling for candidates of Punjab 85% and Other State 15% JEEMAIN Rank-wise Seat Allotment procedure for First and subsequent counselling.

Assumption:

a. Candidate has to register himself and fill choices. If candidate does not fill any choices, he will not be eligible for counselling.
b. Seat Matrix is to be uploaded fresh before the start of counselling.
c. Based on JEEMAIN test Rank will be unique i.e. no two candidates will have same rank in general merit list. The general merit list will include candidates of all categories.
d. Candidates from Punjab residents will be considered under Punjab 85%.
e. Candidates from Chandigarh UT are only eligible to participate in online counselling through 15% JEEMAIN quota. However only in case of PAU, PUNJAB and Chandigarh are considered as One State. For rest of the Universities i.e. IKGPTU, GNDU and PU Punjab and Chandigarh are different states.

Algorithm:

1. Sort the candidate's data stored in Registration table rank wise with condition where choices have been locked.
2. Process the data of first candidate.
3. Store the value of sex, category code, sub-category code, in the temporary variables.
4. Identify eligible categories, subcategories on the basis of category, subcategory and Priority as applicable of candidate and store it in arrays.
5. Process the choices of candidate for each category in the same sequence as described elsewhere in the document.
6. If seat is available then allocate the seat to candidate
7. Update the seat master and reduce the value of seats available in the seat matrix by 1 against the particular institute
8. Repeat above steps for all candidate.

6.2.1. Algorithm for Seat Allocation Procedure for 85% Punjab Candidates

For 85% Punjab Candidates: Following categories/sub-categories exist;

- General
- SC/ST
- Backward Class (BC)
- T-Sunami(TS)
- Border Area(BR)
- Backward Area (BA)
- Sports Person (SP)
- Widows of Defense Personnel (DF)
- Widow / Divorced Women
- Terrorists/Riots victims (RT)
- Children/Widows of Para military forces (PM)
- Freedom Fighter (FF)
- Disabled Person-Blind (DPB)
- Disabled Person -Deaf (DPD)
- Disabled Person-Others (DPO)

Seat Allocation sequence for 85% Punjab Quota

Following rules shall be applicable for seat allotment for counselling for 85% Punjab category for all the institutions under IKGPTU/GNDU/PU/PAU participating in counselling located in Punjab.

In case of IKGPTU, seats under Fee Waiver Category will be processed as a separate category depending upon choices filled by the Candidate.

Counselling for seats for the Children /Widows of Defense Personal category, Sports Person, under Para Military Forces Personal and under Terrorist/Riot affected category is done in the order of sub-category, priority, rank (as applicable) and eligibility condition.

The following cases are checked and searched for a Candidate until seat is allotted or options are exhausted for JEEMAIN merit Rank.

FOR General Merit List :

The seats based on rank wise list, will be allotted in the following sequence:

Case 1: If candidate has opted for Fee Waiver and filled Fee waiver seat choices (Applicable for B.Tech only)
Candidate can fillup Fee waiver seat choices in addition to his category based choices. Check the seat for **Fee Waiver**, if it is available then seat is allotted else go to candidate's next choice. Repeat till a seat is allotted or all the choices are processed.

Case 2: If candidate is General, no subcategory
Check the seat for **General (Open quota)**, if it is available then seat is allotted else go to candidate's next choice. Repeat till a seat is allotted or all the choices are processed.

Case 3: If candidate is having any one of the reserved category, following is the seat allotment criteria
All the reserve category candidates will first be considered in General Category. In this case JEEMAIN Rank is the allotment criteria. Check the seat for **General (Open quota)**, if it is available then seat is allotted else check the seat in respective Reserve Category(SC/ST,BC, T-Sunami(TS)/BA/ BR/ FF). If seat is available then allot the seat else go to candidate's next choice. Repeat this process till a seat is allotted or all the choices are processed.

- ✓ If candidate is DF then allocation is done on the basis of sub-category and priority.
- ✓ If candidate is PM then allocation is done on the basis of sub-category.
- ✓ If candidate is RT then allocation is done on the basis of sub-category.
- ✓ If the candidate is SP than allocation is done on the basis of subcategory and eligibility criteria of the participating universities.
- ✓ If candidate is DPB/DPD/DPO, then allocation is done on the basis of respective category(i.e. DPB/DPD/DPO) and checking for leftout seats in any of (DPB/DPD/DPO) categories.

Fee Waiver	General	***Category*** (SC/ST,BC, T-Sunami(TS) / DF/ BA/ BR/ FF /RT/ PM/ DPB/ DPD/ DPO)	Sequence of Allotment
√			**Fee Waiver**
	√		***General (Open)***
		√	***General (Open), (SC/ST,BC, T-Sunami(TS)/ DF/BA/BR/FF/SP / RT/ PM / DPB/DPD/DPO/WD)*** 1. For Categories (DF, SP, PM, RT) Seat Allotment Sequence will be General, category of Candidate (In General category seat

			allotment will be done on the basis of Rank whereas in his own Category allotment will be done on the basis of sub-category, priority , rank and eligibility criteria of participating universities). 2. In all other category (General, SC/ST,BC,T-Sunami(TS), BA, BR, FF,WD) JEEMAIN Rank is the allotment criteria. 3. In Handicap categories (DPB/DPD/DPO), Seat allotment sequence will be General, category of Candidate and balance seats of any of DPB/DPD/DPO) categories. JEEMAIN Rank is the allotment criteria.

Note: In Sports Category selection criteria for participating universities is as follows

Inder Kumar Gujral Punjab Technical University, Jalandhar	Accepts Grade A, Grade B, Grade C & Grade D and Priorities of Medals (Gold/Silver/Bronze/Participation)
Maharaja Ranjit Singh Punjab Technical University, Bathinda	Accepts Grade A, Grade B, Grade C & Grade D and Priorities of Medals (Gold/Silver/Bronze/Participation)

6.2.2 Rural Area Seats Allocation under IKGPTU & MRSPTU

1. Special reservation criteria/policy exists in the case of Guru Nanak Dev Engineering College, Ludhiana and Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib. There are separate reservation of 70% and 30% separately for Rural and Urban categories respectively. The reservation for all the categories and sub-categories is followed separately under these and allotment of seats is made accordingly as per the state policy**.**

Algorithm for Seat Allocation Procedure for GNDEC, LDH and BBSBEC, FGS in Rural Area

Following rules shall be applicable for seat allotment in Guru Nanak Dev Engineering College, Ludhiana and Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib.

Case type	Candidate belonging to	Seat allotment Sequence
Case 1	General Category, Urban	1. General Category, Urban
Case 2	General Category, Rural	1. General Category, Urban 2. General Category , Rural
Case 3	Specific Category, Urban	1. General Category, Urban 2. Specific Category, Urban
Case 4	Specific Category, Rural	1. General Category, Urban 2. General Category , Rural 3. Specific Category, Urban 4. Specific Category, Rural

Algorithm for Seat Allocation Procedure for GNDEC, LDH and BBSBEC, FGS in Sikh Minority

Following rules shall be applicable for seat allotment in Guru Nanak Dev Engineering College, Ludhiana and Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib.

Case type	Candidate belonging to	Seat allotment Sequence
Case 1	Sikh Minority, General Category, Urban	1. SM General Category, Urban

		2. NSM General Category Urban
Case 2	Sikh Minority General Category, Rural	1. SM General Category, Urban 2. NSM General Category, Urban 3. SM General Category, Rural 4. NSM General Category, Rural
Case 3	Sikh Minority Specific Category, Urban	1. SM General Category, Urban 2. NSM General Category, Urban 3. SM Specific Category, Urban 4. NSM Specific Category, Urban
Case 4	Sikh Minority Specific Category, Rural	1. SM Urban General 2. NSM Urban General 3. SM Rural General 4. NSM Rural General 5. SM Urban Category Specific 6. NSM Urban Category Specific 7. SM Rural Category Specific 8. NSM Rural Category Specific

SM – Sikh Minority, NSM – Non Sikh Minority

6.2.3 Algorithm for Seat Allocation Procedure for 15% JEEMAIN General for candidates outside Punjab

Following rules shall be applicable for seat allotment for counselling for 15% JEEMAIN All India category for all the institutions under IKGPTU/MRSPTU participating in counselling located in Punjab

- For 15 % seats (Other State): Following categories/sub-categories exist;
  General, SC/ST, BC
- Under the 15% All India category further reservation is provided for 70% General, 25% SC/ST category and 5% for BC category.
- All the cases, irrespective of the category, will be dealt one by one as per rules and regulations applicable and as per the case/category.

Case 1: If candidate is General and under Non Sikh Minority

Check the seat for **Non Sikh Minority General (Open i.e. from 70% quota)**, if it is available then the seat is allotted else his/her next choice is searched for.

Case 2: If candidate is from any one of the Non Sikh Minority reserved category, following is the seat allotment criteria

Check the seat from Non Sikh Minority general quota if seat is not available then check the seat from respective Non Sikh Minority reserved category.

Case 3 : If Candidate is under Sikh Minority and General

Check the seat for **Sikh Minority General (i.e. from 70% quota)**, if it is available then seat is allotted else check the seat from Non Sikh Minority General else his/her next choice is searched for.

Case 4: If candidate is from any one of the Sikh Minority reserved category, following is the seat allotment criteria

Check the seat from Sikh Minority general quota if seat is not available then check from Non Sikh Minority general quota if seat is not available there then check the seat from respective Sikh

Minority reserved category else check from Non Sikh Minority reserved category . If seat is available than it will be allotted to the candidate else his/her next choice is searched for.

6.3 Seat Allotment procedure for Second Counselling for candidates of 85% / 15% (2nd Round)

Pre-requisites/Assumptions:

a. Candidates falling under 85% / 15% quota will be eligible for 2nd Round of Counselling. Candidate has to reconfirm his registration for the 2nd counselling and fill fresh choices. Candidates, who have participated in 1st counselling, need not pay counselling fee again, whereas new candidates appearing in counselling for the first time will have to deposit counselling fee and register themselves in the website. If candidate does not fill any choice for 2nd counselling, then he will not be eligible for 2nd counselling.

b. Candidate can also include the same choice in 2nd counselling against which he is allotted seat in the first counselling. In such case choices which are listed before this choice will be processed. For example a candidate has filled 5 choices in 2nd counselling and choice no 3 is same for which candidate is allotted seat in first counselling. In this case first two choices will be processed.

c. Seat Matrix will be uploaded afresh before the start of second counselling.

d. Seat Allocation will be done exactly as per rules adopted in Ist round of Counselling, i.e. no seats will be merged.

e. If a candidate has been admitted against his allotted seat in his category(reserve) in previous counselling, the seat will not be changed in the subsequent round of counselling for the Same branch and Institute with regards to category.

Note: Candidates once opted a category can not change his category without the permission of Chief Co Ordinator(admission).

Algorithm:

a. Sort the candidate's data rank wise once the choices are locked
b. Process the data of first candidate.
c. Store the value of sex, sub-category, and category temporarily.
d. Identify eligible categories, subcategories on the basis of category and subcategory of candidate, priority(as applicable) and store it in arrays.
e. Process the choice's of candidate for each category in the same sequence as described in first counselling.
f. If seat is available then temporarily allocate the seat to candidate
g. Update the Seat matrix and reduce the value of seats available for the particular branch by 1 against the particular institute
h. Transfer the seat allotted to the candidate in the first counselling to vacant pool.
i. Repeat above steps for all candidate. (first iteration is complete)
j. Next iteration will start and will repeat all the above steps till vacant pool seats become 0.

6.4 Participating Institute and Administrator Module

6.4.1 On-Line Admission Reporting by the Participating Institutions:

General Assumptions

- Individual candidate shall print a "Provisional allotment letter" and shall report to the PIs for admission. In case of any type of problem candidate has to contact Central Control Room of

IKGPTU. In case candidate fails to take admission during the slotted time period, his seat shall remain vacant and shall be declared as vacant for next counselling.

- Credential and documents shall be verified with online data by the designated PI officials.
- If candidate is found eligible, PI will issue provisional admission letter to the candidate.
- In case of up gradation by the candidate he/she will have to participate in subsequent counselling for re-scheduling and saving of choices.
- If a candidate has been allotted a seat or fail to report within specified time limit at PIs shall be allowed to participate in the subsequent phase of counselling, if candidate opts for up gradation against the available vacant seats, declared vacant by various institutions on the counselling website and compiled by the system (as per counselling schedule). If a candidate has not been allotted any seat from his/her choices, such candidate shall be allowed to participate in subsequent round of counselling.
- The candidates, who would like to upgrade their earlier allotted seats, will also be permitted to participate in the subsequent counselling, provided they give a declaration, while they are getting themselves registered for the subsequent counselling, to the effect that they would be vacating the seat allotted to them in the previous counselling. For the subsequent round of counselling, candidate will have to give his/her consent and fill fresh choices. If the candidate shall not get the admission seat from new choice of the subsequent round in such a case, his/her previous admission shall be continued.

Reporting process will start after the allotment of seats as in the previous step and this process will comprise of following steps:

a. After allotment of the seat, the candidate is required to report to the allotted institute for admission within the date specified in the allotment letter. The administrator website will have PI module secured by separate user id and password for each PIs.
b. The credentials and certificates of the candidates are to be verified by PIs as part of the admission process at the reported Institute. If the credentials and certificates are found wrong the allotment will be canceled and the admission is denied otherwise the admission is granted.
c. Candidates are required to pay the fees in the prescribed form at the designated bank.
d. The authorized institutes can access candidates' details who have been allotted to a specific institution. All the PIs are required to update the successful candidates' data on web to complete the process of admission. It will facilitate to compile filled and vacant seats.
e. On successful verification of the documents, Institute designated officials will generate an admission slip. One part of the slip will be handed over to the candidate and second part will be retained by the Institute.
f. PIs can also generate reports on admitted candidate course wise round wise or roll no wise, list of vacant seats etc.

6.4.2. Administrator Module :- IKGPTU Administrator will be responsible for technical conduct of the counselling including initial seat matrix creation, schedule preparation, uploading of static contents, message management and interaction with NIC Hqrs Counselling helpline etc. He/she will login to the website http://intraptu.nic.in using two level userid and password.

IKGPTU Administrator will have following facility in his account.

1. Creation of Participating Userid and details thereof
2. Seat availability, leftover & filled status and reports
3. Category Wise & Branch wise Seat Availability/filled/leftover in all institutions
4. Category wise breakup of Seat Matrix
5. Candidate Information Updation
6. Candidate Seat Allotment Details
7. Secured interface for uploading/updating of seat matrices.
8. Online Withdrawal/Cancellation of Candidates' Admission
9. List of Candidates who withdrew their seats

Seat Allotment Module

Since the allotment of seats is to be done by the software using the seat matrices and seat allotment procedure, therefore every bit of required procedure is need to be coded. As per the study and detailed discussions with the user/core committee, following procedure has been designed.

For allotment of a seat, Merit Number (Rank) is not only the criteria but also the eligibility and reservation criteria of candidates are checked. The admissions shall be subjected to the verification of credential and documents in the allotted institution.

For any course, before the allotment starts, Candidate must complete following steps

Step-1: The candidate should deposit the counselling fees of Rs. 2000/- non-refundable.
Step-2: The candidate has to fill up the choices and save it successfully. The candidate is advised to give as many choices as desirable. There is no maximum limit for the choices.

The offline processing module gives the feature of round wise processing and generation of MIS (Institute wise, Rank wise Candidates) Reports

Core & Technical Committee - **Appendix-I**

Various Committees have been formed by Chief Coordinator, IKGPTU Admissions 2017, vide its letter no IKGPTU/REG/53 dated 23/02/2017.

Functions of the Core Committee:

1. Recommendations for finalization of
   - Process and procedure, contents development for website.
   - SRS approvals.
   - Testing of developed software
   - Acceptance of software

2. Verifying the sanctioned seat for allotment / approved institutions before publication

3. Finalization of training requirement / needs

4. Monitoring and coordinating the training

5. Inspecting the facilities of participating institutions regarding online counselling.

6. Coordinating with various concerned agencies related with counselling / admissions

7. Coordination with participating institutions, other Govt. departments / private agencies and various committees

8. All other jobs assigned by the Chief Coordinator and Vice Chancellor cum Chairman, IKGPTU.

Appendix-II

Roles and Responsibilities of IKGPTU & NIC

IKGPTU:

1. IKGPTU/Core committee will approve the SRS and software functionality.
2. IKGPTU will provide payment gateway for integration with Counselling application for collection of online fee though credit card/debit card/ netbanking.
3. IKGPTU shall provide the soft copies of institutions' profiles, seat matrix of all the participating institutions, counselling schedule etc by 20th June, 2017 so as to complete the software development in time.
4. IKGPTU will approve and certify the acceptance of the application software as well as the responsibility of seat allotment will be with IKGPTU
5. IKGPTU shall provide the Merit Number (Rank)s of all the qualified candidates. For B.Tech, JEEMAIN rank will be used, whereas for B.Arch, B.Tech 10+2 Inter Se Merit and B.Pharmacy ;., IKGPTU verification team will verify and approve the Rank prepared by NIC.
6. IKGPTU will identify the PI and their officials so that those could be trained for conducting counselling smoothly at every PI. Also the trained officials of PI shall further educate the candidates for submission of choices.
7. IKGPTU will ensure readiness of the PI, these include required computer hardware, operating software, establishment of LAN, uninterrupted power supply, leased line Internet connectivity. A list of PIs and their respective officials identified for execution of counselling shall be provided to NIC for placing on the website.
8. IKGPTU will take all proactive actions as needed from time to time for proper upkeep of the systems and also for their smooth operations.
9. Making available of all consumables such as computer stationery, CD & toners etc. required for the above services will be the responsibility of PI. PI will be procuring all such items out of their own funds as per the norms/procedures applicable.
10. IKGPTU will provide all the facilities to NIC personnel at par with other personnel deputed for the conduct of counselling, NIC is not making any budget provision in this regard.
11. IKGPTU will make provision in the schedule of counselling for conversion of seats from one category to another and to generate the resultant seat matrix.
12. There may be sufficient time between subsequent counselling's for verification of resultant seat matrices and their uploading on the website other related matters.
13. IKGPTU will provide the Final Candidate Master (JEEMAIN examination) at least Seven days before the actual start of the counselling. At later stage, if required, IKGPTU will itself make changes to the candidate master.
14. IKGPTU will be responsible for unsaving of any final locked choices on request of candidates, and shall inform NIC about the same before processing the seat allotment module.

15. IKGPTU will be responsible for making changes in candidate master, if required.

16 IKGPTU shall provide all the procedure and processes for counselling to put on website for the use of all concerned

17 The PI will also Verify the documents and credentials online, acceptance of admission fees online and updating of admission status of candidates online

18 IKGPTU shall deal with the designated bank to sort out all related problems. In case counselling registration fee deposited by a candidates does not gets uploaded the counselling website, the bank shall sort out the mater. Also the bank shall provide the list of participating branches.

19 IKGPTU shall pass on necessary instructions for successful counselling to the PI s and other stakeholders.

NIC:

1. NIC will
   a. Design, develop and implement the software for online form filling, to be used in on-line counselling
   b. Provide Technical Support and advice to Technical Committee during the counselling process.
2. NIC will develop and implement the software package on the servers & LAN provided by IKGPTU and PI on need basis
3. NIC will provide training as per the mutually agreed schedule to the identified officials of PIs and Technical committee members at the identified locations for helping the candidates in submission of their choices, handling PI level provisional admission process and required operation of the counselling software packages.
4. NIC will give utmost priority and put up dedicated teams for timely completion of tasks as per the timeframes envisaged provided necessary inputs are made available by the IKGPTU in time.
5. NIC will ensure the required security of the data and the databases as per the current technology standards.

Appendix-III

State Codes

State code	State Name
01	Punjab
02	Other States

Master List of Categories/Sub-Categories/Sub-Sub-Categories (Priorities)

Category	Description
General	General
SC/ST	Scheduled Caste/Scheduled tribe
BC	Backward Class
TS	T-Sunami Victims
FF	Wards of Political Sufferers/ Freedom Fighter
BA	Backward Area
BR	Border Area
SP	Sports Person
DF	Children/Widows of Defense Personnel
RT	Terrorist/Riots affected victims
PM	Children/Widows Para military forces
DPB	Handicapped- Blind
DPD	Handicapped- Deaf & Dumb
DPO	Handicapped- Others
RURAL	RURAL
URBAN	Urban
SM	Sikh Minority
WD	Widows/ Divorced Women

Sub-Category for Defense Personnel

Subcategory Code	Description
01	Posthumous Awardees
02	Other Awardees
03	Children/Wards of the Defence Personnel killed or disabled to the extent of 50% or more
04	Serving Defense Personnel/Ex-Serviceman

Priority(Sub-Sub-Category) for Defense Personnel

Priority Code	Description
1	Param Vir Chakra
2	Ashok Chakra
3	Sarvottam Yudh Seva Medal
4	Maha Vir Chakra (MVC)
5	Kirti Chakra
6	Uttam Yudh Seva Medal (UYSM)

7	Vir Chakra (VrC)
8	Shaura Chakra (SC)
9	Yudh Seva Medal (YSM)
10	Sena Nau Sena /Vayu Medal(Gallentry only)
11	Mention in Despatches
12	PVSM
13	AVSM
14	VSM
15	Sena Medal/ Nau Sena/Vayu Sena Medal
16	No Received any distinguished Medal

Sub-Category for Terrorist/Riots affected victims Quota

Subcategory Code	Description
01	Persons killed in 1984 riots / killed as a result of terrorist violence or killed by the security forces acting in aid of civil authority, including innocent civilians and Army Deserters as well as those of these categories who have been disabled physically to the extent of 100% in accordance with the policy already in place
02	Person who were disabled to an extent less than 100%
03	All other categories mentioned in the existing policy under this head

Sub-Category for PM (Children/Widows Para military forces) Quota

Subcategory Code	Description
01	Winners of President's Police Medal for Gallantry
02	Winners of Police Medal
03	Killed or disabled to extent of 50%
04	Children of serving para-military personnel and ex-para military personnel
05	Remaining categories already mentioned

Sub-Category for SP(Sports Person)

Subcategory Code	Description
01	Grade A
02	Grade B
03	Grade C
04	Grade D

Priority(Sub-Sub-Category) for Sports Persons

Priority Code	Description
1	Gold Medal –Senior
2	Gold Medal – Junior
3	Gold Medal – 19 Years
4	Gold Medal – 17 Years
5	Silver Medal – Senior

6	Silver Medal – Junior
7	Silver Medal – 19 Years
8	Silver Medal – 17 Years
9	Bronze Medal – Senior
10	Bronze Medal – Junior
11	Bronze Medal – 19 Years
12	Bronze Medal – 17 Years
13	Gradation, No medal (only participation)

Appendix-IV

Counseling Schedule

(B.Tech. and B.Tech Fee Waiver)

(85% Punjab & 15% Other States)

Activity	***B.Tech alongwith Fee Waiver***	
	Start Date	End Date/Actual
Registration	01-06-2017 11.00 am	05-06-2017 05.00 pm
Choice Filling	Choice filling will start simultaneously with Registration.	
Ist Round Result	**08-06-2017, 11.00 am**	
Reporting in Allotted Institution	09-06-2017 11.00 am	12-06-2017 05.00 pm
2nd Round (85% Punjab and 15% Other states)		
Registration	14-06-2017 11.00 am	17-06-2017 05.00 pm
Choice Filling	Choice filling will start simultaneously with Registration	
2nd Round Result	**19-06-2017 11.00 am**	
Reporting in Allotted Institution	19-06-2017 11.00 am	23-06-2017 05.00 pm

(B.Tech. 10+2 Inter se Merit Fee Waiver)

(85% Punjab & 15% Other States)

Activity	***B.Tech alongwith Fee Waiver***	
	Start Date	End Date/Actual
Registration		
Rank Preparation		
2nd Round (85% Punjab and 15% Other states)		
Choice Filling		
Result		
Reporting in Allotted Institution		

Appendix V

Institutions wise list of courses, eligibility criteria of participating Universities and Counselling Fees will be as per Government notifications No. 13/105/10-1TE2/225 dated 18-03-2017 for B. Technology issued by Government of Punjab, Department of Technical Education and Industrial Training(Technical Education Branch II)

I.K GUJRAL PUNJAB TECHNICAL UNIVERSITY
ਆਈ.ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ
Established in 1997
Propelling Punjab to a Prosperous Knowledge Society
1800-419-0730(General query)
studentcentre@ptu.ac.in
www.ptu.ac.in

SYSTEM REQUIREMENT SPECIFICATION

OF

IKGPTU – 2018 WEB COUNSELLING

for

Admission to Engineering Degree Courses in the Colleges under Inder Kumar Gujral Punjab Technical University, Jalandhar, Maharaja Ranjit Singh Punjab Technical University, Bathinda and Punjab Agricultural University, Ludhiana

Submitted to

Technical Committee

Inder Kumar Gujral Punjab Technical University (IKGPTU)

Version 3.6

May 2018

Submitted by

e-Counselling and e-Admission Division

National Informatics Centre

Ministry of Communication & Information Technology

Government of India

A – Block, C.G.O Complex

New Delhi– 110003

Amendment Log

Sr No	Version	Date of Release	Changes	Remarks/Change description
1	3.0	18/04/2016	Ist edition	•
2	3.1	07/05/2016	Appendix	• List of Colleges have been removed and it will be followed by Government notification
3	3.2	01/06/2016	University / Institution mapping	• Mapping of Colleges have been incorporated as per changes.
4	3.3	02/06/2016	10+2 Counselling	• Inclusion of Procedure for students participating under 10+2 inter se merit.
5	3.6	05/05/2017	Online Fee Payment	• Inclusion of Online Fee Payment module for all courses

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1. Introduction

The Inder Kumar Gujral Punjab Technical University(IKGPTU) was established in the year 1997 under The Punjab Technical University Act, 1996 (Punjab Act No. 1 of 1997) to provide for the establishment and incorporation of a University for the advancement of technical education and development thereof in the State of Punjab and for matters connected therewith. In pursuance of this Act, the University started its journey with 09 engineering colleges and few management colleges affiliated to it. Since then the University has come in a long way and during the Academic Session 2017-18, the University has affiliated 65 Engg. Colleges, 109 management and Computer Application courses, 33 institutions imparting Pharmacy education, 08 colleges imparting hotel management education, 06 colleges providing Architecture Education, 11 Regional Centres for M.Tech and Ph.D. in different branches of Engineering and Management and 01 Regional Centre for M. Pharmacy. The IKGPTU is responsible for producing quality technical manpower in the field of Engineering and Technology through AICTE approved Govt. / Govt. Aided / Self-financed Institutions and University Departments. The norms and standards prescribed by AICTE are being followed.

For admission to various technical courses namely B.Tech / Degree Pharmacy, the state government used to conduct entrance tests viz. CET. As result of entrance tests, manual computerized counselling were conducted by different institutions/nominated agencies for completion of the admission process for various courses, which was very cumbersome & tiresome process.

Keeping in view the generic problems faced by the candidates, their parents and by the state administration, it was decided to give up the manual counselling system and adoption of modern web based online off campus counselling system to bring in transparency & efficiency for making merit based admissions.

The National Informatics Centre (NIC), the premier Science & Technology organization of Government of India under Union Ministry of Information Communication & Technology is entrusted to accomplish the task of Software development, testing & implementation of Web based e-Counselling for admissions to B.Tech, B.Arch and B.Pharmacy Degree courses being run in all type of institutions in the State.

1.1 Purpose

This document outlines the Software requirements Specification (SRS) for the project of web based e-Counselling and requirement for finalization and approval of:

- The functional areas of counselling
- The online seat allotment procedure
- The Seat matrices as per the reservation policy /distribution of seats
- Conversion/merging of reserved seats
- INPUT/OUTPUT layouts & Data Requirements
- Required Hardware software interfaces
- Infrastructure and resource requirement at PI & CCR.

- Process and Procedure for counselling

For development of software package for **e-Counselling** of IKGPTU, Punjab, SRS has been prepared to facilitate the team of software developer and to apprise the user regarding all aspects of Web based counselling.

Once approved, the SRS document will be referred as a base document for design and software development by IKGPTU and NIC software development team. SRS is the outcome of the feasibility and analytical study of the counselling system.

1.2 Scope

The main scope of the SRS is to identify the processes and procedures that will meet the specified requirements and also available from the technical, economical, logistical and operational point of view. It is also required to establish whether the project will be implemented successfully not only to meet meaningful rationale but also in aspects to withstand legal, economical and technical viability as well. This SRS will enhance the likelihood of success, reduces project risks and minimizes shortcomings due to shortsightedness caused by the lack of research, in-depth study and analysis of various aspects of the project.

The scope of the proposed web based counselling shall be applicable to all the courses offered by following institutions as listed below.

i. Inder Kumar Gujral Punjab Technical University's affiliated Engineering / Institutions for Engineering & Technology.

ii. Maharaja Ranjit Singh Punjab Technical University affiliated Engineering / Institutions for Engineering & Technology

iii. Punjab Agricultural University, College of Agricultural Engineering, Ludhiana for Engineering Courses

Engineering Four Years Degree Courses:

Course Code	Course Name	Short Name
1	APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING	AEIE
2	AUTOMOBILE ENGINEERING	AE
3	BIO MEDICAL ENGINEERING	BME
4	BIO TECHNOLOGY	BT
5	CHEMICAL ENGINEERING	CHE
6	CIVIL ENGINEERING	CIVIL
7	COMPUTER ENGINEERING	CE
8	COMPUTER SCIENCE & ENGINEERING	CSE
9	ELECTRICAL ENGINEERING	EE

10	ELECTRICAL AND ELECTRONICS ENGINEERING	EEE
11	ELECTRONICS & COMMUNICATION ENGINEERING	ECE
12	ELECTRONICS AND ELECTRICAL COMMUNICATION ENGINEERING	EECE
13	ELECTRONICS AND INSTRUMENTATION ENGINEERING	EIE
14	FOOD TECHNOLOGY	FT
15	INDUSTRIAL ENGINEERING	IE
16	INFORMATION TECHNOLOGY	IT
17	INSTRUMENTATION AND CONTROL ENGINEERING	ICE
18	MECHANICAL ENGINEERING	ME
19	PRODUCTION ENGINEERING	PE
20	TEXTILE CHEMISTRY	TXC
21	TEXTILE ENGINEERING	TXE
22	AGRICULTURAL ENGINEERING	AGR

Note: NIC shall provide the complete database of all the candidates, applied and registered on line to IKGPTU. IKGPTU will process the data as per admission rules and criteria and prepare the merit list of all eligible candidates along with reserved category candidates. IKGPTU will provide the same database to NIC after inserting merit rank of eligible candidates**.**

1.3 Objectives

This year, 10th time in a row, IKGPTU is conducting Web based counselling for admissions to all B.Tech, B. Arch AND B.Pharma courses in all technical institutes under participating universities with following main objectives;

- To bring in 100% transparency in seats allotment and admissions.
- To build strong public interface to minimize travel burdens on counselees & their parents for counselling.
- Providing enough time to counselees for submission, change, delete, re-ordering of multiple choices from anywhere any time.
- Availability of required information, queries, reports at different levels.
- Centralized database and centralized monitoring.
- Less Paper counselling and Increase in number of registrations and allotments
- Secured and controlled data access at every level.

- Provide fair chance of allotment to eligible candidates following the merit list in case seat are vacated by other candidates on the top of merit. Otherwise, in physical counselling it is allotted in the subsequent allotments, the meritorious candidate will be denied of his choice and the seat will be allotted to a candidate, who is lower in the merit.

1.4 Key words Definitions

Web based e-Counselling	Online Form Filling & Submission of Choices from any Internet point
Provisional Admissions at PI.	Verification of documents, fees and acknowledging provisional admission
Participating Institute (PI)	An Institute participating in counselling.
Help Center	An Institute providing help to the candidate for training, registration, choice selection, saving etc.
Course/stream	Stream like Engineering
Branch	Discipline under which candidate would be offered a seat
Counselees	Candidates Qualified for Counselling
Seat Allotment	Seat allotted on the basis of merit Number (Rank) provided by the IKGPTU
Bank	A bank designated by IKGPTU for collection of counselling fee
Registration fee	As per Appendix V
Open Category	Seat available for all
Reserved categories	SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others
Seat matrix	A table showing the available seats and their bifurcation among different categories as per the reservation policy of the state. The seat matrices are institute, course/ branch and categories wise
MERIT NUMBER(RANK)	Unique Position of the counselees as defined and provided by IKGPTU
Intake	Sanctioned Intake as per AICTE (seats in a discipline)

1.5 Abbreviations & Acronyms

AICTE	All India Council of Technical Education
JEEMAIN	All India Engineering Entrance Examination
BA	Backward Area
BC	Backward Class of Punjab
BR	Border Area
CC	Counselling Centre
CCR	Central Control Room of IKGPTU
DF	Children/Widows of Defense Personnel
DP-Others	Disabled Persons others
DP-Deaf	Disabled Persons deaf
DP-Blind	Disabled Persons blind
FF	Children /Grand Children of Freedom Fighter
GEN	General
NIC	National Informatics Centre
PI	Participating Institutes
PM	Children/Widows of Para military forces
IKGPTU	Punjab Technical University
RT	Terrorists Affected/Riots Affected
SP	Sports Persons
SC/ST	Scheduled Caste & Schedule Tribes
SRS	System Requirement Specifications
TS	Tsunami effected persons.
MRSPTU	Maharaja Ranjit Singh State Technical University
PAU	Punjab Agriculture University
WD	Widows/ Divorced Women

1.6 References

Following documents have been referred during preparation of SRS;

- Specifications/Requirements document by the Core Committee constituted by IKGPTU
- Seat Matrices provided by IKGPTU
- Feedback from various Meetings held with IKGPTU and concerned officers.
- IKGPTU Prospectus 2018 and Notifications for different courses

2. Functional Areas / System Requirements

2.1 functional activities

a) The SRS has been prepared for development, testing, implementation and certification of counselling software.

b) **Core Committee has been constituted by IKGPTU** for helping in finalization of Process and Procedures of Counselling and for the approval of regulatory requirements and software specifications (SRS) etc.-placed on **appendix-I (appendix-I contains name of the Core Committee and Technical Committee members)**

c) Roles and responsibilities for NIC & IKGPTU are described in **Appendix-II**

d) Counselling **process and methodology to be** approved by the IKGPTU

e) Circulation of counselling Procedure, Process & Instructions to PIs along with requirement of hardware, software, connectivity, infrastructure and manpower for conducting of training, submission of choices by candidates and making their admissions as per the allotments of seats.

f) Infrastructure in terms of hardware, software & connectivity for PI /Help Centers and IKGPTU.

g) Finalization of information brochures for placing on websites and due publicity

h) Finalization of counselling schedule-placed at **appendix-IV**

i) Finalization of **seat matrices,** institution & branch wise as per the state reservation policy.

j) IKGPTU will provide payment gateway in advance for facilitating students to deposit fees online. NO FEE will be accepted through Challan or in cash. Filling up of the fee related data in the prescribed format should be the responsibility of the candidate. The designated bank details need to be listed in all documents to be read by Candidates, PIs, IKGPTU and NIC.

k) **Development & testing of counselling** software package by NIC and approval by IKGPTU. Seat allotment algorithm also will be certified by IKGPTU and complete user acceptance test will be done by IKGPTU.

l) Awareness training for core committee PIs & Help Centers members on counselling software.

m) Training to the identified officials of selected PIs/Help Centers on identified locations in the presence of core-committee members to operate the counselling software for successful counselling and further to train the remaining officials of Help Centers and candidates for choice making and saving.

n) Candidates shall be given time as per the counselling schedule decided by IKGPTU to exercise their choices during counselling's as per the counselling schedule decided by IKGPTU

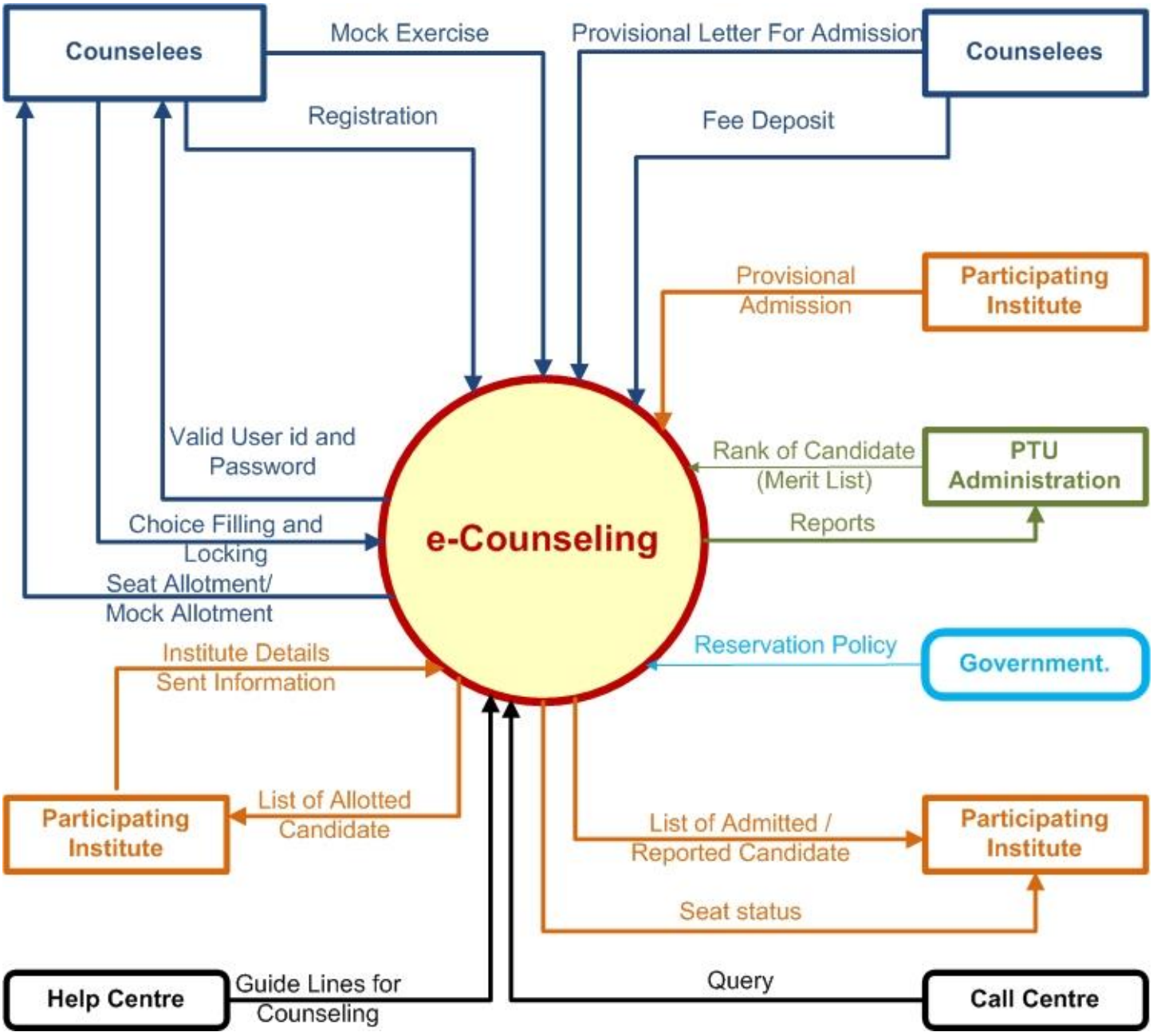
o) Allotment of seats shall be done as per the seat allotment procedure and seat matrices provided by the IKGPTU. The results shall be published on the counselling website after choice saving period of each round of counselling.

p) *Concerning PIs shall provisionally admit the candidates after verification of credentials and documents. If any candidate does not report to PI for provisional admission with in stipulated period as per the counselling schedule, her/his seat allotment will be treated as cancelled.*

q) Concerning PI will update admission status on the website and IKGPTU shall declare unfilled/leftover seats-instructions.

r) Withdrawal of Seats will be taken care of by IKGPTU Administrator through Admin module.

2.2 Context Diagram



2.3 User Interface

2.3.1 Candidates Interface

While operating the counselling website by the candidates for online form registration, choice filling & saving etc, On-line help is provided which explains about every function of the software i.e. How candidates should make online payment, exercise their choices. Designated Trained officials identified by IKGPTU shall be available at Participating Institutes to help the candidates during counselling.

Candidates can also exercise their choices from cyber cafes and other nearby Internet gateways.

Following software interface shall be available for candidates during "web based e-counselling"

- **Online Fee Payment :-** Candidates will be able to pay Fees through Online mode as provided by IKGPTU.
- **New Candidate Registration**: – New candidates will register through the registration form and get the userid and password. All the candidates will have to register on the website provided they have deposited requisite counselling Fee in the designated bank. The system will ask for details like roll no, rank, date of birth etc for cross-verification. It will ask for other details like category, sub-category, Priority etc. It will then ask the candidate to create the password. Candidates will be directed to read the reservation policies of participating universities and Government notifications and give their acceptance. The successful completion of above will complete the registration process.
- If there is any change from the already available information, candidate has to report to the IKGPTU with necessary documentary proofs and IKGPTU Administrator will modify/ update the data.
- Registered candidate can view his data from view profile. If the necessary change does not reflect in view profile, he/she has to contact CCR.
- **Registered Candidate Sign In / Login**
- Change Password
- Registration details
- Choices Available
- Standard Template for Choice with User Defined Scroll up/down on Template without change Original Template after Copied into Choice Fill
  - Branch wise
  - College wise
- Choices Edit – Interchange(Swap)
- Choices Edit – Rearrange(Move)
- Choices Delete
- Save choices
- Choices Print (report format)
- Result
- Withdrawal of Seat
- **Generation and printing of Allotment letter**
- Log out

2.3.2 PI Interface

- Candidates Reported at PIs
- Online candidate information Display (for verification)
- Online Fee verification
- Provisional Admission
- Document verification with generation of document verification checklist and signed by candidate and PI.
- Printing of Admission Letter.
- Updation of admission status on the counselling website.

2.3.3 Administrator Interface

- List of Institutes, Institute Profile & Institute Course Summary
- Seat Matrix Entry , Seat Matrix Summary and different views
- Candidate Details (Registered Candidate) and Edit Registration
- Message Entry, Counselling Schedule
- Candidate Original Information (Unregistered Candidate)
- Admission Status (Course Wise Details, Name Wise Allotment, Admitted Candidate List, Candidate Who Got Refund, Admission Withdrawal and Vacancy Position)

2.4 System External interface

2.4.1 Data requirement from IKGPTU and Bank

- System will have seamless interface with candidate's data obtained by IKGPTU and Bank as under.

    a. Candidate Record (detailed data)

    b. Valid Merit Number (Rank) Database

    c. Payment Details from the Bank.

Note: Databases obtained by IKGPTU will be hosted on counselling website for registration and counselling process

2.4.2 Data requirement from IKGPTU

[a] Information Brochure for all courses and **Institutes Profiles** will be supplied by IKGPTU to NIC for uploading it to the above-mentioned counselling websites along with the counselling procedure & seat matrices.

[b] IKGPTU will provide following information as well as database to NIC:

- **Participating Institutes** Information, categorization with Govt. / University/ self-finance/Pvt. Institutes, Engineering /Pharmacy wise.
- **Course/Branches wise list** containing branches/disciplines finance/self finance wise.
- **Unique Merit Number (Rank) and detailed data** of candidates appeared in All India Engineering Entrance Examination.
- **Seat Matrix** – for every technical institute having category wise breakup of seats as applicable (SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others)
- **Eligibility criteria's** & **Reserve Categories master**

2.5 Overview of the proposed project

The proposed system of counselling is web based and shall be applicable for admissions to all AICTE approved technical professional courses run by different technical institutes in the state (Govt./Aided/University Departments/self-financed/Private Institutes) to overcome the problems faced by the candidates during manual system.

To meet the requirements of web based counselling, the website **http://ptuadmissions.nic.in** shall be launched. The website shall keep following required links for different activities of counselling.

1. Counselling Website (procedural) with URL: **http://ptuadmissions.nic.in** shall contain procedures and information for counselling w.r.t institutes, availability of seats in different disciplines and categories, profile of institutes, eligibility criteria and counselling procedure.
2. Counselling website with URL: **http://ptuadmissions.nic.in** for registration, exercising of choices and saving/saving the choices during actual counselling and for publishing of results of counselling etc **(**The link shall be activated during actual counselling days).
3. Actual Admission intranet website, URL: **http://intraptu.nic.in** , which shall be accessible through a prescribed User-ID and Password.

All above websites links shall perform following functions:

- Provision for online Counselling fee payment.
- After paying the counselling fees, students can register themselves on the website
- Information relating to Institutes, disciplines (Engineering), branches (e.g. Civil Engineering or Computer Science etc.) and categories (General, SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others) should be displayed through relevant menus.
- Secure user/password based Login and the system will provide the facility to add, change, re-order, delete the choices in respect of institutions and branches.
- Candidate can save their choices, when ever required using <Save Choices> button.

- Candidate can get print of their choices after Final saving, but list of choices and indicative seat matrix can be printed, whenever required.
- The system shall process the submitted choices and generate the indicative seat Matrix (latest positions of seat availability)
- Processing for Seat allotment & final seat allotment shall be published on Website.
- Candidates shall print their allotment letter and will report to the PIs for admission with in prescribed time period.
- Document Verification, generation of document verification checklist and updation of final admissions by Institutes will be done by PIs on the Website.
- The system shall provide required online query/Reports.
- After completion of admission period for counselling, the leftover/unfilled seats shall be transferred for consequent counselling.
- Online Withdrawal facility will be managed by IKGPTU Administration. Candidates, who are willing to withdraw from Counselling after taking admission in allotted college, will give the request to IKGPTU administration.
- Subsequent counselling's based on the vacant seats/leftover /unfilled / merged seats

2.6 Assumptions and dependencies

- All Counselling's based on IKGPTU merit list(JEEMAIN for B.Tech**, IKGPTU Rank for B.Arch and B.Pharma).
- Merit Numbers (Rank) for each candidate should be UNIQUE (i.e. no two candidates can have same Merit Number (Rank) in a stream).
- IKGPTU will finalize/provide and upload all required master data including seat matrices(of all the colleges/streams/branches, comprising of the distribution of the seats in absolute terms as per the state reservation policy), Institute profile etc well in advance before the start of the counselling.
- Eligible Candidates, who have paid counselling fees, will register online and obtain unique-ID based on roll number and password (as given by the candidate at the time of registering on the web) prior to exercising of choices.
- Seat allotment as per the seat matrices given by IKGPTU according to reservation policy of the state.
- IKGPTU shall reserve all right pertaining to any changes in any master data including candidate master. Changes in **Candidates' Master Database**, like **DOB, Gender,** etc. Permitted through web interface by authorized IKGPTU officials.
- A candidate shall be able to fill unlimited choices as decided by IKGPTU
- Saving of Choices by Candidates is a must for the seat allotment. Unsaved choices will be considered as deemed choice.
- Saving of Choices by Candidates is to be taken as the last choices submitted by the candidate. In case the candidate does not explicitly lock the choices, the choices submitted till last moment of the last cut-off time shall be taken as the final choices by that candidate.
- All the PIs should have the prescribed computer infrastructure, trained manpower and Internet connectivity through an Internet Service Provider (ISP) with specific IP addresses (obtained from

the ISP by the PIs) for accessing secured databases for making admissions and updating of admission data on website.

- Updation from PIs will not be allowed.
- IKGPTU will provide all functional, regulatory and non-functional requirements for the project.
- Students data base shall be the property of IKGPTU

** After allotting seats in B.Tech on the basis of JEEMAIN in 2nd Round, remaining seats will be processed for B.Tech students on the basis of 10+2 Inter se Merit.

2.7 Non functional requirements

2.7.1 Performance

During entire period of e-counselling the web server & database server shall remain accessible to the candidates, the PIs and to IKGPTU on 24x7 hours operational basis through the counselling website. To access the counselling website, performance shall also depend on the mode & capacity of Internet connectivity used by candidates, PIs and IKGPTU. For satisfactory performance the Internet connectivity should be as mentioned in the section 4 of this document.

2.7.2 Security

1. **Client Side security**: The PIs will be given role based unique user IDs and passwords for authorization and controlled access to the website of counselling. The PIs will be required to use Digital Signature Certificates for accessing the website.
2. **Database level security:** NICs web server and database server are well secured on SAN (Storage area networks).
3. **Network based security**
   a. **Auditing and Testing:** Before final launching of the site, it will be audited and tested for Vulnerabilities by the experts.
   b. Finally, provision has been kept for certification of the website from 3rd agency.

3. Software product functions.

Following are the functional areas with regards to the **"e-counselling"** for all technical courses in the state.

[a] Web based Counselling fee payment, counselling & entry/saving of final choices
[b] Online Seat allotment and declaration of result on the net
[c] Administration of PIs & Admissions
[d] Seat Availability, vacant, filled status.
[e] Data Administration and overall control module for IKGPTU

[a] Web based counselling shall comprises of following functions.

FN001: New Candidate Counselling Fee payment and Registration Screen

FN002: **Candidate basic credential entry Screen**

FN003: **Eligibility criteria of all participating Universities Screen**

FN004: Online Form Filling – Registration **Screen**

FN005**: Registration Confirmation Screen**

FN006: **Registered candidate Sign In /Login**

FN007: **Password Change Screen**

FN008: Forgot Password screen

FN009: **Available Choices screen**

FN010: **Choice Submission screen**

FN011: **Choice Edit – Swap screen**

FN012: **Choice Edit – Rearrange / reordered (Move) screen**

FN013: **Choice Delete screen**

FN014: **Choice Save & Continue screen**

FN015: **Choice Saving & Exiting Screen**

FN016: **Logout Screen**

FN017: **Seat Allotment & Publishing of Result screen**

FN018: **SMS Alert to Candidates**

FN019: **Printing of Allotment Letter**

FN020: **Withdrawal of Seat and Printing of Refund Letter**

FN021: **Subsequent Round Undertaking Screen**

FN022: **Subsequent Round Choice Filling direction screen**

[b] Administration of CCR & Provisional Admissions

FN001: Candidates Reported at PIs - Admin user can see details of reported candidate of the PIs.

FN002: Online candidate information Display (for verification)

FN003: Provisional Admission Screen

[c] Seat availability, leftover & filled status and reports

FN001: Institute Wise Total Seat Availability/filled/leftover

FN002: Category Wise & Branch wise Seat Availability/filled/leftover in all institutions

FN003: Institution/branch/Category wise Seat Availability/filled/ leftover

[d] Administration of PIs

FN001: Viewing of Branch Wise Seat Availability/filled/leftover

FN002: Document verification Screen

FN003: Printing of provisional Admission Letter

FN004: Category wise breakup of Seat Matrix

[e] Data Administration and overall control module for IKGPTU

FN001: Counselling registration Admin

FN002: **Secured interface for uploading/updating of seat matrices.**

FN003: Fee payment management

[f] Seat Allotment Module

FN001: User Manager
FN002: Seat Allotment Processing
FN003: MIS (Institute wise, Rank wise Candidates) Reports
FN004: Login/Logout

4. Resource Requirements

4.1 At Participating Institutes / Help Centre

Hardware, Software, connectivity & Manpower requirement

- 10-20 Sets of latest computers with original Operating System, IE 7.0 or above and Antivirus on **UPS & Power generators**
- **2-3 network laser printers** or stand alone heavy duty laser printers connected with the clients for choice saving printing
- 2-5 number of trained officials under supervision of HoD/ Sr. faculty/programmer of Computer /Electronics departments for handholding of candidates
- Required **Internet connectivity ranging from 512 kbps to 1 MBPS using** (Broad Band or RF Link or Lease Line or VSAT based) if not available, it can be obtained from nearest Internet Service Provider to ensure 24x7 connectivity. Also provision of backup of connectivity needs to be made to meet the link breakdown situations.
- Updation of admission status on the web site
- Proper Seating, Cooling and drinking water facility for the Candidates
- Required Consumables like CD, Floppy, Printer toners/Ribbons and stationeries.

4.2 Counselee's side

1. The Client must have Internet browser i.e. IE 6.0 or above version or Mozilla Firefox 3.0 or above to access the websites. He should also ensure that his machine is up to date in all respects.

4.3 Establishment of Control Rooms

One control room at IKGPTU will be made and called as **Central Control Room (CCR). It** will be equipped with computer machines/printer connected with internet on **24x7** hours operational during the counselling period to respond/resolve queries of candidates and PIs. It will be managed by team of IKGPTU officers concerned.

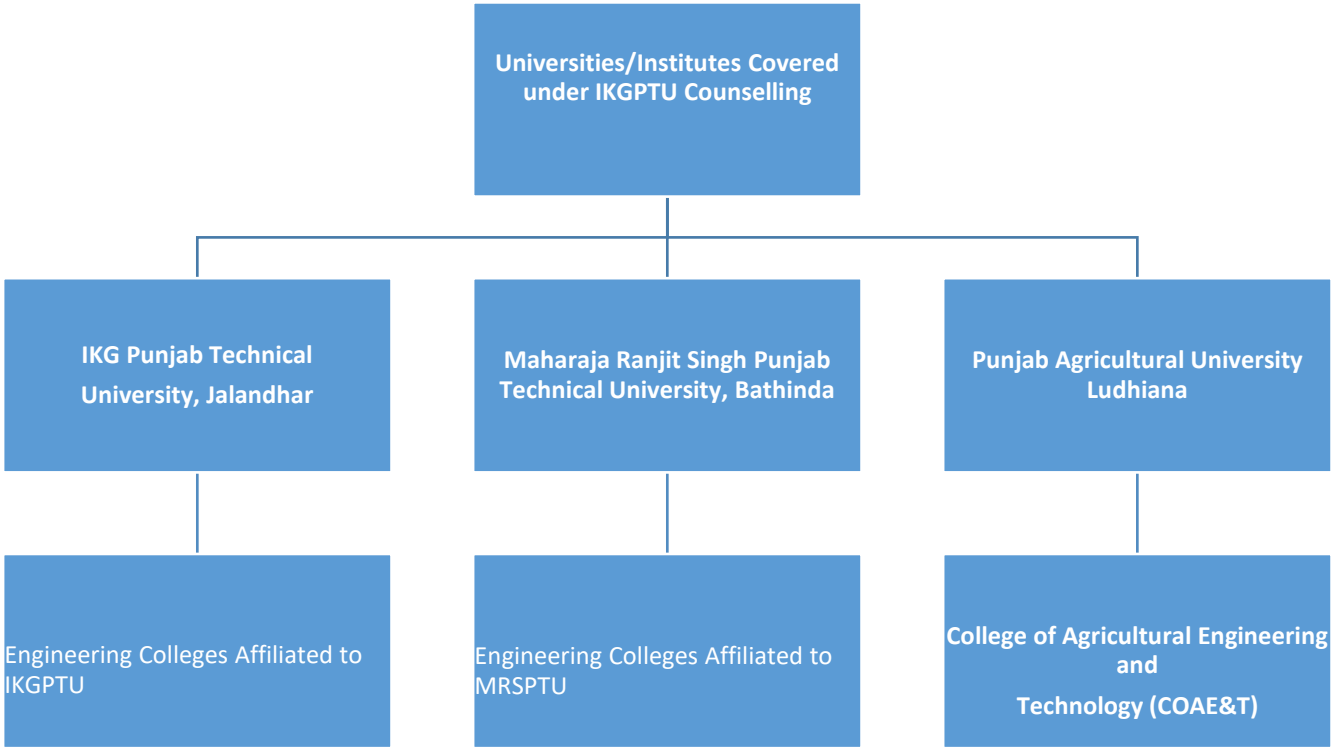
One control room also needs to be established at NIC HQ New Delhi in the counselling division.

Control Room should equipped with following infrastructure requirements,

- Proper Seating Facility with AC environment
- 4-6 Computers with 2 GB RAM & TFT Monitors, anti virus loaded and patches injected
- Network Printers connected with Computers
- 2 MBPS lease line with alternate backup of Internet
- All computers must be connected with UPS of proper Backup
- Fax Machine with STD Telephone Facility
- 4-6 Telephone Line
- Mobile for Officers of IKGPTU seats in control room
- Photocopy
- Necessary consumable like Paper, CD, Tanner etc.

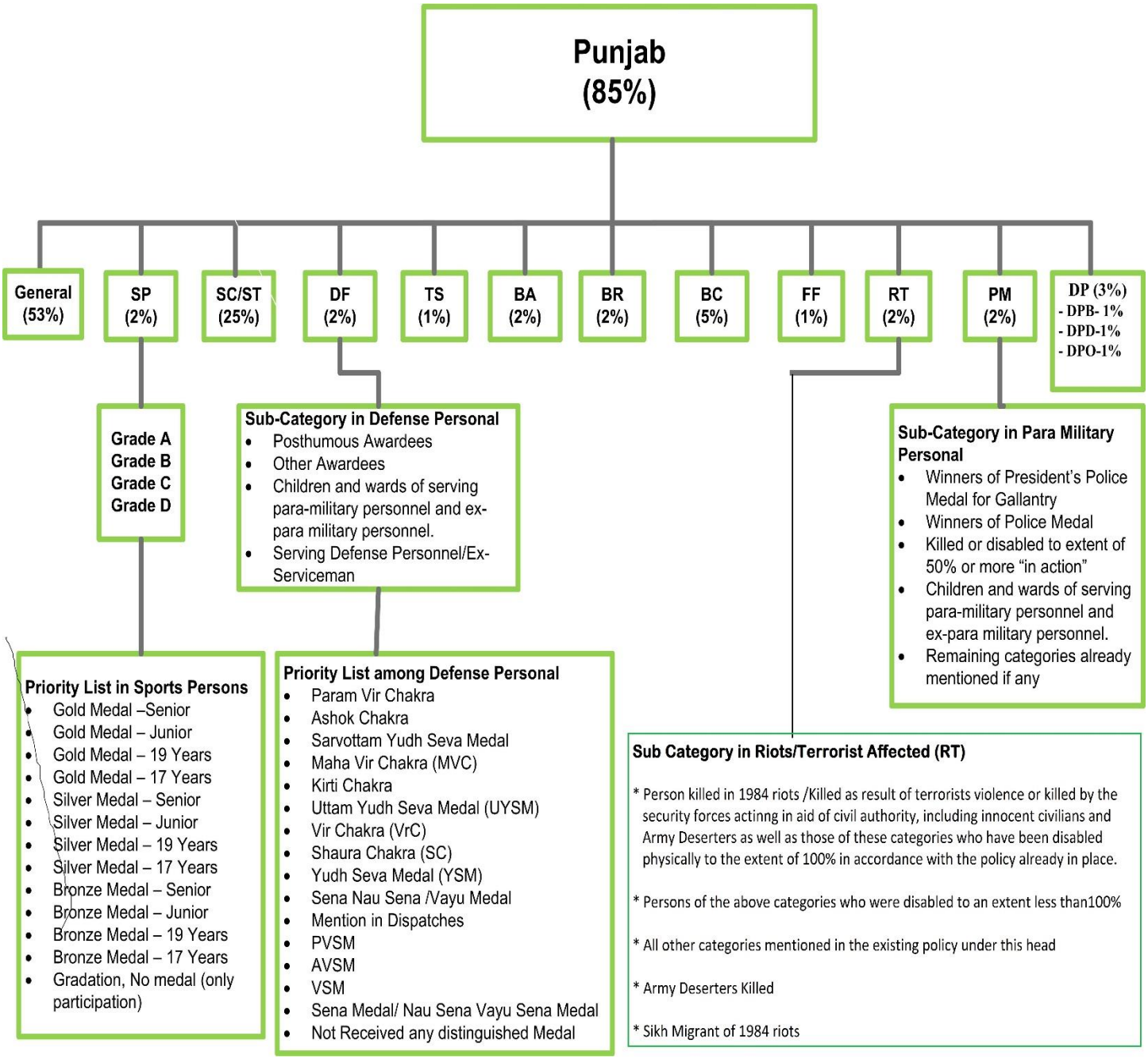
5.0 Seat Reservation Distribution and Reservation Policies

Universities/Institutes where Admission will made through JEEMAIN-2018



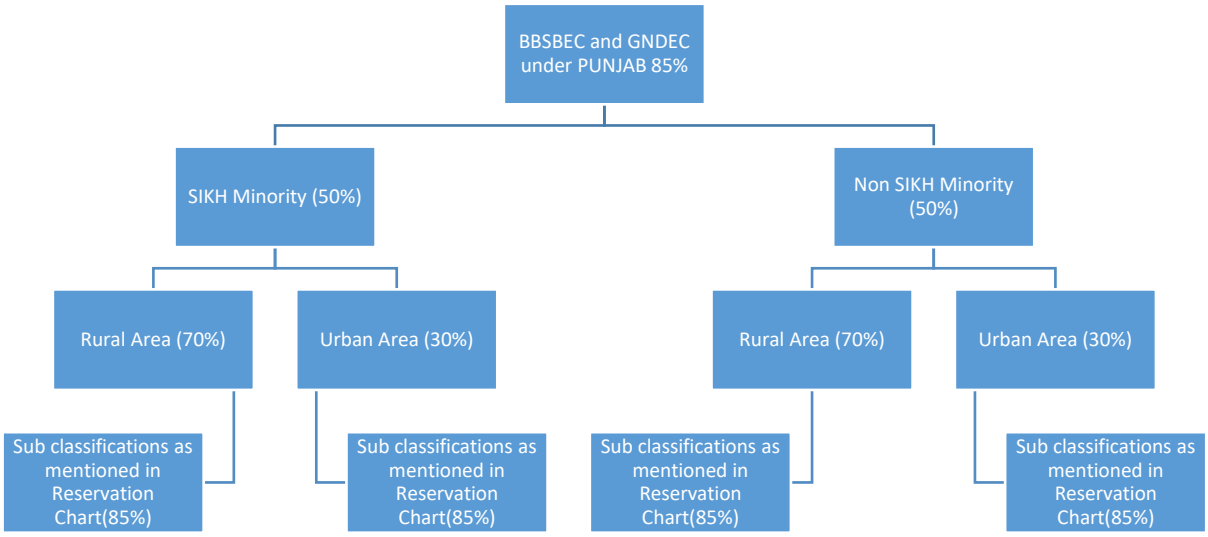
Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU

Punjab 85% based on JEEMAIN Ranking / 10+2 Inter Se Merit



As per Notification

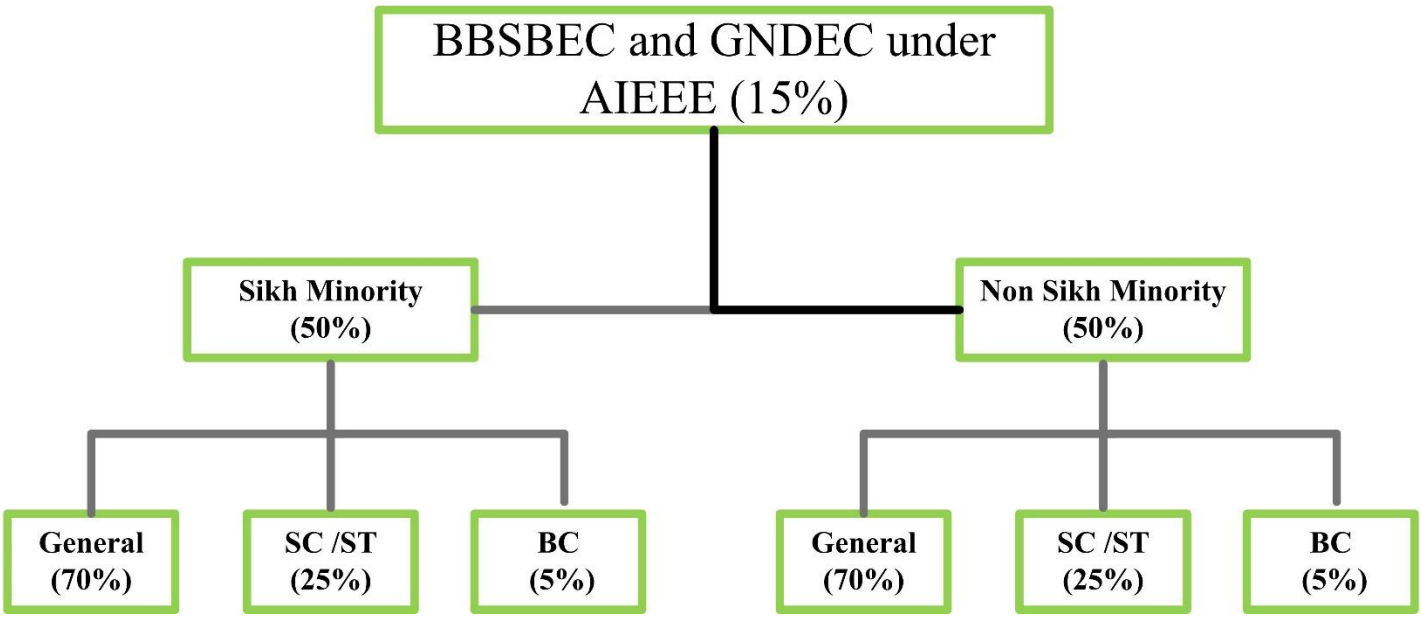
Sikh Minority in Punjab(85%)



Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU (2)

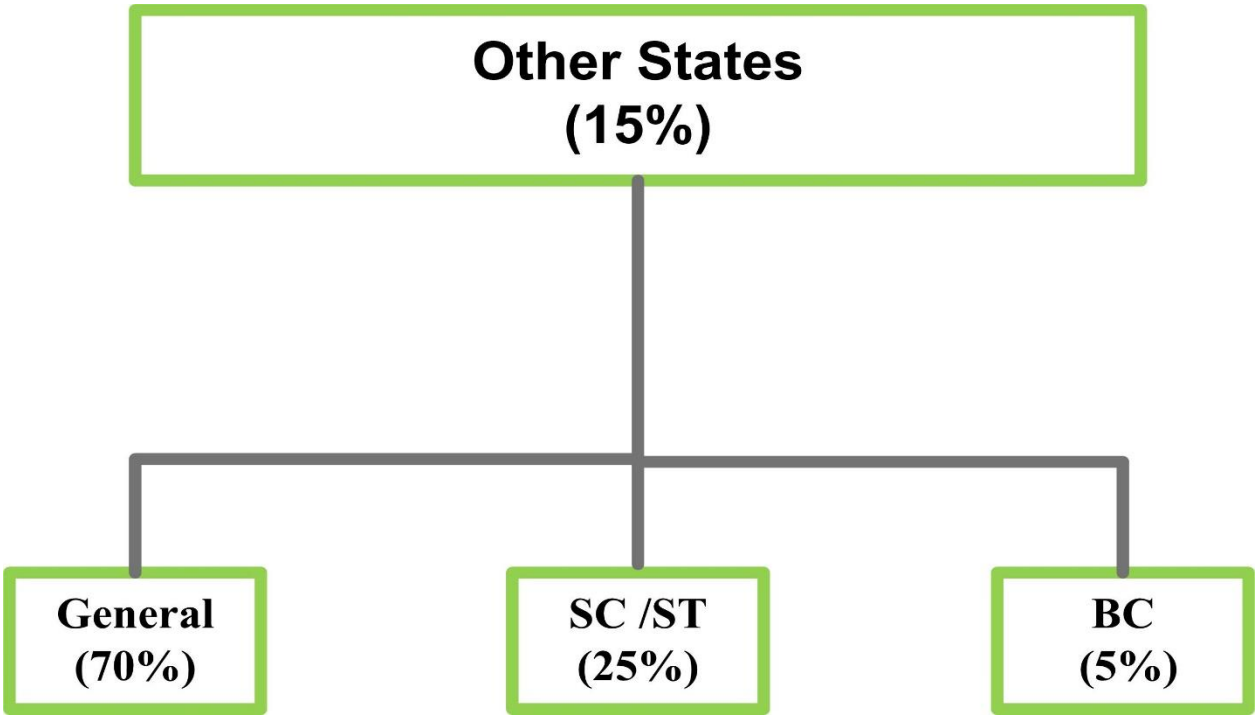
Reservation Chart for 15 % Other State Quota based on JEEMAIN Ranking/ 10+2 Inter Se Merit

(Bifurcated into Sikh Minority & Non Sikh Minority)



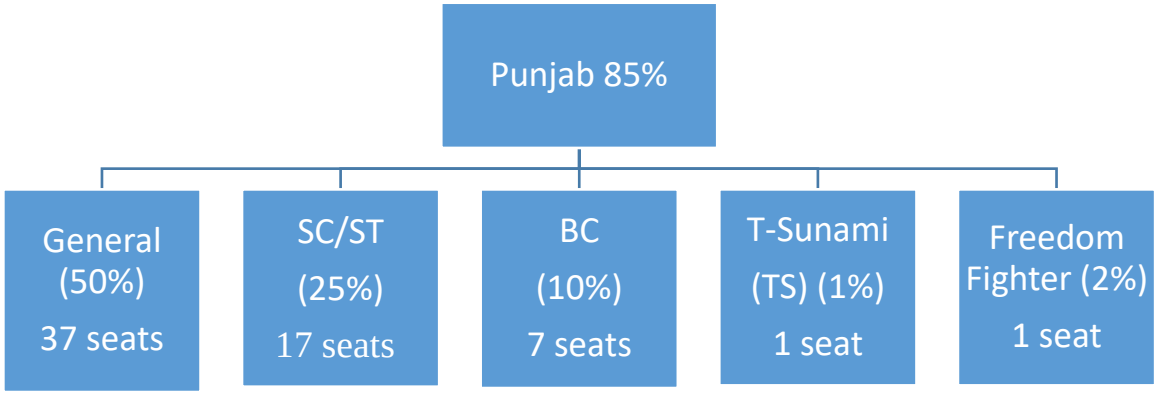
Reservation Chart for 15 % Other State Quota in IKGPTU/MRSPTU

Other State 15 % based on JEEMAIN Ranking



Reservation policies for the Constituent College of Punjab Agricultural University (PAU)

Punjab 85% based on JEEMAIN Ranking



Note: Categories Outstanding Sportspersons(5%), Children of Armed Forces(2%), TA(2%) and Persons with Disability (3%) will be taken care by Punjab Agricultural University and these seats will not be offered through Online Counselling".

6.0 Counselling Process & Methodology

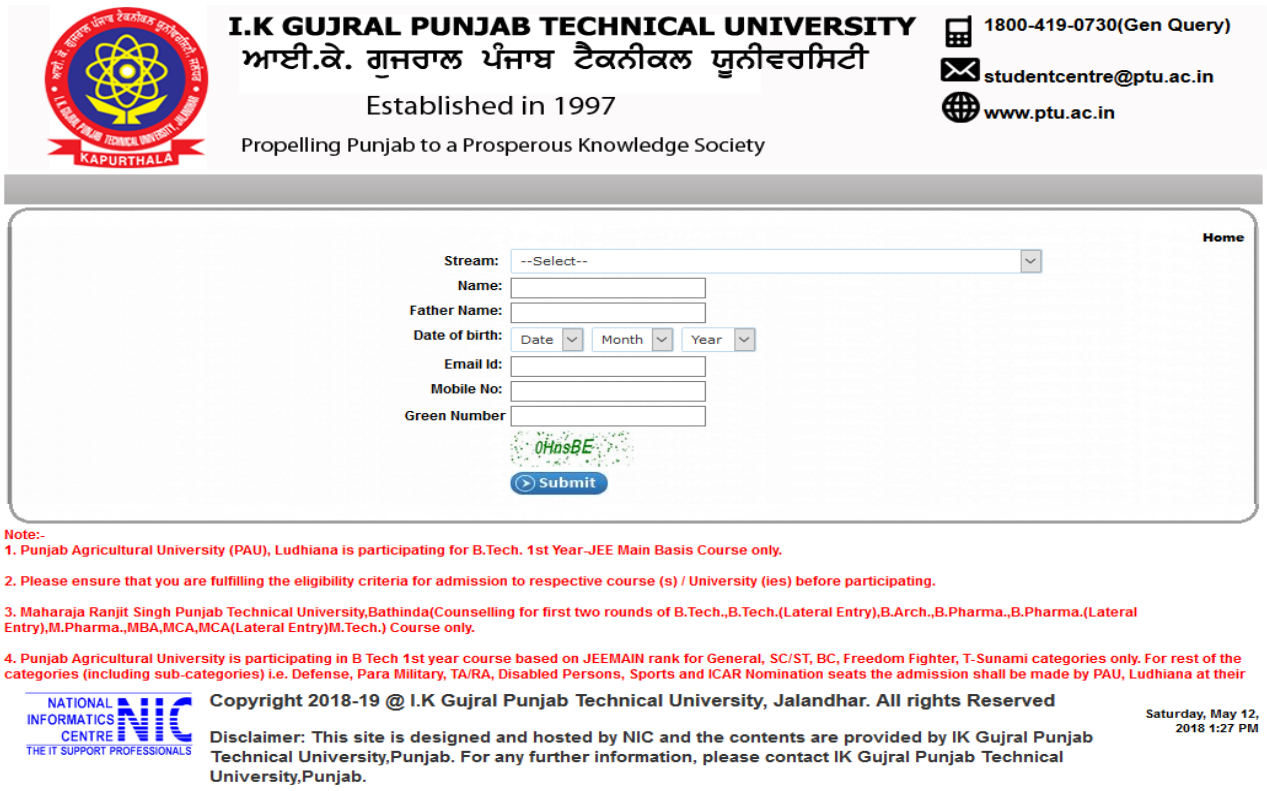
6.1 Counselling Fee Payment Module

The candidates will be prompted to fill the following basic details for paying Counselling fee:-

- Name of the Course Applied for
- Candidate Name
- Father's Name
- Date of Birth
- Email Address
- Mobile Number
- Green Number(Captcha)

An OTP will be generated by the system, which will be sent to the Mobile number given by the candidate. Once Candidate fills correct OTP, system will route Candidate to Bank Portal, where in candidate can submit the counselling fee of Rs. 2,000/- (non refundable) through Netbanking/Credit Card/Debit Card. Once fees is submitted successfully, a computerized receipt will be generated by the system, which will also include roll number assigned to the Candidate. For all future actions, candidate will have to use this roll number for registering himself and fill up all details.

The candidate will only be able to proceed further (as per schedule) only if the confirmation regarding successful payment of counselling fee is done, which may take 24 hrs. This status can be checked by login to the respective account at website www.ptuadmissions.nic.in using "Registered User" button.



6.2 Functionalities of Candidate Module

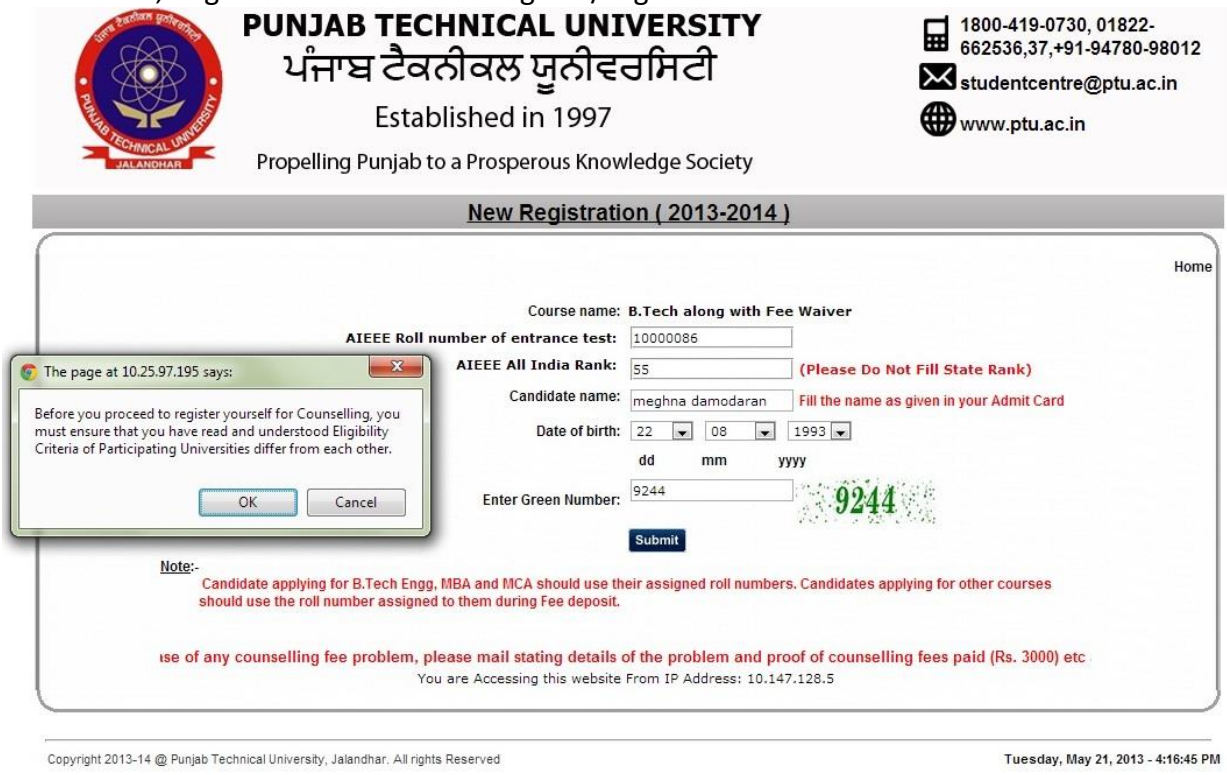
The candidates declared eligible for counselling have to visit the website http://ptuadmissions.nic.in . This website will give them static information about the Participating Universities including affiliated Institutes, various courses offered by then, Government notifications, Counselling schedule, Process Flow, FAQs and User Manual, Notice Board apart from New Registration and Login section.

6.2.1 Registration Module & Choice Filling in 1st round (for B.Tech courses based on JEEMAIN)

a. Candidate is required to click on the New Registration link on the Home Page.
b. He/ She has to fill five authentication parameters for gaining access.
   - Roll No.
   - Rank
   - Candidate Name
   - Date of Birth as printed in Admit Card
   - Security Pin as shown on the screen

System will insist students to read eligibility criteria of all participating universities before proceeding further. On pressing OK button, the above data submitted by candidate will be verified with the JEEMAIN 2018 database. It will also check for Counselling fee submitted by the candidates. If system finds entry of Counselling fee and information provided by candidate matches with the JEEMAIN 2018 database, then the candidate will be permitted to register.

Online Form Filling – Candidate can choose/fill his state of eligibility, Main category, sub category, Sikh minority status, Rural Area, Qualifying marks, etc. He will also choose Password as per Password policy for getting the valid userid and password for login to e-Counselling. Candidate can change this information as per his wish till he does not confirm it. Once this personal data is Verified and Confirmed by the candidate, candidate cannot change the personal data. At the end of the process, a registration receipt will be generated on the screen. Candidate can take a print out the registration receipt. For subsequent access to the website, Registered users will use Sign In /Login section.



PUNJAB TECHNICAL UNIVERSITY
ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ
Established in 1997
Propelling Punjab to a Prosperous Knowledge Society

1800-419-0730, 01822-662536,37,+91-94780-98012
studentcentre@ptu.ac.in
www.ptu.ac.in

Registration For Admissions - 2013

Please fill following details carefully. Fields marked as (*) are mandatory

*Eligible For: (•) Punjab State 85% Quota for Candidate of Punjab ( ) All India Category (15% quota for other states)
Your State of Residence is Punjab 85%

Gender: ( ) Male (•) Female

*Main Category: Sports Persons

This category belongs to Sportsperson Candidates. Choose your subcategory and priority also.GNDU,Amritsar only accepts Grade A,B & C without any consideration of Medal achieved.For eligibility refer prospectus.Candidate is also advised to refer to FAQ on this website.

Sports Test Passed: [✓] Sports Test in PAU [ ] Sports Test in PBI

*Sub category: Grade-A

Select priority (in case of SPORTS,WDP) : Gold Medal Senior

* Do you wish to opt for Tuition Fee Waiver Scheme? (•) Yes ( ) No
Sons and Daughters of parents whose annual income is less than 4.50 lacs from all sources shall only be eligible under this scheme. The scheme shall be limited to tuition fee as prescribed by the State Government. All other fee except tution fees will have to be paid by the beneficiary.

* Select Rural/Urban status: (•) Eligible for Rural Area Status in Punjab State
( ) Eligible for Urban Area Status in Punjab State
[✓] Rural Seats in PTU(BBSBEC,GNDEC)
Please refer to Information Brochure for Admissions 2013-14 for availing Rural/Urban Status for PTU(GNDEC,BBSBEC -Refer Page 39 and 40), and Rural Area criteria of GNDU Amritsar & Punjabi University, Patiala.

* Select Sikh Minority status: (•) Candidate belongs to Sikh Minority
( ) Candidate belongs to Non Sikh Minority
Candidate opting for Sikh Minority must ensure that he/she has passed SRE otherwise he will be considered as Open Candidate.

Sikh Religion Examination(SRE) Passed: ( ) Yes (•) No

*Qualifying marks percentage : (Rounded upto 5 decimal points) 85.9 Please refer to Brochure 2013-14 for Eligibility criteria of Participating Universities
(5 digits are required after decimal)

Login ID: 10000086 Your AIEEE roll no is your login id

*Choose password: •••••• Password length must be of 8-12 and alphanumeric. Example:test1234

*Confirm password: •••••• Candidate should keep password confidential and PTU will not be responsible for any misuse of password

*Security question: Where did you spend your childhood summers? In case you forget your password

*Your answer: ••••••

Contact address: jalandhar
Only Space, Comma, /, - , alphabets and numbers are allowed

City / Town / Village: jalandhar

Pin code: 144001

Contact number (STD, Number): 0181 22222222

* Mobile number: +91 9876543211 If you are interested in result through SMS then provide Mobile No.

* E-Mail ID: a@in.com

Note: If all the fields are filled correctly then press "Submit" button for successful registration

Submit Your Details

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Tuesday, May 21, 2013 - 4:19:28 PM

 Signatures of Technical Committee Members:

Password Change facility:- System will facilitate registered Candidates for changing the password. After successful login, the candidate can change his/her password by entering the Old Password, followed by New Password and Confirm New Password. Password policy will be enforced at every level.

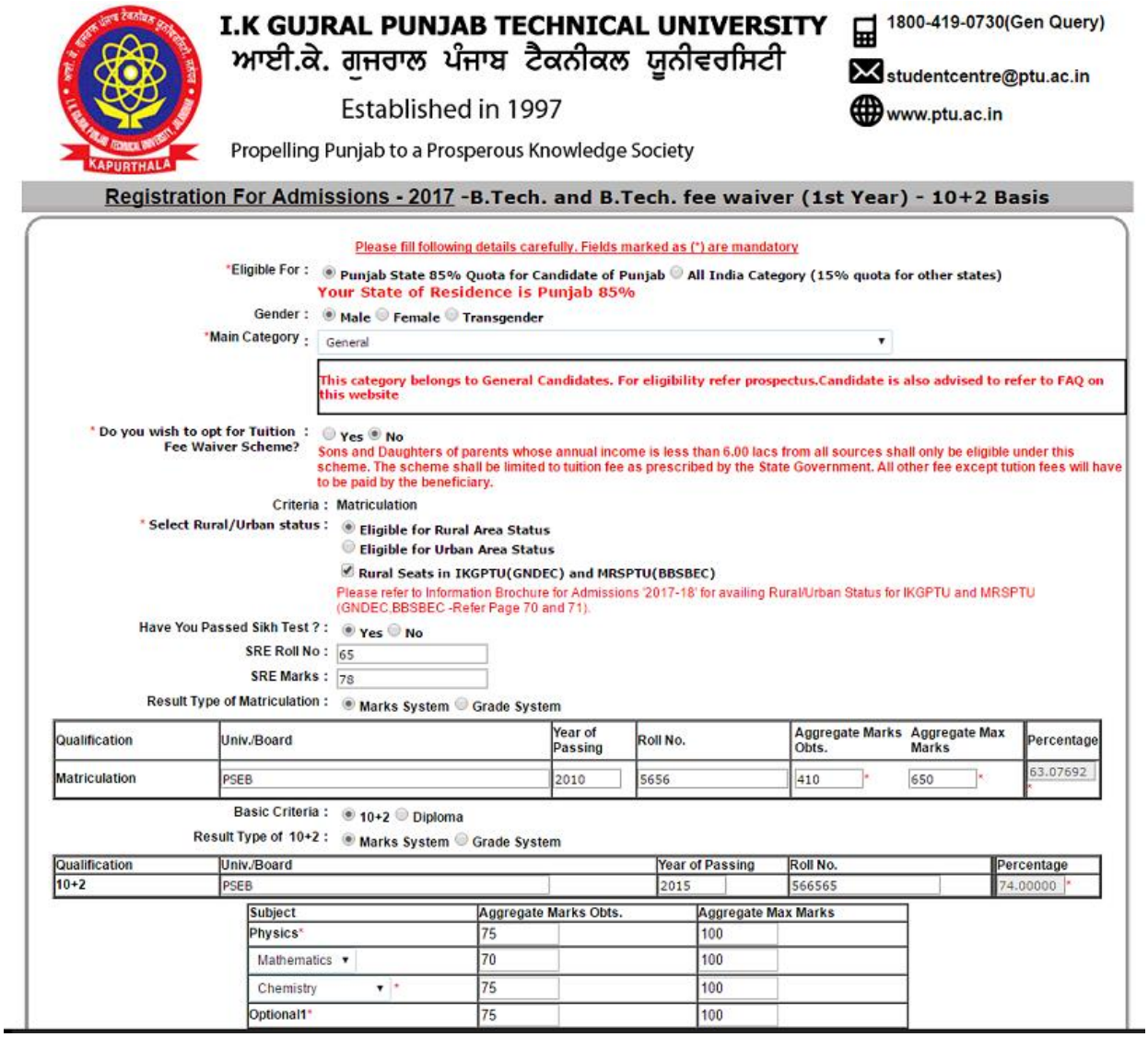
In case, the candidate has forgotten the password, he/she is required to enter the Roll Number, Rank, Name and Date of Birth as per their JEEMAIN-2018 Rank card and secret answer to the question selected during registration process. The above data submitted by candidate will be verified with the registered candidate Database. If it matches, then only the candidate will be permitted to change his/her password and proceed further.

Registration Module in 1st round (for B.Tech courses based on 10+2 Inter se Merit)

a) Candidate is required to click on the New Registration link on the Home Page.
b) He/ She has to fill five authentication parameters for gaining access.

- Fee Slip Roll No.
- Candidate Name
- Father Name
- Date of Birth
- Security Pin as shown on the screen

System will insist students to read eligibility criteria of all participating universities before proceeding further. On pressing OK button, the above data submitted by candidate will be verified with the 10+2 Fee data. If system finds entry of Counselling fee and information provided by candidate, then the candidate will be permitted to register.



I.K GUJRAL PUNJAB TECHNICAL UNIVERSITY
ਆਈ.ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ
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studentcentre@ptu.ac.in
www.ptu.ac.in

Registration For Admissions - 2017 -B.Tech. and B.Tech. fee waiver (1st Year) - 10+2 Basis

Please fill following details carefully. Fields marked as (*) are mandatory

*Eligible For : Punjab State 85% Quota for Candidate of Punjab / All India Category (15% quota for other states)
Your State of Residence is Punjab 85%

Gender : Male / Female / Transgender

*Main Category : General

This category belongs to General Candidates. For eligibility refer prospectus.Candidate is also advised to refer to FAQ on this website

* Do you wish to opt for Tuition Fee Waiver Scheme? : Yes / No
Sons and Daughters of parents whose annual income is less than 6.00 lacs from all sources shall only be eligible under this scheme. The scheme shall be limited to tuition fee as prescribed by the State Government. All other fee except tution fees will have to be paid by the beneficiary.

Criteria : Matriculation

* Select Rural/Urban status : Eligible for Rural Area Status / Eligible for Urban Area Status
Rural Seats in IKGPTU(GNDEC) and MRSPTU(BBSBEC)
Please refer to Information Brochure for Admissions '2017-18' for availing Rural/Urban Status for IKGPTU and MRSPTU (GNDEC,BBSBEC -Refer Page 70 and 71).

Have You Passed Sikh Test ? : Yes / No

SRE Roll No : 65

SRE Marks : 78

Result Type of Matriculation : Marks System / Grade System

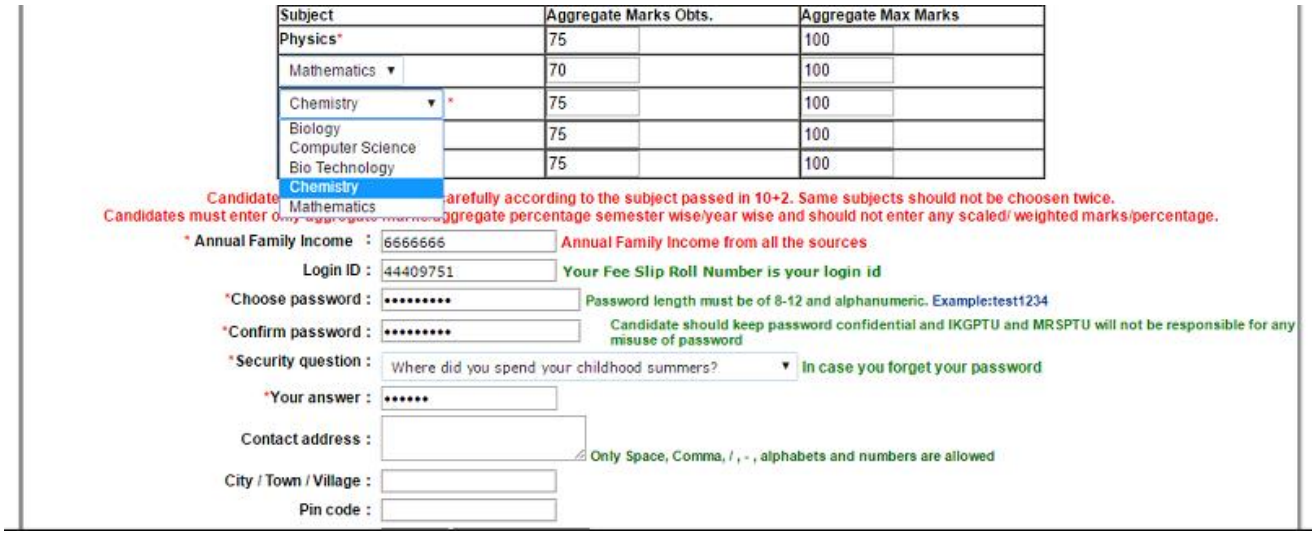
Qualification	Univ./Board	Year of Passing	Roll No.	Aggregate Marks Obts.	Aggregate Max Marks	Percentage
Matriculation	PSEB	2010	5656	410 *	650 *	63.07692 *

Basic Criteria : 10+2 / Diploma

Result Type of 10+2 : Marks System / Grade System

Qualification	Univ./Board	Year of Passing	Roll No.	Percentage
10+2	PSEB	2015	566565	74.00000 *

Subject	Aggregate Marks Obts.	Aggregate Max Marks
Physics*	75	100
Mathematics	70	100
Chemistry *	75	100
Optional1*	75	100



Category-wise Seat selection criteria for Engineering Stream Under 85% Punjab quota and 15% Outside State quota

A. **If candidate has Punjab domicile and under 85% quota with any of the following Category(B.Tech Candidates)**

Input Parameters - Roll No., Rank, Category, State Code, Sex

If Candidate is Male then seats under General category and Category specific (if applicable) in Coeducation colleges will be selected by system. No seats of Girls colleges will be selected for a Male candidate

If Candidate is Female, then seats under General category and Category specific (if applicable) in Coeducation colleges + Girls Colleges will be selected by system.

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU General + MRSPTU General + PAU General
2.	SC /ST	☑	IKGPTU General, SC + MRSPTU General, SC + PAU General, SC
3.	BC	☑	IKGPTU General, BC + MRSPTU General, BC + PAU General, BC
4	T-Sunami	☑	IKGPTU General, TS + MRSPTU General + PAU General, TS
5.	Freedom Fighter	☑	IKGPTU General, FF + MRSPTU General, FF + PAU General, FF
6.	Backward Area	☑	IKGPTU General, BA + MRSPTU General, BA + PAU General
7	Defence Personnel	☑	IKGPTU General, DF + MRSPTU General, DF + PAU General
8	Terrorist / Riots Victims (RT)	☑	IKGPTU General, RT + MRSPTU General, RT + PAU General

9	Para Military forces (WPP)	☑	(IKGPTU General, WPP + MRSPTU General, WPP + PAU General)
10	Handicapped blind (DPB)	☑	(IKGPTU General, DPB + MRSPTU General, DPB + PAU General)
11	Handicapped Deaf and Dumb (DPD)	☑	(IKGPTU General, DPD + MRSPTU General, DPD + PAU General)
12	Handicapped Others(DP).	☑	(IKGPTU General, DP + MRSPTU General, DP + PAU General)
13	Widows / Divorced Women	☑	(IKGPTU General + MRSPTU General, DW + PAU General) ***No male candidate will fall under this category and these seats are exclusively for Female candidates***

Rural Area Category/Status

University	General	Rural Status opted	Seats to be shown
PAU Ludhiana	☑	☒	General

Sports Category

University	General	Sports Category	Seats to be shown
PAU Ludhiana	☑	☒	General seats
IKGPTU	☑	☑	General + sports category seats
	☑	☒	General seats
MRSPTU	☑	☑	General + sports category seats
	☑	☒	General seats

Border Area Seats

University	General	Border Area Category	Seats to be shown
PAU Ludhiana	☑	☒	General
IKGPTU	☑	☑	General + Border Area category seats
	☑	☒	General
MRSPTU	☑	☑	General + Border Area category seats
	☑	☒	General

Special Case for Fee Waiver Category Seats under IKGPTU/MRSPTU

For incorporating seats under Fee Waver in B.Tech Courses, as per discussion with IKGPTU Officials, these seats will be added separately for each courses and shown as a separate course. These seats will be made available to those students, who at the time of registration opted for Fee Waiver scheme. These students will also be eligible for B.Tech Courses normal seats as well.

Category	Eligibility for IKGPTU & MRSPTU opted by the Candidate	Seats to be shown
Fee Waiver	☑	(IKGPTU+MRSPTU Fee Waiver Category)

Special Case for Rural Seats and Sikh Minority Seats under IKGPTU (Guru Nanak Dev Engineering College, GNDEC – Evening shift & Baba Banda Singh Bahadur EC)

University	Sikh Minority + **Sikh Test passed** *				Sikh Minority + **Sikh Test Not passed** = Non Sikh Minority(Normal Classes) **$**				Seats to be shown
	Rural *.1		Urban *.2		Rural $.1		Urban $.2		
	General 1	SC/ST, BC, BA, SP etc 2	General 3	SC/ST, BC, BA, SP etc 4	General 5	SC/ST, BC, BA, SP etc 6	General 7	SC/ST, BC, BA, SP etc 8	
IKGPTU / MRSPTU	☑								1+3+5+7
		☑							1+2+3+4+5+6+7+8
			☑						3+7
				☑					3+4+7+8
					☑				5+7
						☑			5+6+7+8
							☑		7
								☑	7+8

Hint – Where Sikh Test passed is ticked, seats (1 to 8) are applicable.
Where Sikh Test passed is **NOT ticked,** seats (5 to 8) are applicable

B. **If candidate has other State domicile and under 15% JEEMAIN quota with any of the following Category (APPLICABLE FOR B.Tech Course, B.Tech 10+2 Course only)**

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU General + MRSPTU General + PAU General
2.	SC /ST	☑	IKGPTU General,SC + MRSPTU General,SC + PAU General,SC
3.	BC	☑	IKGPTU General, BC + MRSPTU General, BC + PAU General, BC

Special Case for Sikh Minority Seats under IKGPTU & MRSPTU (Guru Nanak Dev Engineering College, GNDEC – Evening shift & Baba Banda Singh Bahadur EC)

University	Sikh Minority + **Sikh Test passed Urban Seats only**		Sikh Minority + **Sikh Test Not passed** = Non Sikh Minority(Normal Classes) **Urban Seats Only**		Seats to be shown
	General 1	SC/ST, BC 2	General 3	SC/ST, BC 4	
IKGPTU / MRSPTU	☑				1+3
		☑			1+2+3+4
			☑		3
				☑	3+4

Available Choices:
After successful login and on clicking the link "Available Choices", the systems internally retrieve the credentials of the candidate like gender, category, subcategory, state of eligibility and eligibility remarks from the candidate's database and the available choices specific to the candidate based on his/her credentials.

All the choices of B.Tech Courses (includes both Fee waiver B.Tech Courses and non Fee waiver B.Tech Courses) will be displayed in choice filling section for these candidates and they can select choices as per their priority. The candidates may opt same course for fee wavering scheme and as well as for Non fee wavering Scheme.

Choice Submission:
On clicking the "Choice Submission" button, the available choices to the candidate will be displayed in the left side frame and on clicking the add button, it will be removed from the left frame and will be added into right frame. User can sort their choices University-wise also.

Choice Edit – Swap / Move Choice / Delete Choice:

System will provide the students with option of swapping already selected choice, setting their order(moving the choices or deleting the choices.

Save Choices

During choice selection, Candidate can click on "Save Choices" button to save his choices. System will save the choices and keep the screen open for Candidate to select more choices.

Save and Exit

Clicking on Save and Exit button will save the choices filled by candidate during the session and close the screen. It will take Candidate to **Displaying Filled Choices** section, where Candidate can take a printout of saved choices, which includes Choice saving date time and IP address.

After saving the choices, if a candidate logs in again, then the saved choices given by the candidate will be displayed and can be modified or altered by the Candidate.

Seat Allotment & Publishing of Result

Seat Allotment will be done by IKGPTU Technical Team by downloading the choices filled by registered candidates and processing as per approved algorithm. After verification and approval by the technical team, the result will be uploaded into the website.

SMS Alert to Candidates

Successful candidates, who get a seat in the Counselling round will get a SMS indicating the seat allotted and College details.

Printing of Allotment Letter

Candidate who gets a seat, can login to his portal and take printout of the Provisional Allotment Letter, which he will produce at the allotted College during admission period.

Seat Withdrawal

Admitted candidate, if wishes to surrender his seat during reporting time in both round and upto 7 days after completion of counselling, can do so by giving his consent absolving concerned University.

Subsequent 2nd round student access methodology

In the subsequent rounds, new students, who wish to join Counselling for the first time will go through the same process as given above for the Ist round. Students who are already registered and exercised their choices can access the system in following fashion.

Candidate will fill five authentication parameters for gaining access.

- Roll No.
- Rank (JEEMAIN or IKGPTU generated)
- Candidate Name
- Date of Birth as printed in Admit Card
- Security Pin as shown on the screen

If all the five parameters are valid and match the Candidate database, then a new Re-registration/Confirmation screen will appear. In which candidate will give an undertaking that

"Before participating in the second counselling, I have understood that if I am allotted a seat in the second counselling, my previous seat in 1st counselling shall automatically be cancelled and replaced by the seat allotted in second counselling. My claim for previously allotted seat stand forfeited. I shall have claim only on the seat allotted in second counselling. I have further understood that I should fill only those choices which are preferred over the already confirmed seat in first counselling. " On accepting the Declaration, candidate will be registered in the system. System will give following information.

"In the second round, Candidate can also fill College/Branch even if Available seats section shows Zero(0) seats. In case any candidate, who has been allotted the seat in 1st round vacates the seat during 2nd round, the same will be made available to other candidates in the 2nd Round itself."

6.2 Seat Allotment procedure for First Counselling for candidates of Punjab 85% and Other State 15% JEEMAIN Rank-wise Seat Allotment procedure for First and subsequent counselling.

Seat Allotment Module

Since the allotment of seats is to be done by the software using the seat matrices and seat allotment procedure, therefore every bit of required procedure is needed to be coded. As per the study and detailed discussions with the user/core committee, following procedure has been designed.

For allotment of a seat, Merit Number (Rank) is not only the criteria but also the eligibility and reservation criteria of candidates are checked. The admissions shall be subjected to the verification of credential and documents in the allotted institution.

For any course, before the allotment starts, Candidate must complete following steps

Step-1: The candidate should deposit the counselling fees of Rs. 2000/- non-refundable.
Step-2: The candidate has to fill up the choices and save it successfully. The candidate is advised to give as many choices as desirable. There is no maximum limit for the choices.

The offline processing module gives the feature of round wise processing and generation of MIS (Institute wise, Rank wise Candidates) Reports

Assumption:

a. Candidate has to register himself and fill choices. If candidate does not fill any choices, he will not be eligible for counselling.
b. Seat Matrix is to be uploaded fresh before the start of counselling.
c. Based on JEEMAIN test Rank will be unique i.e. no two candidates will have same rank in general merit list. The general merit list will include candidates of all categories.
d. Candidates from Punjab residents will be considered under Punjab 85%.
e. Candidates from Chandigarh UT are only eligible to participate in online counselling through 15% JEEMAIN quota. However only in case of PAU, PUNJAB and Chandigarh are considered as One State. For rest of the Universities i.e. IKGPTU, GNDU and PU Punjab and Chandigarh are different states.

Algorithm:

1. Sort the candidate's data stored in Registration table rank wise with condition where choices have been locked.
2. Process the data of first candidate.
3. Store the value of sex, category code, sub-category code, in the temporary variables.
4. Identify eligible categories, subcategories on the basis of category, subcategory and Priority as applicable of candidate and store it in arrays.

5. Process the choices of candidate for each category in the same sequence as described elsewhere in the document.
6. If seat is available then allocate the seat to candidate
7. Update the seat master and reduce the value of seats available in the seat matrix by 1 against the particular institute
8. Repeat above steps for all candidate.

6.2.1. Algorithm for Seat Allocation Procedure for 85% Punjab Candidates

For 85% Punjab Candidates: Following categories/sub-categories exist;

- General
- SC/ST
- Backward Class (BC)
- T-Sunami(TS)
- Border Area(BR)
- Backward Area (BA)
- Sports Person (SP)
- Widows of Defense Personnel (DF)
- Widow / Divorced Women
- Terrorists/Riots victims (RT)
- Children/Widows of Para military forces (PM)
- Freedom Fighter (FF)
- Disabled Person-Blind (DPB)
- Disabled Person -Deaf (DPD)
- Disabled Person-Others (DPO)

Seat Allocation sequence for 85% Punjab Quota
Following rules shall be applicable for seat allotment for counselling for 85% Punjab category for all the institutions under IKGPTU/GNDU/PU/PAU participating in counselling located in Punjab.

In case of IKGPTU, seats under Fee Waiver Category will be processed as a separate category depending upon choices filled by the Candidate.

Counselling for seats for the Children /Widows of Defense Personal category, Sports Person, under Para Military Forces Personal and under Terrorist/Riot affected category is done in the order of sub-category, priority, rank (as applicable) and eligibility condition.

The following cases are checked and searched for a Candidate until seat is allotted or options are exhausted for JEEMAIN merit Rank.

FOR General Merit List :

The seats based on rank wise list, will be allotted in the following sequence:

Case 1: If candidate has opted for Fee Waiver and filled Fee waiver seat choices (Applicable for B.Tech only)

Candidate can fillup Fee waiver seat choices in addition to his category based choices. Check the seat for **Fee Waiver**, if it is available then seat is allotted else go to candidate's next choice. Repeat till a seat is allotted or all the choices are processed.

Case 2: If candidate is General, no subcategory

Check the seat for **General (Open quota)**, if it is available then seat is allotted else go to candidate's next choice. Repeat till a seat is allotted or all the choices are processed.

Case 3: If candidate is having any one of the reserved category, following is the seat allotment criteria

All the reserve category candidates will first be considered in General Category. In this case JEEMAIN Rank is the allotment criteria. Check the seat for **General (Open quota)**, if it is available then seat is allotted else check the seat in respective Reserve Category(SC/ST,BC, T-Sunami(TS)/BA/ BR/ FF). If seat is available then allot the seat else go to candidate's next choice. Repeat this process till a seat is allotted or all the choices are processed.

- ✓ If candidate is DF then allocation is done on the basis of sub-category and priority.
- ✓ If candidate is PM then allocation is done on the basis of sub-category.
- ✓ If candidate is RT then allocation is done on the basis of sub-category.
- ✓ If the candidate is SP than allocation is done on the basis of subcategory and eligibility criteria of the participating universities.
- ✓ If candidate is DPB/DPD/DPO, then allocation is done on the basis of respective category(i.e. DPB/DPD/DPO) and checking for leftout seats in any of (DPB/DPD/DPO) categories.

Fee Waiver	General	***Category*** (SC/ST,BC, T-Sunami(TS) / DF/ BA/ BR/ FF /RT/ PM/ DPB/ DPD/ DPO)	Sequence of Allotment
√			**Fee Waiver**
	√		***General (Open)***
		√	***General (Open), (SC/ST,BC, T-Sunami(TS)/ DF/BA/BR/FF/SP / RT/ PM / DPB/DPD/DPO/WD)*** 1. For Categories (DF, SP, PM, RT) Seat Allotment Sequence will be General, category of Candidate (In General category seat allotment will be done on the basis of Rank whereas in his own Category allotment will be done on the basis of sub-category, priority , rank and eligibility criteria of participating universities). 2. In all other category (General, SC/ST,BC,T-Sunami(TS), BA, BR, FF,WD) JEEMAIN Rank is the allotment criteria.

			3. In Handicap categories (DPB/DPD/DPO), Seat allotment sequence will be General, category of Candidate and balance seats of any of DPB/DPD/DPO) categories. JEEMAIN Rank is the allotment criteria.

Note: In Sports Category selection criteria for participating universities is as follows

Inder Kumar Gujral Punjab Technical University, Jalandhar	Accepts Grade A, Grade B, Grade C & Grade D and Priorities of Medals (Gold/Silver/Bronze/Participation)
Maharaja Ranjit Singh Punjab Technical University, Bathinda	Accepts Grade A, Grade B, Grade C & Grade D and Priorities of Medals (Gold/Silver/Bronze/Participation)

6.2.2 Rural Area Seats Allocation under IKGPTU & MRSPTU

1. Special reservation criteria/policy exists in the case of Guru Nanak Dev Engineering College, Ludhiana and Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib. There are separate reservation of 70% and 30% separately for Rural and Urban categories respectively. The reservation for all the categories and sub-categories is followed separately under these and allotment of seats is made accordingly as per the state policy**.**

Algorithm for Seat Allocation Procedure for GNDEC, LDH and BBSBEC, FGS in Rural Area

Following rules shall be applicable for seat allotment in Guru Nanak Dev Engineering College, Ludhiana and Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib.

Case type	Candidate belonging to	Seat allotment Sequence
Case 1	General Category, Urban	1. General Category, Urban
Case 2	General Category, Rural	1. General Category, Urban 2. General Category , Rural
Case 3	Specific Category, Urban	1. General Category, Urban 2. Specific Category, Urban
Case 4	Specific Category, Rural	1. General Category, Urban 2. General Category , Rural 3. Specific Category, Urban 4. Specific Category, Rural

Algorithm for Seat Allocation Procedure for GNDEC, LDH and BBSBEC, FGS in Sikh Minority

Following rules shall be applicable for seat allotment in Guru Nanak Dev Engineering College, Ludhiana and Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib.

Case type	Candidate belonging to	Seat allotment Sequence
Case 1	Sikh Minority, General Category, Urban	1. SM General Category, Urban 2. NSM General Category Urban
Case 2	Sikh Minority General Category, Rural	1. SM General Category, Urban 2. NSM General Category, Urban 3. SM General Category, Rural 4. NSM General Category, Rural
Case 3	Sikh Minority Specific Category, Urban	1. SM General Category, Urban 2. NSM General Category, Urban 3. SM Specific Category, Urban

		4. NSM Specific Category, Urban
Case 4	Sikh Minority Specific Category, Rural	1. SM Urban General 2. NSM Urban General 3. SM Rural General 4. NSM Rural General 5. SM Urban Category Specific 6. NSM Urban Category Specific 7. SM Rural Category Specific 8. NSM Rural Category Specific

SM – Sikh Minority, NSM – Non Sikh Minority

6.2.3 Algorithm for Seat Allocation Procedure for 15% JEEMAIN General for candidates outside Punjab

Following rules shall be applicable for seat allotment for counselling for 15% JEEMAIN All India category for all the institutions under IKGPTU/MRSPTU participating in counselling located in Punjab

- For 15 % seats (Other State): Following categories/sub-categories exist;
  General, SC/ST, BC
- Under the 15% All India category further reservation is provided for 70% General, 25% SC/ST category and 5% for BC category.
- All the cases, irrespective of the category, will be dealt one by one as per rules and regulations applicable and as per the case/category.

Case 1: If candidate is General and under Non Sikh Minority

Check the seat for **Non Sikh Minority General (Open i.e. from 70% quota)**, if it is available then the seat is allotted else his/her next choice is searched for.

Case 2: If candidate is from any one of the Non Sikh Minority reserved category, following is the seat allotment criteria

Check the seat from Non Sikh Minority general quota if seat is not available then check the seat from respective Non Sikh Minority reserved category.

Case 3 : If Candidate is under Sikh Minority and General

Check the seat for **Sikh Minority General (i.e. from 70% quota)**, if it is available then seat is allotted else check the seat from Non Sikh Minority General else his/her next choice is searched for.

Case 4: If candidate is from any one of the Sikh Minority reserved category, following is the seat allotment criteria

Check the seat from Sikh Minority general quota if seat is not available then check from Non Sikh Minority general quota if seat is not available there then check the seat from respective Sikh Minority reserved category else check from Non Sikh Minority reserved category . If seat is available than it will be allotted to the candidate else his/her next choice is searched for.

6.3 Seat Allotment procedure for Second Counselling for candidates of 85% / 15% (2nd Round)

Pre-requisites/Assumptions:

a. Candidates falling under 85% / 15% quota will be eligible for 2nd Round of Counselling. Candidate has to reconfirm his registration for the 2nd counselling and fill fresh choices. Candidates, who have participated in 1st counselling, need not pay counselling fee again, whereas new candidates

appearing in counselling for the first time will have to deposit counselling fee and register themselves in the website. If candidate does not fill any choice for 2nd counselling, then he will not be eligible for 2nd counselling.

b. Candidate can also include the same choice in 2nd counselling against which he is allotted seat in the first counselling. In such case choices which are listed before this choice will be processed. For example a candidate has filled 5 choices in 2nd counselling and choice no 3 is same for which candidate is allotted seat in first counselling. In this case first two choices will be processed.

c. Seat Matrix will be uploaded afresh before the start of second counselling.

d. Seat Allocation will be done exactly as per rules adopted in Ist round of Counselling, i.e. no seats will be merged.

e. If a candidate has been admitted against his allotted seat in his category(reserve) in previous counselling, the seat will not be changed in the subsequent round of counselling for the Same branch and Institute with regards to category.

Note: Candidates once opted a category can not change his category without the permission of Chief Co Ordinator(admission).

Algorithm:

a. Sort the candidate's data rank wise once the choices are locked
b. Process the data of first candidate.
c. Store the value of sex, sub-category, and category temporarily.
d. Identify eligible categories, subcategories on the basis of category and subcategory of candidate, priority(as applicable) and store it in arrays.
e. Process the choice's of candidate for each category in the same sequence as described in first counselling.
f. If seat is available then temporarily allocate the seat to candidate
g. Update the Seat matrix and reduce the value of seats available for the particular branch by 1 against the particular institute
h. Transfer the seat allotted to the candidate in the first counselling to vacant pool.
i. Repeat above steps for all candidate. (first iteration is complete)
j. Next iteration will start and will repeat all the above steps till vacant pool seats become 0.

6.4 Seat Allotment Procedure for B.Tech students based on 10+2 Inter se Merit

During 1st round of B.Tech Counselling, students registered under B.Tech 10+2 Inter se merit course will be permitted to register themselves. After completion of 1st round of B.Tech, Rank will be prepared of registered candidates as per following procedure and PTU verification team will check and approve the Rank. On approval, the rank will be uploaded into the course.

Tie Breaking

In case of tie the same shall be decided as follows

i. The candidate scoring higher marks in Compulsory subjects shall be higher in merit
ii. In case of tie in (i) above, candidates scoring higher marks in Physics shall be higher in merit.
iii. In case of tie in (ii) above, candidates scoring higher marks in Mathematics shall be higher in merit.
iv. In case of tie in (iii) above, candidates senior in age shall rank higher in order of merit.

v. In case of tie in (iv) above, candidates scoring higher marks in 10th examination shall be higher in merit.

2nd round for B.Tech course and B.Tech 10 + 2 Inter se merit Course will run simultaneously. After closure of Choice filling period of both courses, first choices of students in B.Tech course will be processed and allotted seats. Once all students under B.Tech and B.Tech Fee Waiver course are allotted seats depending upon their Choices, leftover seats will be processed for students under 10+2 Inter Se Merit course based on their choices, eligibility criteria and Universities Rules.

Both the results will be declared simultaneously and students can take admission during reporting period.

6.5 Participating Institute and Administrator Module

6.5.1 On-Line Admission Reporting by the Participating Institutions:

General Assumptions

- Individual candidate shall print a "Provisional allotment letter" and shall report to the PIs for admission. In case of any type of problem candidate has to contact Central Control Room of IKGPTU. In case candidate fails to take admission during the slotted time period, his seat shall remain vacant and shall be declared as vacant for next counselling.
- Credential and documents shall be verified with online data by the designated PI officials.
- If candidate is found eligible, PI will issue provisional admission letter to the candidate.
- In case of up gradation by the candidate he/she will have to participate in subsequent counselling for re-scheduling and saving of choices.
- If a candidate has been allotted a seat or fail to report within specified time limit at PIs shall be allowed to participate in the subsequent phase of counselling, if candidate opts for up gradation against the available vacant seats, declared vacant by various institutions on the counselling website and compiled by the system (as per counselling schedule). If a candidate has not been allotted any seat from his/her choices, such candidate shall be allowed to participate in subsequent round of counselling.
- The candidates, who would like to upgrade their earlier allotted seats, will also be permitted to participate in the subsequent counselling, provided they give a declaration, while they are getting themselves registered for the subsequent counselling, to the effect that they would be vacating the seat allotted to them in the previous counselling. For the subsequent round of counselling, candidate will have to give his/her consent and fill fresh choices. If the candidate shall not get the admission seat from new choice of the subsequent round in such a case, his/her previous admission shall be continued.

Reporting process will start after the allotment of seats as in the previous step and this process will comprise of following steps:

a. After allotment of the seat, the candidate is required to report to the allotted institute for admission within the date specified in the allotment letter. The administrator website will have PI module secured by separate user id and password for each PIs.
b. The credentials and certificates of the candidates are to be verified by PIs as part of the admission process at the reported Institute. If the credentials and certificates are found wrong the allotment will be canceled and the admission is denied otherwise the admission is granted.

c. Candidates are required to pay the fees in the prescribed form at the designated bank.

d. The authorized institutes can access candidates' details who have been allotted to a specific institution. All the PIs are required to update the successful candidates' data on web to complete the process of admission. It will facilitate to compile filled and vacant seats.
e. On successful verification of the documents, Institute designated officials will generate an admission slip. One part of the slip will be handed over to the candidate and second part will be retained by the Institute.
f. PIs can also generate reports on admitted candidate course wise round wise or roll no wise, list of vacant seats etc.

6.5.2. Administrator Module :- IKGPTU Administrator will be responsible for technical conduct of the counselling including initial seat matrix creation, schedule preparation, uploading of static contents, message management and interaction with NIC Hqrs Counselling helpline etc. He/she will login to the website http://intraptu.nic.in using two level userid and password.

IKGPTU Administrator will have following facility in his account.

1. Creation of Participating Userid and details thereof
2. Seat availability, leftover & filled status and reports
3. Category Wise & Branch wise Seat Availability/filled/leftover in all institutions
4. Category wise breakup of Seat Matrix
5. Candidate Information Updation
6. Candidate Seat Allotment Details
7. Secured interface for uploading/updating of seat matrices.
8. Online Withdrawal/Cancellation of Candidates' Admission
9. List of Candidates who withdrew their seats

Core & Technical Committee - **Appendix-I**

Various Committees have been formed by Chief Coordinator, IKGPTU Admissions 2018, vide its letter no IKGPTU/REG/53 dated 23/02/2018.

Functions of the Core Committee:

1. Recommendations for finalization of
   - Process and procedure, contents development for website.
   - SRS approvals.
   - Testing of developed software
   - Acceptance of software

2. Verifying the sanctioned seat for allotment / approved institutions before publication

3. Finalization of training requirement / needs

4. Monitoring and coordinating the training

5. Inspecting the facilities of participating institutions regarding online counselling.

6. Coordinating with various concerned agencies related with counselling / admissions

7. Coordination with participating institutions, other Govt. departments / private agencies and various committees

8. All other jobs assigned by the Chief Coordinator and Vice Chancellor cum Chairman, IKGPTU.

Appendix-II

Roles and Responsibilities of IKGPTU & NIC

IKGPTU:

1. IKGPTU/Core committee will approve the SRS and software functionality.
2. IKGPTU will provide payment gateway for integration with Counselling application for collection of online fee though credit card/debit card/ netbanking.
3. IKGPTU shall provide the soft copies of institutions' profiles, seat matrix of all the participating institutions, counselling schedule etc by 20th June, 2018 so as to complete the software development in time.
4. IKGPTU will approve and certify the acceptance of the application software as well as the responsibility of seat allotment will be with IKGPTU
5. IKGPTU shall provide the Merit Number (Rank)s of all the qualified candidates. For B.Tech, JEEMAIN rank will be used, whereas for B.Arch, B.Tech 10+2 Inter Se Merit and B.Pharmacy ;., IKGPTU verification team will verify and approve the Rank prepared by NIC.
6. IKGPTU will identify the PI and their officials so that those could be trained for conducting counselling smoothly at every PI. Also the trained officials of PI shall further educate the candidates for submission of choices.
7. IKGPTU will ensure readiness of the PI, these include required computer hardware, operating software, establishment of LAN, uninterrupted power supply, leased line Internet connectivity. A list of PIs and their respective officials identified for execution of counselling shall be provided to NIC for placing on the website.
8. IKGPTU will take all proactive actions as needed from time to time for proper upkeep of the systems and also for their smooth operations.
9. Making available of all consumables such as computer stationery, CD & toners etc. required for the above services will be the responsibility of PI. PI will be procuring all such items out of their own funds as per the norms/procedures applicable.
10. IKGPTU will provide all the facilities to NIC personnel at par with other personnel deputed for the conduct of counselling, NIC is not making any budget provision in this regard.
11. IKGPTU will make provision in the schedule of counselling for conversion of seats from one category to another and to generate the resultant seat matrix.
12. There may be sufficient time between subsequent counselling's for verification of resultant seat matrices and their uploading on the website other related matters.
13. IKGPTU will provide the Final Candidate Master (JEEMAIN examination) at least Seven days before the actual start of the counselling. At later stage, if required, IKGPTU will itself make changes to the candidate master.
14. IKGPTU will be responsible for unsaving of any final locked choices on request of candidates, and shall inform NIC about the same before processing the seat allotment module.

15. IKGPTU will be responsible for making changes in candidate master, if required.

16 IKGPTU shall provide all the procedure and processes for counselling to put on website for the use of all concerned

17 The PI will also Verify the documents and credentials online, acceptance of admission fees online and updating of admission status of candidates online

18 IKGPTU shall deal with the designated bank to sort out all related problems. In case counselling registration fee deposited by a candidates does not gets uploaded the counselling website, the bank shall sort out the mater. Also the bank shall provide the list of participating branches.

19 IKGPTU shall pass on necessary instructions for successful counselling to the PI s and other stakeholders.

NIC:

1. NIC will
   a. Design, develop and implement the software for online form filling, to be used in on-line counselling
   b. Provide Technical Support and advice to Technical Committee during the counselling process.
2. NIC will develop and implement the software package on the servers & LAN provided by IKGPTU and PI on need basis
3. NIC will provide training as per the mutually agreed schedule to the identified officials of PIs and Technical committee members at the identified locations for helping the candidates in submission of their choices, handling PI level provisional admission process and required operation of the counselling software packages.
4. NIC will give utmost priority and put up dedicated teams for timely completion of tasks as per the timeframes envisaged provided necessary inputs are made available by the IKGPTU in time.
5. NIC will ensure the required security of the data and the databases as per the current technology standards.

Appendix-III

State Codes

State code	State Name
01	Punjab
02	Other States

Master List of Categories/Sub-Categories/Sub-Sub-Categories (Priorities)

Category	Description
General	General
SC/ST	Scheduled Caste/Scheduled tribe
BC	Backward Class
TS	T-Sunami Victims
FF	Wards of Political Sufferers/ Freedom Fighter
BA	Backward Area
BR	Border Area
SP	Sports Person
DF	Children/Widows of Defense Personnel
RT	Terrorist/Riots affected victims
PM	Children/Widows Para military forces
DPB	Handicapped- Blind
DPD	Handicapped- Deaf & Dumb
DPO	Handicapped- Others
RURAL	RURAL
URBAN	Urban
SM	Sikh Minority
WD	Widows/ Divorced Women

Sub-Category for Defense Personnel

Subcategory Code	Description
01	Posthumous Awardees
02	Other Awardees
03	Children/Wards of the Defence Personnel killed or disabled to the extent of 50% or more
04	Serving Defense Personnel/Ex-Serviceman

Priority(Sub-Sub-Category) for Defense Personnel

Priority Code	Description
1	Param Vir Chakra
2	Ashok Chakra
3	Sarvottam Yudh Seva Medal
4	Maha Vir Chakra (MVC)
5	Kirti Chakra
6	Uttam Yudh Seva Medal (UYSM)

7	Vir Chakra (VrC)
8	Shaura Chakra (SC)
9	Yudh Seva Medal (YSM)
10	Sena Nau Sena /Vayu Medal(Gallentry only)
11	Mention in Despatches
12	PVSM
13	AVSM
14	VSM
15	Sena Medal/ Nau Sena/Vayu Sena Medal
16	No Received any distinguished Medal

Sub-Category for Terrorist/Riots affected victims Quota

Subcategory Code	Description
01	Persons killed in 1984 riots / killed as a result of terrorist violence or killed by the security forces acting in aid of civil authority, including innocent civilians and Army Deserters as well as those of these categories who have been disabled physically to the extent of 100% in accordance with the policy already in place
02	Person who were disabled to an extent less than 100%
03	All other categories mentioned in the existing policy under this head

Sub-Category for PM (Children/Widows Para military forces) Quota

Subcategory Code	Description
01	Winners of President's Police Medal for Gallantry
02	Winners of Police Medal
03	Killed or disabled to extent of 50%
04	Children of serving para-military personnel and ex-para military personnel
05	Remaining categories already mentioned

Sub-Category for SP(Sports Person)

Subcategory Code	Description
01	Grade A
02	Grade B
03	Grade C
04	Grade D

Priority(Sub-Sub-Category) for Sports Persons

Priority Code	Description
1	Gold Medal –Senior
2	Gold Medal – Junior
3	Gold Medal – 19 Years
4	Gold Medal – 17 Years
5	Silver Medal – Senior

6	Silver Medal – Junior
7	Silver Medal – 19 Years
8	Silver Medal – 17 Years
9	Bronze Medal – Senior
10	Bronze Medal – Junior
11	Bronze Medal – 19 Years
12	Bronze Medal – 17 Years
13	Gradation, No medal (only participation)

Appendix-IV

Tentative Counseling Schedule

(B.Tech. and B.Tech Fee Waiver)

(85% Punjab & 15% Other States)

Activity	***B.Tech alongwith Fee Waiver***	
	Start Date	End Date/Actual
Registration	01-06-2018 11.00 am	05-06-2018 05.00 pm
Choice Filling	Choice filling will start simultaneously with Registration.	
Ist Round Result	**08-06-2018, 11.00 am**	
Reporting in Allotted Institution	09-06-2018 11.00 am	12-06-2018 05.00 pm
2nd Round (85% Punjab and 15% Other states)		
Registration	14-06-2018 11.00 am	17-06-2018 05.00 pm
Choice Filling	Choice filling will start simultaneously with Registration	
2nd Round Result	**19-06-2018 11.00 am**	
Reporting in Allotted Institution	19-06-2018 11.00 am	23-06-2018 05.00 pm

(B.Tech. 10+2 Inter se Merit Fee Waiver)

(85% Punjab & 15% Other States)

Activity	***B.Tech alongwith Fee Waiver***	
	Start Date	End Date/Actual
Registration		
Rank Preparation		
2nd Round (85% Punjab and 15% Other states)		
Choice Filling		
Result		
Reporting in Allotted Institution		

Appendix V

Institutions wise list of courses, eligibility criteria of participating Universities and Counselling Fees will be as per Government notifications No. 8/18/2018/ITE2/219955/1 dated 25/04/2018 for B. Tech and B.Arch issued by Government of Punjab, Department of Technical Education and Industrial Training(Technical Education Branch II)

NIC's Counselling & Admissions System (NIC-CAS) for IKGPTU

Stakeholder Requirement Specifications

NIC-Cas-StRS-0.1

Abstract: The requirement document is an attempt to the requirements for a system that can provide the services needed by users and other stakeholders in a defined environment.

Keywords: Registration, Counselling, Admissions, IKGPTU

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Amendment log

Version	Date	Brief Description	Section Change
0.1	02/03/2019	The StRS document defines the requirements for IKGPTU Counselling 2019. It contains the scope of application, business environment, goals, operational requirements and user requirements etc.	

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1 Introduction

A Stakeholder Requirements Specification (StRS) defines the requirements for a system that can provide the services needed by users and other stakeholders in a defined environment. It identifies stakeholders, or stakeholder classes, involved with the system throughout its life cycle, and their needs, expectations, and desires. It analyses and transforms these into a common set of stakeholder requirements that express the intended interaction the system will have with its operational environment and that are the reference against which each resulting operational service is validated.

The e-Counselling system is an one stop solution for all the counselling needs right from application form, on-line fee payment, selection of courses/institutes, document verification, seat allocation, PI reporting, reports/dashboards. The solution cater to all the stakeholders namely Aspirants, Counselling Board, and Participating Institutions with end-to-end support towards a hassle-free transparent admission processes in the Technical and Academic Institutions in Punjab State.

NIC counselling solutions has been widely accepted by a number of professional institutes and universities in the last 15 years. The system has evolved with the change of technology over the period of time to stay relevant.

This document defines the requirements for e-counselling system that can provide the services needed by users and other stakeholders in a defined environment. It transforms the requirements to the intended interaction in the system and it acts as a reference against which each resulting operational service is validated.

1.1 Business Purpose

This sub section describes at the organization level the reason and background for which the organization is pursuing new business or changing the current business in order to fit a new management environment. In this context, it should describe how the proposed system would contribute to meeting business objectives.

The Centralized Counselling is a convenient platform for the students to apply for B. Pharmacy, B. Architecture, MBA, MCA, M. Tech(Full Time), M. Pharmacy(Full Time), M. Arch, B. Tech (LEET), B. Pharm (LEET) & MCA(LEET) programmes based on their IKGPTU generated rank, in all institutions of participating Universities. This centralized system has replaced the older system, wherein students had to apply individually to various institutes and visit every institute for appearing in interview/counselling. The current system facilitates students to fill single online application form and apply to all programmes in all the participating institutions to which they are eligible. The overall convenience of students has increased enormously due to this centralized counselling.

The centralised counselling has been successfully organised for IKGPTU since 2009 for centralized admission in B. Pharmacy, B. Architecture, MBA, MCA, M. Tech(Full Time), M. Pharmacy(Full Time), M. Arch, B. Tech (LEET), B. Pharm (LEET) & MCA(LEET) programmes offered by institutions of participating Universities.

The proposed system will be configured/customised to provide counselling services to organising university i.e. Inder Kumar Guzral Punjab Technical University based on previous experiences to improve it further.

1.2 Business Scope

This sub-section defines the business domain under consideration by

a) Identifying the business domain by name.
b) Defining the range of business activities included in the business domain concerned. The scope can be defined in terms of divisions in the organization and external entities that relate directly to the business activities, or functions to be performed by the business activities. It is helpful to show environmental entities which are outside of the scope.
c) Describing the scope of the system being developed or changed. The description includes assumptions on which business activities are supported by the system.

The proposed system (IKGPTU-2019) cover e-counselling services to organising University i.e. IKGPTU by performing following activities.

1. Customise/Configure IKGPTU website https://ptuadmissions.nic.in for IKGPTU-2019.
2. Customise/configure online eCounselling system as per the **Business Rules** finalized by Technical Committee of IKGPTU-2019.
3. Conduct training and handholding sessions to officials of organizing University and participating institutes at a central location.
4. Hand-over entire database to organizing university after closing of admission process for further reports, query and usages.
5. Integrate SMS/Email services for sending alert to applicants.
6. Integration of HDFC payment gateway Services.
7. Storage of candidate's mobile number and email id in encrypted format and would be utilized only for sending alerts to the candidates during registration & result publication process.

1.2.1 Out-of-scope

The following are considered excluded from current scope of work

- Reconciliation of Fee with HDFC for adjustment/refund would be done by IKGPTU and is not in the scope of work of NIC.
- IKGPTU would reconcile with the bank the double/multiple payment made by a candidate.
- Any other activities that is not mentioned under the above Scope of Work.

1.2.2 Assumptions and Dependencies

1.2.2.1 Pre-requisite

The proposed system of counselling is web based and shall be applicable for admissions to all AICTE approved technical professional courses run by different technical institutes in the state (Govt./Aided/University Departments/self-financed/Private Institutes) to overcome the problems faced by the candidates during manual system.

To meet the requirements of web based counselling, the website **http://ptuadmissions.nic.in** shall be launched. The website shall keep following required links for different activities of counselling.

1. Counselling Website (procedural) with URL: **http://ptuadmissions.nic.in** shall contain procedures and information for counselling w.r.t institutes, availability of seats in different disciplines and categories, profile of institutes, eligibility criteria and counselling procedure.

2. Counselling website with URL: **http://ptuadmissions.nic.in** for registration, exercising of choices and saving/saving the choices during actual counselling and for publishing of results of counselling etc **(**The link shall be activated during actual counselling days).
3. Actual Admission intranet website, URL: **http://intraptu.nic.in** , which shall be accessible through a prescribed User-ID and Password.

All above websites links shall perform following functions:

- Provision for online Counselling fee payment.
- After paying the counselling fees, students can register themselves on the website
- Information relating to Institutes, disciplines (Engineering), branches (e.g. Civil Engineering or Computer Science etc.) and categories (General, SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others) should be displayed through relevant menus.
- Secure user/password based Login and the system will provide the facility to add, change, re-order, delete the choices in respect of institutions and branches.
- Candidate can save their choices, when ever required using <Save Choices> button.
- Candidate can get print of their choices after Final saving, but list of choices and indicative seat matrix can be printed, whenever required.
- The system shall process the submitted choices and generate the indicative seat Matrix (latest positions of seat availability)
- Processing for Seat allotment & final seat allotment shall be published on Website.
- Candidates shall print their allotment letter and will report to the PIs for admission with in prescribed time period.
- Document Verification, generation of document verification checklist and updation of final admissions by Institutes will be done by PIs on the Website.
- The system shall provide required online query/Reports.
- After completion of admission period for counselling, the leftover/unfilled seats shall be transferred for consequent counselling.
- Online Withdrawal facility will be managed by IKGPTU Administration. Candidates, who are willing to withdraw from Counselling after taking admission in allotted college, will give the request to IKGPTU administration.
- Subsequent rounds are on based on the vacant seats/leftover /unfilled / merged

- IKGPTU (Organising university) need to finalize

  - Information Brochure for all courses and Institutes Profiles will be supplied by IKGPTU to NIC for uploading it to the above-mentioned counselling websites along with the counselling procedure & seat matrices.
  - IKGPTU will provide following information as well as database to NIC:
    - Participating Institutes Information, categorization with Govt. / University/ self-finance/Pvt. Institutes, Engineering /Pharmacy wise.
    - Course/Branches wise list containing branches/disciplines.
    - Unique Merit Number (Rank) and detailed data of candidates appeared in All India Engineering Entrance Examination.
    - Seat Matrix – for every technical institute having category wise breakup of seats as applicable (GEN,SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others)
    - Eligibility criteria's & Reservation Categories master

- All input and output format/reports like Registration Form, Choices Page, Provisional Seat Allotment letter, Provisional Admission Letter, Cancellation Letter, Withdrawal Letter etc.
- All SMS/Email message formats and content.
- Payment related formalities with bank before starts of Counselling.

1.2.2.2 Assumptions

- All Counselling's would be based on IKGPTU merit list.
- Merit Numbers (Rank) for each candidate should be UNIQUE (i.e. no two candidates can have same Merit Number (Rank) in a stream).
- IKGPTU will finalize/provide and upload all required master data including seat matrices (of all the colleges/streams/branches, comprising of the distribution of the seats in absolute terms as per the state reservation policy), Institute profile etc. well in advance before the start of the counselling.
- Eligible Candidates, who have paid counselling fees, will register online and obtain unique-ID based on roll number and password (as given by the candidate at the time of registering on the web) prior to exercising of choices.
- Seat allotment would be as per the seat matrices given by IKGPTU according to reservation policy of the state.
- IKGPTU shall reserve all right pertaining to any changes in any master data including candidate master. Changes in **Candidates' Master Database**, like **DOB, Gender,** etc. Permitted through web interface by authorized IKGPTU officials.
- A candidate shall be able to fill unlimited choices as decided by IKGPTU
- Saving of Choices by Candidates is must for the seat allotment. Unsaved choices will be considered as deemed choice.
- Saving of Choices by Candidates would be taken as the last choices submitted by the candidate. In case the candidate does not explicitly lock the choices, the choices submitted till last moment of the last cut-off time shall be taken as the final choices by that candidate.
- All the PIs should have the prescribed computer infrastructure, trained manpower and Internet connectivity through an Internet Service Provider (ISP) with specific IP addresses (obtained from the ISP by the PIs) for accessing secured databases for making admissions and updating of admission data on website.
- Data updation from PIs will not be allowed.
- IKGPTU will provide all functional, regulatory and non-functional requirements for the project.
- Students data base shall be the property of IKGPTU
- IKGPTU will test the application software and sign User Acceptance Test (UAT) before launching of the application.

- Payment Gateway
  - Organising University makes an agreement with bank for payment gateway integration.
  - Organising University and Bank will handle all the financial matters relating to payments, receipts, refund and reconciliation of fee payment etc.
- Seat Matrix
  - All Participating Institutions (PIs) will follow the same Seat Matrix structure.
  - All PIs will update their Seat Matrix through online Portal. After updates, PI should freeze the Seat Matrix and send signed, stamped printout to IKGPTU.
  - The seat matrix data will be prepared as per prevailing reservation policy of State / participating institutes.
- Registration Form

  - New candidates will register through the registration form and get the Login Id and password. All the candidates will have to register on the website provided they have deposited requisite counselling Fee in the designated bank. The system will ask for details like roll no, rank, date of birth etc for cross-verification. It will ask for other details like category, sub-category, Priority etc. It will then ask the candidate to create the password. Candidates will be directed to read the reservation policies of participating universities and Government notifications and give their acceptance. The successful completion of above will complete the registration process.
  - If there is any change from the already available information, candidate has to report to the IKGPTU with necessary documentary proofs and IKGPTU Administrator will modify/ update the data.
  - Registered candidate can view his data from view profile. If the necessary change does not reflect in view profile, he/she has to contact CCR.
- Registered Candidate Sign In / Login
  - Change Password
  - Registration details
  - Choices Available
  - Standard Template for Choice with User Defined Scroll up/down on Template without change Original Template after Copied into Choice Fill
  - Branch wise
  - College wise
  - Choices Edit – Interchange(Swap)
  - Choices Edit – Rearrange(Move)
  - Choices Delete
  - Save choices
  - Choices Print (report format)
  - Result
  - Withdrawal of Seat
  - Generation and printing of Allotment letter
  - Log out

1.3 Business Overview

This sub-section describes major internal divisions and external entities of the business domain concerned and how they are interrelated.

1.3.1 Major Internal Divisions

1.3.1.1 Organising Board/Institute

Government of Punjab has authorised IKGPTU to conduct e-counselling for 2019-20 session for IKGPTU and participating universities.

1.3.1.2 Participating Universities

- Inder Kumar Gujral Punjab Technical University's affiliated Engineering / Institutions for Engineering & Technology.
- Maharaja Ranjit Singh Punjab Technical University affiliated Engineering / Institutions for Engineering & Technology

1.3.1.3 Reporting Centres

All participating institutes would act as Reporting Centre for physical verification of documents and admitting the students in their institute.

1.3.2 External Entities

1.3.2.1 National Informatics Centre (NIC)

NIC provides e-counselling services by

- configuring its e-counselling solution
- customising the solution to meet specific requirements
- hosting the e-counselling solution
- SMS/Email integration
- On-line payment gateway integration

1.3.2.2 National Informatics Centre Services Inc. (NICSI)

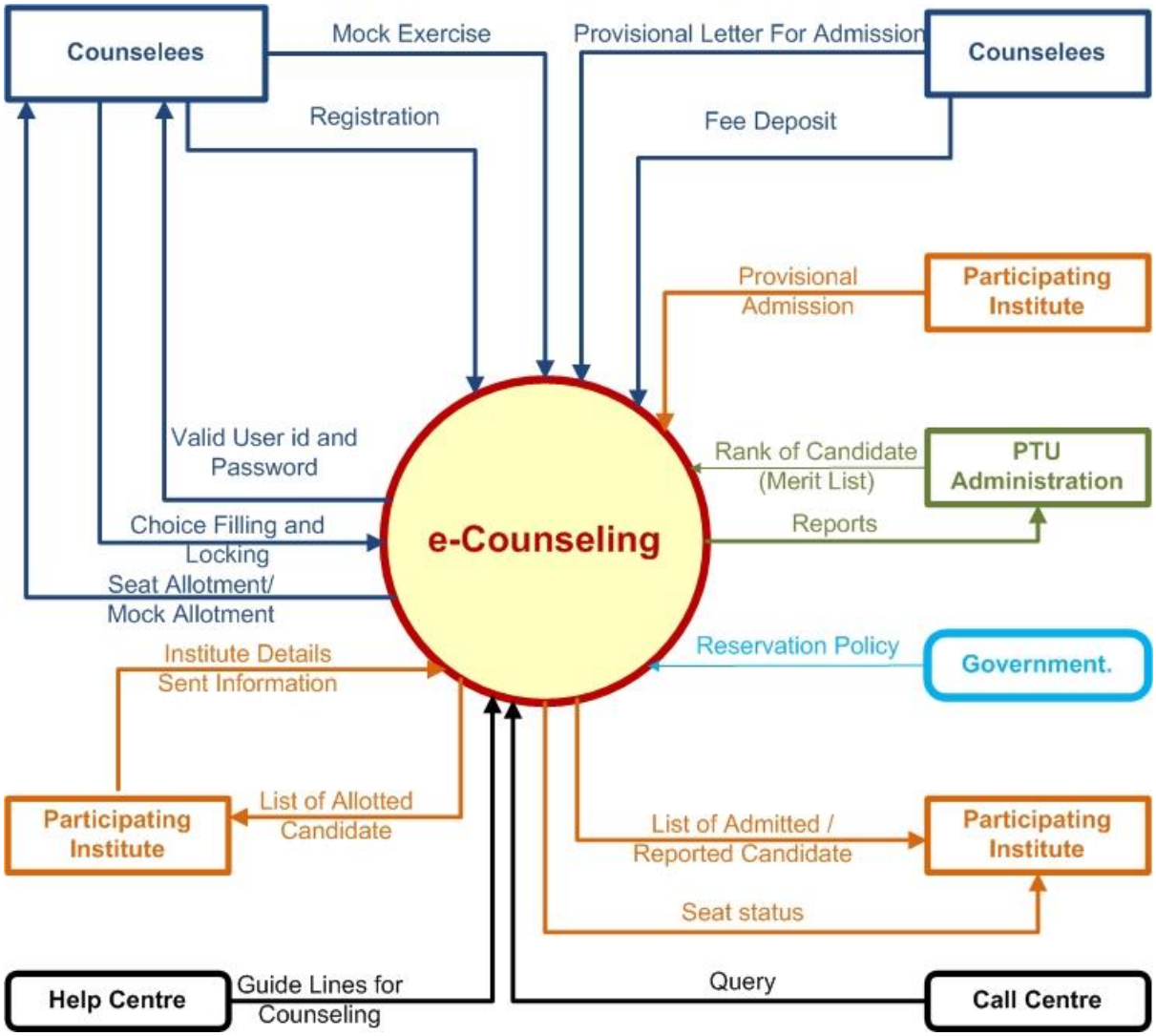
NICSI will take care of all the financial matters.

1.3.2.3 Payment Gateway Integrator (PGI)

The PGI will provide the electronic payment gateway (EPG) services for all the applications for payment of fees/charges towards various services provided by organising institute.

1.3.3 Interrelationships

The following diagram describes how all the entities are interrelated. IKGPTU would be the organising university for conducting Counselling and like previous years, NIC is providing the ecounselling services. HDFC Bank would provide the EPG services.



1.4 Definitions

1.4.1 User Characteristics

The following users will have a role in the proposed Centralized Counselling for Seat Allocation

S. No.	User category	Description
1	Eligible Candidates	Eligible candidates based on rank, IKGPTU generated ranks
2	Organising University Administrator (IKGPTU Board Admin)	Privilege users who have special permissions to manage the counselling process.
3	Participating Institution Users (PI Admin)	Institutes who offer seats will update institute profile, academic program and seat matrix and mapping tables.
4	Reporting Centre(PI) Users	IKGPTU would designate all participating Institutes for document verification and confirmation of provisional admission.

1.4.2 User Hierarchy

IKGPTU Administrator Interface

- List of Institutes, Institute Profile & Institute Course Summary
- Seat Matrix Entry , Seat Matrix Summary and different views
- Candidate Details (Registered Candidate) and Edit Registration
- Message Entry, Counselling Schedule
- Candidate Original Information (Unregistered Candidate)
- Admission Status (Course Wise Details, Name Wise Allotment, Admitted Candidate List, Candidate Who Got Refund, Admission Withdrawal and Vacancy Position)

PI Interface

- Candidates Reported at PIs
- Online candidate information Display (for verification)
- Online Fee verification
- Provisional Admission
- Document verification with generation of document verification checklist and signed by candidate and PI.
- Printing of Admission Letter.
- Updation of admission status on the counselling website.

1.4.3 Category Class

For the purpose of seat allocation, qualified candidates are partitioned into different categories as per their preferred category/sub category/ESM priority. Based on such a partition, each candidate is assigned a category tag as given below.

State Codes

State code	State Name
01	Punjab
02	Other States

Master List of Categories/Sub-Categories/Sub-Sub-Categories (Priorities)

Category	Description
General	General
SC/ST	Scheduled Caste/Scheduled tribe
BC	Backward Class
TS	T-Sunami Victims
FF	Wards of Political Sufferers/ Freedom Fighter
BA	Backward Area
BR	Border Area
SP	Sports Person
DF	Children/Widows of Defence Personnel
RT	Terrorist/Riots affected victims
PM	Children/Widows Para military forces
DPB	Handicapped- Blind
DPD	Handicapped- Deaf & Dumb
DPO	Handicapped- Others
RURAL	RURAL
URBAN	Urban
SM	Sikh Minority
WD	Widows/ Divorced Women

Sub-Category for Defense Personnel

Subcategory Code	Description
01	Posthumous Awardees
02	Other Awardees
03	Children/Wards of the Defence Personnel killed or disabled to the extent of 50% or more
04	Serving Defence Personnel/Ex-Serviceman

Priority(Sub-Sub-Category) for Defense Personnel

Priority Code	Description
1	Param Vir Chakra
2	Ashok Chakra
3	Sarvottam Yudh Seva Medal
4	Maha Vir Chakra (MVC)
5	Kirti Chakra
6	Uttam Yudh Seva Medal (UYSM)
7	Vir Chakra (VrC)
8	Shaura Chakra (SC)
9	Yudh Seva Medal (YSM)
10	Sena Nau Sena /Vayu Medal(Gallentry only)
11	Mention in Despatches
12	PVSM
13	AVSM
14	VSM
15	Sena Medal/ Nau Sena/Vayu Sena Medal
16	No Received any distinguished Medal

Sub-Category for Terrorist/Riots affected victims Quota

Subcategory Code	Description
01	Persons killed in 1984 riots / killed as a result of terrorist violence or killed by the security forces acting in aid of civil authority, including innocent civilians and Army Deserters as well as those of these categories who have been disabled physically to the extent of 100% in accordance with the policy already in place
02	Person who were disabled to an extent less than 100%
03	All other categories mentioned in the existing policy under this head

Sub-Category for PM (Children/Widows Para military forces) Quota

Subcategory Code	Description
01	Winners of President's Police Medal for Gallantry
02	Winners of Police Medal
03	Killed or disabled to extent of 50%
04	Children of serving para-military personnel and ex-para military personnel
05	Remaining categories already mentioned

Sub-Category for SP(Sports Person)

Subcategory Code	Description
01	Grade A

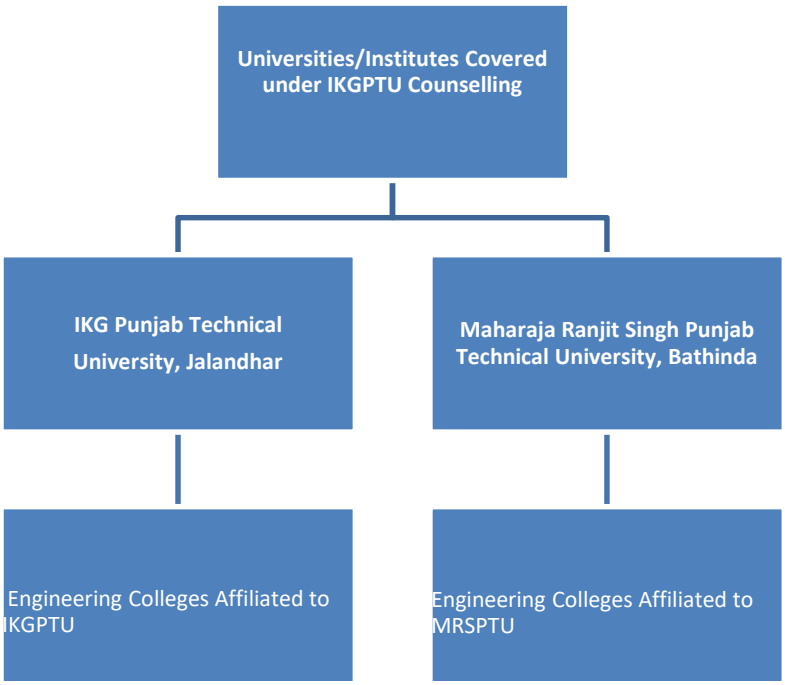
02	Grade B
03	Grade C
04	Grade D

Priority(Sub-Sub-Category) for Sports Persons

Priority Code	Description
1	Gold Medal –Senior
2	Gold Medal – Junior
3	Gold Medal – 19 Years
4	Gold Medal – 17 Years
5	Silver Medal – Senior
6	Silver Medal – Junior
7	Silver Medal – 19 Years
8	Silver Medal – 17 Years
9	Bronze Medal – Senior
10	Bronze Medal – Junior
11	Bronze Medal – 19 Years
12	Bronze Medal – 17 Years
13	Gradation, No medal (only participation)

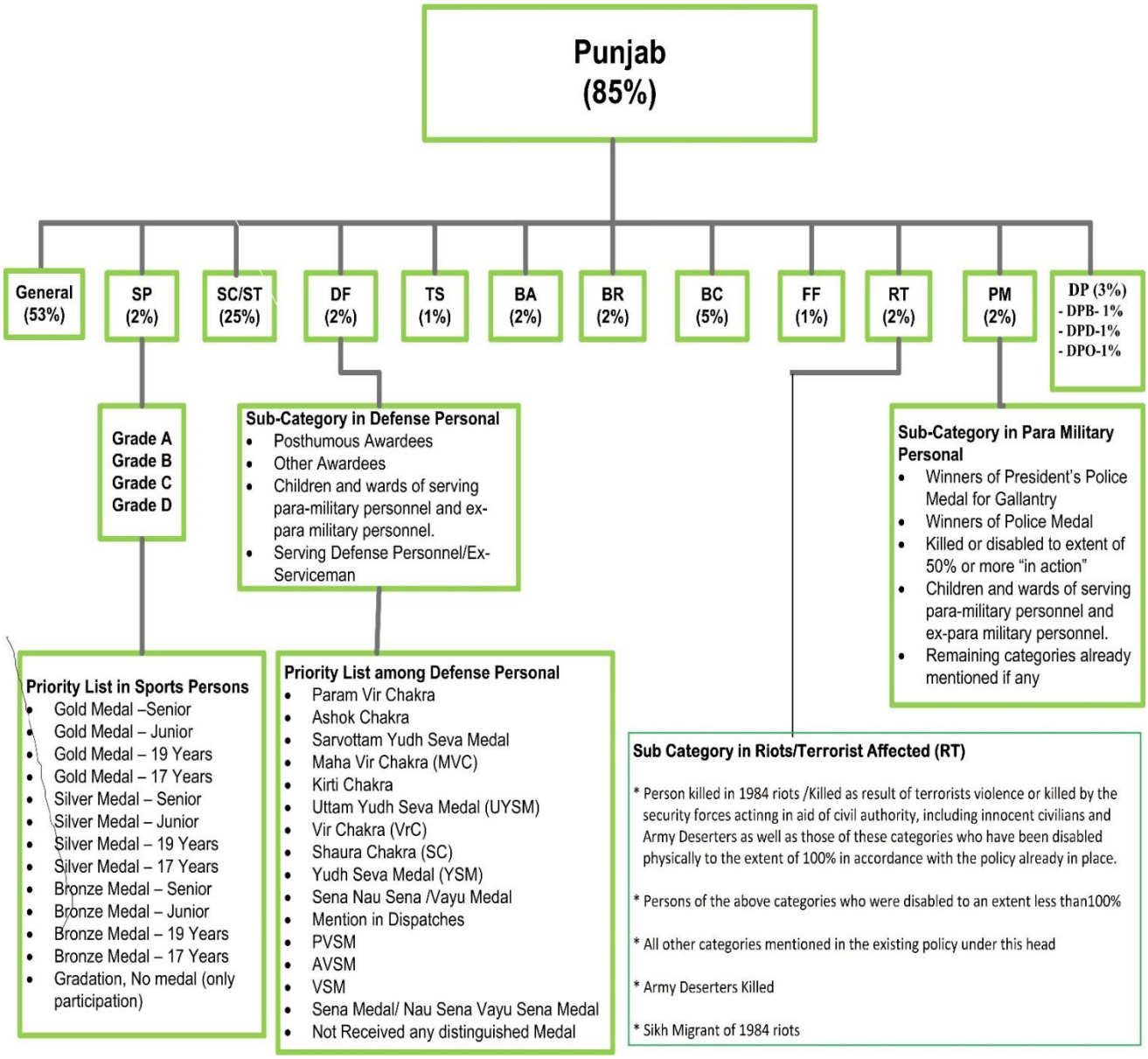
1.4.4 Seat Categories

The total intake for B.Tech (LEET), B.Pharmacy, B.Pharmacy(LEET), B.Architecture, M.Tech, M.Arch, M.Pharma(FT),MBA,MCA & MCA(LEET) intersect merit programs offered by participating institutions are divided into fifteen different seat categories. Following reservation policies as adopted by Universities will be used in the project.



Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU

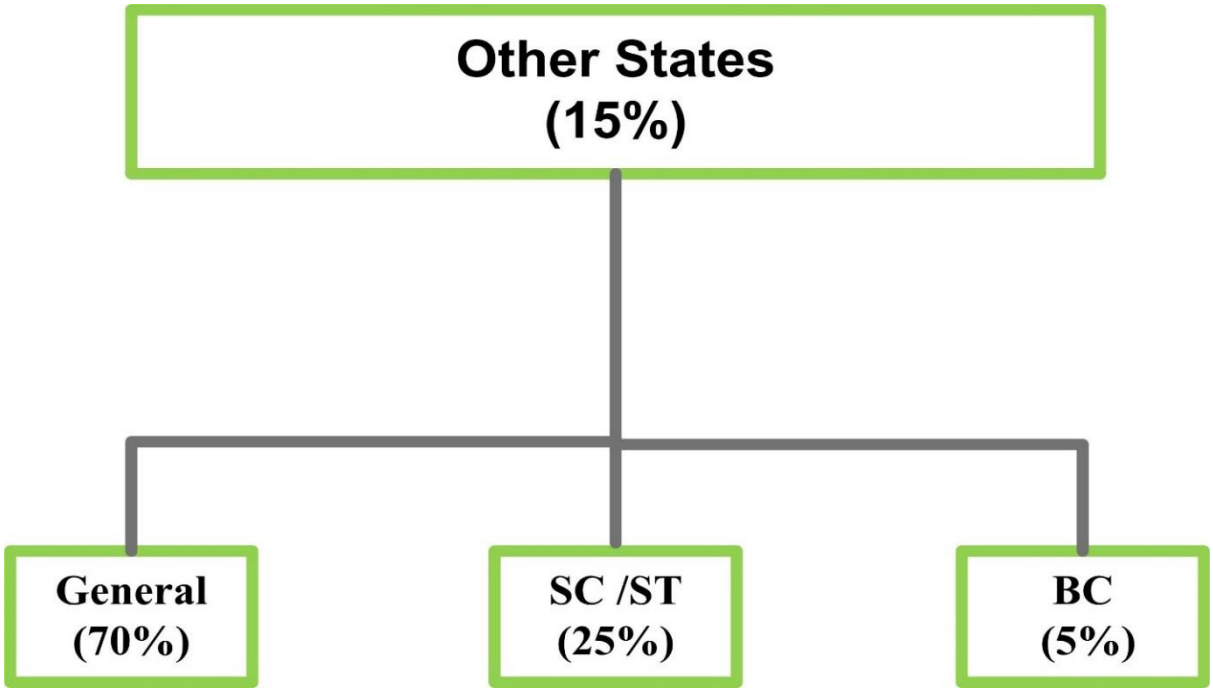
Punjab 85% based on Ranking



As per Notification

Reservation Chart for 15 % Other State Quota in IKGPTU/MRSPTU

Other State 15 % based on Ranking



1.5 Stakeholders

This sub-section lists the stakeholders or the classes of stakeholders and describes how they will influence the organization and business, or will be related to the development and operation of the system.

- Organizing University (IKGPTU)
- Participating Institutes
- National Informatics Centre
- National Informatics Centre Services Inc.
- Payment Gateway Integrator
- Applicants

2 References

- IKGPTU website (https://ptuadmissions.nic.in), http://intraptu.nic.in
- Business Rules finalized by IKGPTU Technical Committee for the session 2019-20
- Discussion with Organising University officials.
- Software Requirement Specifications (SRS) of IKGPTU e-Counselling 2018-19.
- IEEE Standard 29148-2011 - ISO/IEC/IEEE International Standard - Systems and software engineering -- Life cycle processes --Requirements engineering.

3 Business Management Requirements

3.1 Business environment

This sub-section defines external and internal environmental factors that should be taken into consideration in understanding the new or existing business and eliciting the stakeholder requirements

for the system to be developed or changed. The environmental factors should include possible influences to the business and consequently the system from external conditions like market trends, laws and regulations, social responsibilities, and technology base.

The Inder Kumar Gujral Punjab Technical University(IKGPTU) was established in the year 1997 under The Punjab Technical University Act, 1996 (Punjab Act No. 1 of 1997) to provide for the establishment and incorporation of a University for the advancement of technical education and development thereof in the State of Punjab and for matters connected therewith. In pursuance of this Act, the University started its journey with 09 engineering colleges and few management colleges affiliated to it. Since then the University has come in a long way and during the Academic Session 2017-18, the University has affiliated 65 Engineering Colleges, 109 management and Computer Application courses, 33 institutions imparting Pharmacy education, 08 colleges imparting hotel management education, 06 colleges providing Architecture Education, 11 Regional Centres for M.Tech and Ph.D. in different branches of Engineering and Management and 01 Regional Centre for M. Pharmacy. The IKGPTU is responsible for producing quality technical manpower in the field of Engineering and Technology through AICTE approved Govt. / Govt. Aided / Self-financed Institutions and University Departments. The norms and standards prescribed by AICTE are being followed.

For admission to various technical courses namely B.Tech / Degree Pharmacy, the state government used to conduct entrance tests viz. CET. As result of entrance tests, manual computerized counselling were conducted by different institutions/nominated agencies for completion of the admission process for various courses, which was very cumbersome & tiresome process.

Keeping in view the generic problems faced by the candidates, their parents and by the state administration, it was decided to give up the manual counselling system and adoption of modern web based online off campus counselling system to bring in transparency & efficiency for making merit based admissions.

3.2 Goal and Objective

This sub-section describes the business results to be obtained through or by the proposed system.

3.2.1 Goals

- Improve equity and quality thru IT delivery.
- A hassle-free and transparent service for applicants.
- Simple and user-friendly process of admission.
- 100% seat utilization.

3.2.2 Objectives

- Integrated solution for registration for counselling, seat allocation and admission.
- Integration with external systems (payment gateway, messaging services).
- Key Performance Indicators based on candidates, seat availability, allotment and feedback.
- A simple solution, easy to adopt for candidates.

3.3 Business Model

This sub-section describes methods by which the business goal is expected to be achieved. The description should be concentrated on the methods supported by the system to be developed or changed with the items such as product and services, geographies and locales, distribution channels, business alliance and partnership, and finance and revenue model.

3.3.1 MOU

A tri-partite MOU will be signed between IKGPTU, NIC and NICSI for successful implementation of the project.

3.3.2 E-Counselling Services

NIC provides these services for

- Maintenance of master code directories by organising institute
- Preparation of seat matrix by organising/participating institutes
- Institute Profile Preparation by each participating institutes
- Customisation, configuration of seat allocation software as per business rules
- Website hosting and its content management services
- Messaging (SMS/Email)
- Integration for on-line payment gateway
- Registration by candidates to participate in counselling
- Seat allocation
- Document verification by reporting centres
- Admissions (Seat Confirmation, upgradation, cancellation, withdrawal, willingness change etc.)
- Reports/dashboards to stakeholders

3.3.3 Finance/Payment Model

Estimates are prepared towards cloud hosting services, e-counselling, messaging and technical support during the session. Based on estimates, Organising Institute makes advance payment to NICSI against consolidated Performa Invoice to initiate the project. The NICSI submits the utilization certificate to organizing institute after completion of the project through NIC project coordinator.

3.3.4 Information Environment

This sub-section describes the overall strategy for the organization level decisions on common bases for multiple information systems. It should include the following items:

a) Project portfolio – when multiple system projects are running or planned to pursue the same business goal, the priority, relative positioning, and possible constraints come from the portfolio management strategy.
b) Long term system plan – when common system infrastructure or architecture has been decided or planned, it should be described as constraints on possible design decisions.
c) Database configuration – an organization level database configuration plan and possible constraints on availability and accessibility of organization global data should be specified.

3.3.4.1 Project Portfolio

There are multiple systems running to support examination, counselling and admissions every year with time bound activities with limited budgetary provisions. These multiple systems are also to be maintained with respect to technical advances and address security vulnerabilities.

3.3.4.2 Long Term System Plan

The current systems is based on common architecture with dedicated infrastructure. Plan is to identify the common requirements, a holistic architecture with minimum duplicity in terms of software

application. The common requirement will work as base for multiple systems with integration for specific project requirements in terms of business rules.

3.3.4.3 Database Configuration

Due to multiple systems working with dedicated infrastructure, the master directories are being duplicated bringing in difficulties in data integration with other systems. It is planned to have a common set of database accessible to all the projects at first instance. This may be followed by other databases like applicants, metadata for applications, business rules etc.

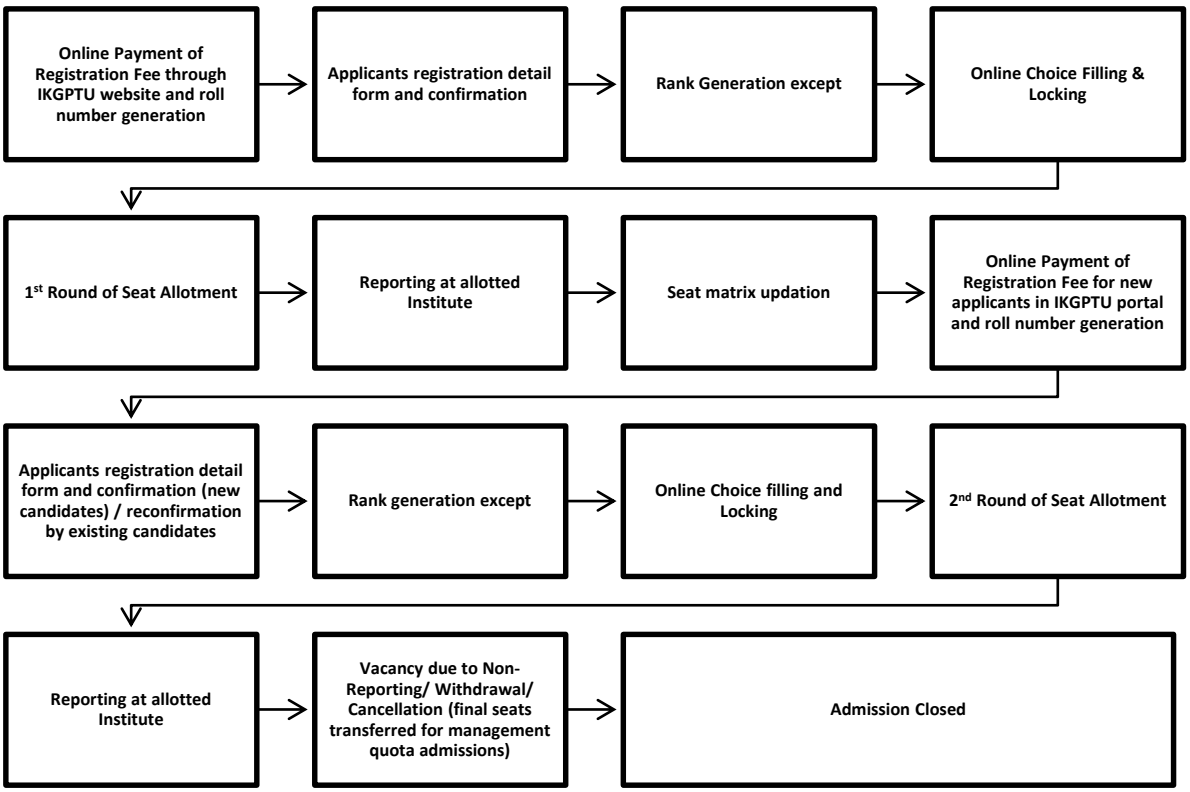
4 Business Operational Requirements

4.1 Business Processes

This sub-section provides description of the procedures of business activities and possible system interfaces within the processes. The purpose of this information item is to represent how and in which context the system supports the business activities. In general, business processes make a hierarchical structure with decomposition and classification. Each business process should be uniquely named and numbered in the hierarchy. The description of the individual business process should be represented as a diagram representing a sequence of activities.

4.1.1 Process Overview

The following online support services are required to be accomplished in different phases:



4.1.2 Registration and Choice Filling

4.1.2.1 Payment of Registration Fee

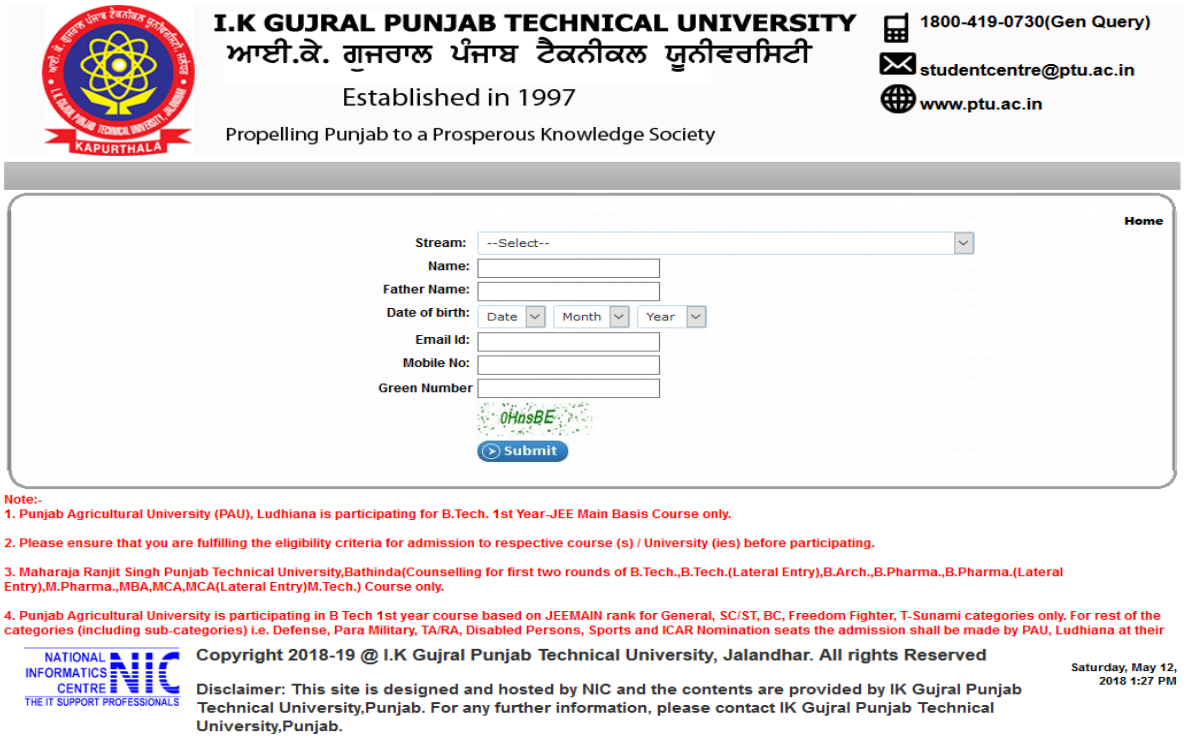
Candidate will pay the registration fee online using HDFC Bank EPG services after successful registration through IKGPTU website.

The candidates will be prompted to fill the following basic details for paying Counselling fee:-

- Name of the Course Applied for
- Candidate Name
- Father's Name
- Date of Birth
- Email Address
- Mobile Number
- Green Number(Captcha)

An OTP will be generated by the system, which will be sent to the Mobile number given by the candidate. Once Candidate fills correct OTP, system will route Candidate to Bank Portal, where in candidate can submit the counselling fee of Rs. 2,000/- (non-refundable) through Net banking/Credit Card/Debit Card. Once fees is submitted successfully, a computerized receipt will be generated by the system, which will also include roll number assigned to the Candidate. For all future actions, candidate will have to use this roll number for registering himself and fill up all details.

The candidate will only be able to proceed further (as per schedule) only if the confirmation regarding successful payment of counselling fee is done, which may take 24 hrs. This status can be checked by login to the respective account at website www.ptuadmissions.nic.in using "Registered User" button.



4.1.2.2 Online Registration

The candidates declared eligible for counselling have to visit the website http://ptuadmissions.nic.in . This website will give them static information about the Participating Universities including affiliated Institutes, various courses offered by then, Government notifications, Counselling schedule, Process Flow, FAQs and User Manual, Notice Board apart from New Registration and Login section.

Registration Module & Choice Filling in 1st round

Candidate is required to click on the New Registration link on the Home Page. He/ She has to fill five authentication parameters for gaining access.

- Name of the Course Applied for
- Candidate Name
- Father's Name
- Date of Birth
- Email Address
- Mobile Number

System will insist students to read eligibility criteria of all participating universities before proceeding further. On pressing OK button, the above data submitted by candidate will be verified with the database. It will also check for Counselling fee submitted by the candidates. If system finds entry of Counselling fee and information provided by candidate matches with the database, then the candidate will be permitted to register.

Online Form Filling – Candidate can choose/fill his state of eligibility, Main category, sub category, Qualifying marks, etc. He will also choose Password as per Password policy for getting the valid Login Id and password for login to e-Counselling. Candidate can change this information as per his wish till he does not confirm it. Once this personal data is Verified and Confirmed by the candidate, candidate cannot change the personal data. At the end of the process, a registration receipt will be generated on the screen. Candidate can take a print out the registration receipt. For subsequent access to the website, registered users will use Sign In /Login section.

Password Change facility: - System will facilitate registered Candidates for changing the password. After successful login, the candidate can change his/her password by entering the Old Password, followed by New Password and Confirm New Password. Password policy will be enforced at every level.

In case, the candidate has forgotten the password, he/she is required to enter the Roll Number, Rank, Name and Date of Birth as per their /IKGPTU Rank card and secret answer to the question selected during registration process. The above data submitted by candidate will be verified with the registered candidate Database. If it matches, then only the candidate will be permitted to change his/her password and proceed further.

4.1.2.3 Sign-in

Candidate will use the Fee Roll number (Login Id) and chosen password during registration for subsequent logins. After successful login, candidate will be redirected to the home page to perform the remaining activities like choice filling, detail viewing etc.

4.1.2.4 Choice Filling

Category-wise Seat selection criteria for Engineering Stream Under 85% Punjab quota and 15% Outside State quota

A. **If candidate has Punjab domicile and under 85% quota with any of the following Category**

Input Parameters - Roll No., Rank, Category, State Code, Sex

If Candidate is Male then seats under General category and Category specific (if applicable) in Coeducation colleges will be selected by system. No seats of Girls colleges will be selected for a Male candidate

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU/MRSPTU General
2.	SC /ST	☑	IKGPTU/MRSPTU General, SC
3.	BC	☑	IKGPTU/MRSPTU General, BC
4	T-Sunami	☑	IKGPTU/MRSPTU General, TS
5.	Freedom Fighter	☑	IKGPTU/MRSPTU General, FF
6.	Backward Area	☑	IKGPTU/MRSPTU General, BA
7	Defence Personnel	☑	IKGPTU/MRSPTU General, DF
8	Terrorist / Riots Victims (RT)	☑	IKGPTU/MRSPTU General, RT
9	Para Military forces (WPP)	☑	IKGPTU/MRSPTU General, WPP
10	Handicapped blind (DPB)	☑	IKGPTU/MRSPTU General, DPB
11	Handicapped Deaf and Dumb (DPD)	☑	IKGPTU/MRSPTU General, DPD
12	Handicapped Others (DP).	☑	IKGPTU/MRSPTU General, DP
13	Sports	☑	IKGPTU/MRSPTU General, Sports
14	Border Area	☑	IKGPTU/MRSPTU General, Border Area

B. **If candidate has other State domicile and under 15% quota with any of the following Category**

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU General + MRSPTU General
2.	SC /ST	☑	IKGPTU General, SC + MRSPTU General, SC
3.	BC	☑	IKGPTU General, BC + MRSPTU General, BC

After successful login and on clicking the link “Available Choices”, the systems internally retrieve the credentials of the candidate like gender, category, subcategory, state of eligibility and eligibility remarks from the candidate’s database and the available choices specific to the candidate based on his/her credentials.

All the appropriate choices will be displayed in choice filling section for these candidates and they can select as many choices in the order of preference from the list of available choices. The candidates may opt same course for fee wavering scheme and as well as for Non-fee wavering Scheme. Various interfaces will be available to candidates to swap/re-arrange/ delete earlier filled choices. On clicking the "Choice Submission" button, the available choices to the candidate will be displayed in the left side frame and on clicking the add button, it will be removed from the left frame and will be added into right frame. User can sort their choices University-wise also. Choices submitted in the 1st round of counselling will be processed after expiry of choice filling period. Fresh choices submission will be permitted in 2nd round of counselling.

During choice selection, Candidate can click on "Save Choices" button to save his choices. System will save the choices and keep the screen open for Candidate to select more choices.

Save and Exit

Clicking on Save and Exit button will save the choices filled by candidate during the session and close the screen. It will take Candidate to **Displaying Filled Choices** section, where Candidate can take a printout of saved choices, which includes Choice saving date time and IP address.
After saving the choices, if a candidate logs in again, then the saved choices given by the candidate will be displayed and can be modified or altered by the Candidate.

4.1.2.5 Choice Saving and Printing of Locked Choices

Clicking on Save and Exit button will save the choices filled by candidate during the session and close the screen. It will take Candidate to **Displaying Filled Choices** section, where Candidate can take a printout of saved choices, which includes Choice saving date time and IP address. After saving the choices, if a candidate logs in again, then the saved choices given by the candidate will be displayed and can be modified or altered by the Candidate. Candidate may take printout of the saved choices.

4.1.3 *Rank Generation*

The Rank Generation process will follow a specific and predefined set of rules. Ranks will be unique and generated before each round of seat allotment. Only those candidates who have registered and also paid registration fee will be considered for Unique Rank generation.

4.1.4 Seat Allotment

Seat Allotment will be done by IKGPTU Technical Team by downloading the choices filled by registered candidates and processing as per approved algorithm. During this step, the choices submitted by the candidate will be processed and seat will be allotted in the order of merit (as per rules of allotment) on the basis of the saved choices. Seat allotment will be done in each Round i.e. 1st and 2nd round. In the first round, all the seats will be available for seat allotment. In the second round, seats will be allotted against the available vacancies in the respective round. After verification and approval by the technical team, the result will be uploaded into the website.

4.1.5 Seat Allotment Result Publishing

In each rounds, seat allotment result will be published on the website. Candidate can login with / Fee Roll number and Password and see the result. If seat is allotted, then seat allotment result will be displayed which includes candidate's basic details, allotment details and important instructions. Candidate take printout of the Provisional Allotment Letter, which he will produce at the allotted College during admission period.

4.1.6 Reporting at Participating Institutes

Candidates, who are allotted seats in 1st / 2nd round must report to the respective Institute, where he/she is allotted seat, within the scheduled dates of that specific round for document verification and fee submission, failing which their allotment will be cancelled. The candidate has to report at the PI along with the provisional seat allotment letter downloaded from the website and relevant documents. Based on the document verification, candidate will be asked to deposit the admission fees in the Institute and candidate data will be updated as per the business rules and the allotted seat will be confirmed. Accordingly, Provisional Admission receipt will be generated and provided to the candidate.

4.1.7 Seat Withdrawal

A candidate, whose documents has been verified at any Reporting Center and want to cancel his/her allotted seat and seek the refund of fee, will have to login in the system and get the withdrawal during the specified period. Withdrawal process involves a few steps after the "Withdrawal" button is clicked. This includes Agreement and re-entering of the password, confirming the withdrawal, etc.

4.1.8 Vacancy due to Non-Reporting/ Withdrawal/ Cancellation

After each round, a vacancy position will be published in public domain. These vacancy will be due to seat vacant of previous round, non-reporting candidates, withdrawal candidates and seat cancelled during reporting.

4.1.9 Subsequent 2nd round student access methodology

In the subsequent rounds, new students, who wish to join Counselling for the first time will go through the same process as given above for the 1st round. Students who are already registered and exercised their choices can access the system in following fashion.

Candidate will fill five authentication parameters for gaining access.

i. Roll No.
ii. Rank (or IKGPTU generated)
iii. Candidate Name
iv. Date of Birth as printed in Admit Card
v. Security Pin as shown on the screen

If all the five parameters are valid and match the Candidate database, then a new Re-registration/Confirmation screen will appear. In which candidate will give an undertaking that

"Before participating in the second counselling, I have understood that if I am allotted a seat in the second counselling, my previous seat in 1st counselling shall automatically be cancelled and replaced by the seat allotted in second counselling. My claim for previously allotted seat stand forfeited. I shall have claim only on the seat allotted in second counselling. I have further understood that I should fill only those choices which are preferred over the already confirmed seat in first counselling. "On accepting the Declaration, candidate will be registered in the system. System will give following information.

"In the second round, Candidate can also fill College/Branch even if Available seats section shows Zero (0) seats. In case any candidate, who has been allotted the seat in 1st round vacates the seat during 2nd round, the same will be made available to other candidates in the 2nd Round itself."

4.1.10 Participation Institute Process

4.1.10.1 On-Line Admission Reporting by the Participating Institutions

General Assumptions

- Individual candidate shall print a "Provisional allotment letter" and shall report to the PIs for admission. In case of any type of problem candidate has to contact Central Control Room of IKGPTU. In case candidate fails to take admission during the slotted time period, his seat shall remain vacant and shall be declared as vacant for next counselling.
- Credential and documents shall be verified with online data by the designated PI officials.
- If candidate is found eligible, PI will issue provisional admission letter to the candidate.
- In case of up gradation by the candidate he/she will have to participate in subsequent counselling for re-scheduling and saving of choices.
- If a candidate has been allotted a seat or fail to report within specified time limit at PIs shall be allowed to participate in the subsequent phase of counselling, if candidate opts for up gradation against the available vacant seats, declared vacant by various institutions on the counselling website and compiled by the system (as per counselling schedule). If a candidate has not been allotted any seat from his/her choices, such candidate shall be allowed to participate in subsequent round of counselling.
- The candidates, who would like to upgrade their earlier allotted seats, will also be permitted to participate in the subsequent counselling, provided they give a declaration, while they are getting themselves registered for the subsequent counselling, to the effect that they would be vacating the seat allotted to them in the previous counselling. For the subsequent round of counselling, candidate will have to give his/her consent and fill fresh choices. If the candidate shall not get the admission seat from new choice of the subsequent round in such a case, his/her previous admission shall be continued.

Reporting process will start after the allotment of seats as in the previous step and this process will comprise of following steps:

a. After allotment of the seat, the candidate is required to report to the allotted institute for admission within the date specified in the allotment letter. The administrator website will have PI module secured by separate user id and password for each PIs.
b. The credentials and certificates of the candidates are to be verified by PIs as part of the admission process at the reported Institute. If the credentials and certificates are found wrong the allotment will be cancelled and the admission is denied otherwise the admission is granted.
c. Candidates are required to pay the fees in the prescribed form at the designated bank.
d. The authorized institutes can access candidates' details who have been allotted to a specific institution. All the PIs are required to update the successful candidates' data on web to complete the process of admission. It will facilitate to compile filled and vacant seats.
e. On successful verification of the documents, Institute designated officials will generate an admission slip. One part of the slip will be handed over to the candidate and second part will be retained by the Institute.

PIs can also generate reports on admitted candidate course wise round wise or roll no wise, list of vacant seats etc.

4.1.10.2 Administrator Module

IKGPTU Administrator will be responsible for technical conduct of the counselling including initial seat matrix creation, schedule preparation, uploading of static contents, message management and interaction with NIC Headquarter Counselling helpline etc. He/she will login to the website http://intraptu.nic.in using two level Login Id and password.

IKGPTU Administrator will have following facility in his account.

1. Creation of Participating Login Id and details thereof
2. Seat availability, leftover & filled status and reports
3. Category Wise & Branch wise Seat Availability/filled/leftover in all institutions
4. Category wise breakup of Seat Matrix
5. Candidate Information Updation
6. Candidate Seat Allotment Details
7. Secured interface for uploading/updating of seat matrices.
8. Online Withdrawal/Cancellation of Candidates' Admission
9. List of Candidates who withdrew their seats

4.1.10.3 Seat Matrix Entry

IKGPTU Admin will enter or update the seat matrix of all institutes. For this IKGPTU admin will choose the institute, course and category. Courses will be listed as per the mapping created by the IKGPTU Admin. After choosing all these parameter, IKGPTU admin will be able to enter the category wise seat intakes. After submission, the entered seat matrix will be shown in the bottom of page and can be edited or deleted from there.

4.1.10.4 View Seat Matrix

Various formats are available to view the seat matrix like institute wise seat matrix, program wise seat matrix and seat matrix at a glance. All the PIs as well as public can view the seat matrix.

4.1.10.5 View Various MIS Reports

Various MIS reports related to the registration, choice filling, locking, allotments, document verifications, Pi reporting etc. are available in authorized users logins. Every user can view the reports as per their responsibilities.

4.1.11 Admission Closed

All the candidates, who have reported physically at allotted institutes, will complete the other formalities of admission and will attend the classes. By this, admission in all the participating institutes affiliated with participating Universities will be closed.

4.2 Business operational policies and rules

This sub-section describes logical propositions applied in conducting the business processes. The propositions will be conditions to start, branch and terminate the sequence of the business activities in the business processes; criteria for judgment in the business processes; or formula to evaluate a quantity, which will likely be addressed in functional requirements in the SyRS and SRS. The policies and rules shall be uniquely named and numbered, and shall be referenced in the description of the business processes.

4.2.1 Eligibility Rules

4.2.1.1 Eligibility Requirements and rank Preparation based on Qualifying Degree

For taking admission in 1st year of B.Tech (LEET), B.Pharmacy, B.Pharmacy(LEET), B.Architecture, M.Tech, M.Arch, M.Pharma(FT),MBA,MCA & MCA(LEET)

NIC will prepare the rank of registered candidates as per following procedure and IKGPTU verification team will check and approve the Rank so generated.

B.Tech (LEET)

The Governor of Punjab is also pleased to further issue the following criteria for making admissions:
Eligibility Criteria for Diploma Holders

1. All those candidates who have passed Diploma examination from an AICTE approved institution and have obtained at least 45% marks (40% in case of Candidates belonging to reserved category) in appropriate branch of Engineering / Technology shall be eligible to apply.
2. All those candidates who have passed B.Sc. Degree from a recognized University as defined by UGC, with at least 45% marks (407o in case of Candidates belonging to reserved category) and passed XII standard with mathematics as a subject shall be eligible to apply.
   i) Students, who have passed B. Sc. Degree from a recognized University as defined by UGC, shall clear the subject of Engineering Graphics / Engineering Drawing and Engineering Mechanics of the first year engineering program along with second year subjects.
   ii) Students Belonging to B. Sc. Stream may further note that they shall be consider only after filling the supernumerary seats in this category with students belonging to the Diploma stream.
3. lt is further provided that students, who have passed Diploma in Engineering & Technology from an AICTE approved institution for B. Sc. Degree from a recognized University as defined by UGC, shall also be eligible for admission to the first year Engineering Degree courses provided there are vacancies in the first year of Engineering Degree. This shall be considered only after the vacancies at lateral entry are exhausted.

List of Diploma holders eligible for admission

- 3 years/ 4 years diploma in Civil Engineering
- 3 years / 4 years diploma in Electrical Engineering.
- 3 years / 4 years diploma in Electronics & T.V. Technology.
- 3 years /4 years diploma in Electronics & Microprocessor
- 3 years /4 years diploma in Electronics & Comm. Engineering.
- 2 and 1/2 years diploma after 10+2 in Electronics & Communication Engineering from SLIET, Longowal
- 3 years / 4years diploma in Instrumentation and Control.
- 2 and 1/2 years diploma after 10+2 in instrumentation and Process Control from SLIET, Longowal .
- 3 years / 4 years diploma in Mechanical Engineering.
- 3 years / 4 years diploma in Production and industrial Engineering
- 3 years / 4 years diploma in Refrigeration & Air Conditioning
- 2 and 1/2 years diploma after 10+2 from SLIET, Longowal in any one of the following :
  - Foundry Technology
  - Industrial / Production Engineering
  - Maintenance of Plant Engineering
  - Welding Technology
- 3 years / 4 years diploma in Mech. Engineering. (Refrigeration & Air conditioner)
- 3 years / 4 years diploma in Chemical Engineering
- 3 years / 4 years diploma in Plastic Technology
- 3 years / 4 years diploma in Textile Technology (Weaving)
- 3 years / 4 years diploma in Garment Technology
- 3 years / 4 years diploma in Textile Processing
- 3 years / 4 years diploma in Textile Technology
- 3 years / 4 years diploma in Mechanical Engineering (Tool & Die)
- 3 years / 4 years diploma in Computer Engineering.

- 4 years diploma in Tool & Die Technology from Central Tool Room, Ludhiana.
- 2 and ½ years diploma after 10+2 from SLIET, Longowal in any one of the following:
  - Computer Programming & Application
  - Computer Servicing & Maintenance
- 3 years / 4 years diploma in Microprocessor Applications
- 3 years / 4 years diploma in information Technology
- 3 years / 4 years diploma in Leather Technology
- 3 years / 4 years diploma in Leather Technology(Footwear)
- 3 years / 4 years diploma in Textile Chemistry
- 3 years/ 4 years diploma in Knitting Technology
- 2½ years diploma after t0+2 from in Chemical Technology from SLIET, Longowal
- 3 years / 4 years diploma in Computer Science & Engineering.
- 3 years / 4 years diploma in Architectural Assistantship
- 3 years / 4 years diploma in Garment Technology
- 3 years / 4 years diploma in Fashion Technology
- 3 years / 4 years diploma in Automobile Engineering
- 3 years diploma from Lovely Professional University, Phagwara.

Any other diploma of the duration 2½ or more years recognized by State Board of Technical Education

B.Pharmacy

As per Punjab Government notification, the eligibility for B. Pharmacy course is as under:

All those candidates who have passed the 10+2 examination from a Board recognized or established by Central / State Government through a legislation with Physics and Chemistry as compulsory subjects along with one of the Mathematics / Chemistry / Bio-technology / Biology shall eligible to apply. Further as per AICTE guidelines the candidate should have obtained at least 45% marks (40% in case of candidate belonging to reserve category) in the above subjects taken together.

OR

All those candidates who have passed Diploma Pharmacy from an Institute affiliated to the Punjab State Board of Technical Education and Industrial Training / Punjabi University or any other University or any State Board of Technical Education provided that the Diploma or the Institute is duly approved by the PCI / AICTE.

For admission to the course through online counselling merit ranking to be prepared for the students**. Following is proposed criteria for merit.**

Aggregate percentage Marks of

Compulsory subjects	**One of the following subjects**
1. Physics 2. Chemistry	3. Mathematics or Chemistry or Bio-Technology or Biology

In case tie in the above, following break-up criteria may be follows:-

(a)	Marks obtained in Physics + Chemistry
(b)	Marks obtained in Physics

(c)	Marks in 10th
(d)	Date of Birth

B.Pharmacy Lateral Entry

The minimum qualification for admission to 2nd year (3'd semester) of B. Pharmacy courses shall be as follows:

4. All those candidates who have passed the diploma in Pharmacy from an institution affiliated to the Punjab State Board of Technical Education & industrial Training/ Punjabi University, Patiala or any other University or any State Board of Technical Education shall be eligible to apply. Further, the diploma in Pharmacy and the institute where the candidate has studied must be duly approved by the Pharmacy Council of India / AICTE. Also the candidate should have obtained at least 45% marks (40% in case of candidate belonging to SC/ST category) in the above mentioned qualifying examination.
5. Students directly admitted to Pharmacy 2nd year have to pass those subjects of B. pharmacy 1st year which have not been covered under D. Pharmacy.

B.ARCH

The proposed eligibility Criteria is as under:

(i) No candidate, with less than 50% marks in aggregate, shall be admitted to the Architecture course unless he/she has passed an examination at the end of the new 10+2 scheme of Senior School Certificate Examination or equivalent with mathematics as a subject of Examination at the 10+2 level.

Or

Candidate who has passed 10+3 Diploma with subject of Mathematics duly recognized by Central / State Governments al equivalent to 10+2 level with minimum 50% aggregate marks.

Or

(c) International Baccalaureate Diploma, after 10 years of schooling with not less than 50% marks in aggregate and with Mathematics as compulsory subjects of examination.
However for SC, ST and OBC candidates the aggregate is 45% marks in the above said examinations.

(ii) All Admissions to B.Arch. Degree course shall be subject to passing of National Aptitude Test in Architecture (NATA) conducted by the COA and marks secured in the qualifying examination in the ratio of 50:50. The minimum passing score for NATA is 80 out 200 for all categories of candidates.

(iii) Vacant seats , if any, can be filled on the basis of paper -2 (JeeMain) conducted by CBSE or on the basis of an aptitude test in Architecture to be conducted by I K Gujral Punjab Technical University.

Proposed criteria for preparation for preparation of merit for the admission to the admission to the above mentioned course through Centralized Counselling.

WEIGHTAGE:

50% (NATA Score)	**50% (marks obtained in qualifying examination)**

Aggregate percentage Marks of

Compulsory subjects	One of the following subjects	Two optional subject
1. Physics 2. Mathematics	3. Computer Science or Chemistry or Biology Engineering Drawing	4. As per 10+2 DMC 5. As per 10+2 DMC

In case tie in the above, following break – up criteria may be follows

(a)	Marks obtained in NATA
(b)	Marks in 10th
(c)	Date of Birth

M.TECH Full Time

As per Punjab Govt. Notification, eligibility for M. Tech FT course is as under:

All those candidates who have passed B.E / B.Tech with at least 50%(45% for candidates belonging to reserved categories) marks in aggregate and with valid GATE 2018 score shall be eligible to apply for Post graduate level M.Tech course.

The merit ranking would be prepared as per the following criteria:

First preference will be given to valid GATE score 2018 or 2019 followed by Aggregate percentage marks of all semester of B. Tech / B. E In case of the tie in the above, following breakup may be followed:

a. In the case of tie (a) above, the candidates scoring higher marks in aggregate of 10+2 shall rank higher in the order of merit.
b. In the case of tie (b) above, the candidate senior in age shall rank higher in the order of merit.

However in case of the students like AMIE the grade obtained in the final year is not clear as one may complete any subject in one of the year.

M.PHARMACY Full Time

As per Punjab Govt. Notification, eligibility for **M.Pharmacy Full Time** course is as under:

All those candidates who have passed B.Pharmacy with at least 50 %(45% for candidates belonging to reserve categories) marks in aggregate and with valid GPAT 2018 score shall be eligible to apply for Master's programme in Pharmacy (M.Pharmacy).

The merit ranking would be prepared as per the following criteria
a. GPAT -2018
b. Aggregate percentage marks of all semester of B.Pharmacy – 100(based on the % of marks) Candidates with valid 2018 GPAT score will be given preference followed by aggregate percentage + experience marks.

In case of the tie in the above, following breakup may be followed:

a. In the case of tie (a) above, the candidates scoring higher marks in aggregate of 10+2 shall rank higher in the order of merit.
b. In the case of tie (b) above, the candidate senior in age shall rank higher in the order of merit.

Master of Business Administration

As per Punjab Govt. Notification, eligibility for Master of Business Administration course is as under:
All those candidates who have passed Recognized Bachelor's Degree of minimum 3 Yrs. duration at Graduate Level and CMAT qualified conducted by AICTE followed by inter se Merit.

Master of Computer Application

As per Punjab Govt. Notification, eligibility for Master of Computer Application course is as under:
Graduation and Inter Se merit in qualifying examination

MCA Lateral Entry

As per Punjab Govt. Notification, eligibility for MCA Lateral Entry course is as under:
All those candidates who have passed Recognized Bachelor's Degree of minimum 3 Yrs. duration in BCA, B.Sc. (IT/Computer Science) with Mathematics as a course at 10+2 level or at Graduate Level. Obtained at least 50% (45% in case of candidate belonging to reserved category) at the qualifying Examination

- **MRSPTU will not participate in MCA LEET course.**

4.2.1.2 Eligibility Requirements based on IKGPTU generated Rank

Eligibility requirement by participating Universities is as under:

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
1.	B.Arch.	Gen.	(i) No candidate, with less than 50% marks in aggregate, shall be admitted to the Architecture course unless he/ she has passed an examination at the end of the new 10+2 scheme of Senior School Certificate Examination or equivalent with Mathematics as a subject of examination at the 10+2 level. Or Candidates who have passed 10th + 3 year Diploma with subject of Mathematics duly recognized by Central/ State Government as equivalent to	Qualifying Marks + NATA Scores in ratio of 50:50	50%	50%	NA
		Res.			50%	50%	

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
			10+2 Level with minimum 50% aggregate marks are also eligible for admission to B. Arch course. Or International Baccalaureate Diploma, after 10 years of schooling, with not less than 50% marks in aggregate and with Mathematics as compulsory subject of examination. (ii) All admissions to Architecture degree courses shall be subject to passing of National Aptitude Test in Architecture (NATA) conducted by the council of Architecture and marks secured in the qualifying examination in the ratio of 50:50. (iii) Vacant seats (if any) can be filled on the basis of Paper-2 (JEE-Main) conducted by CBSE or on the basis of an aptitude test in Architecture to be conducted by I.K. Gujral Punjab Technical University, Jalandhar.				
2.	2nd year of B.Tech. & B.Tech. Fee Waiver	Gen.	(i) All those candidates who have passed Diploma examination from an AICTE approved institution and have obtained at least 45% marks (40% in case of Candidates belonging to reserved category) in appropriate branch of Engineering / Technology shall be eligible to apply. (ii) All those candidates who have passed B.Sc. Degree from a recognized University as defined by UGC, with at least 45% marks (40% in case of Candidates belonging to reserved category) and passed XII standard with mathematics as a subject shall be eligible to apply. (a) Students who have passed B.Sc. Degree from a	Inter-se-merit of Qualifying Examination	45%	45%	NA
		Res.			40%	40%	

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
			recognized University as defined by UGC, shall clear the subject of Engineering Graphics / Engineering Drawing and Engineering Mechanics of the first year engineering program along with second year subjects. (b) Students belonging to B.Sc. Stream may further note that they shall be considered only after filling the supernumerary seats in this category with students belonging to Diploma stream.				
3.	1st year of B.Pharm. & B.Pharm. Fee Waiver	Gen.	All those candidates who have passed the 10+2 examination from a board recognized or established by Central/State Government through a legislation with Physics and Chemistry as compulsory subject along with one of the Mathematics/ Biotechnology/ Biology shall eligible to apply. Further as per AICTE Guidelines the candidate should have obtained at least 45% marks (40% in case of candidate belonging to reserve category) in the above subjects taken together. **OR** All those candidates who have passed Diploma Pharmacy from an institute affiliated to Punjab State Board of Technical Education & Industrial Training / Punjabi University, Patiala or any other University or any State Board of Technical Education provided that the diploma or the institute duly approved by the PCI / AICTE.	Inter-se-merit of Qualifying Examination	45%	45%	NA
		Res.			40%	40%	
4.	2nd year of B.Pharm. & B.Pharm. Fee Waiver	Gen.	(i) All those candidates who have passed Diploma in Pharmacy from an institution affiliated to the Punjab State Board of Technical Education & Industrial Training / Punjabi University, Patiala or any other University or any State Board of Technical Education shall be eligible to apply. Further, the diploma in Pharmacy and the institute where the candidate has studied must be duly approved by the pharmacy	Inter-se-merit of Qualifying Examination	45%	45%	NA
		Res.			40%	40%	

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
			Council of India / AICTE. Also the Candidate should have obtained atleast 45% marks (40% in case of candidates belonging to SC/ST category) in the above mentioned qualifying Examination. (ii) Students directly admitted to the Pharmacy 2nd year have to pass those subjects of B.Pharmacy 1st year which have not been covered under D. Pharmacy.				
5.	MBA	Gen. Res.	All those candidates who have passed Bachelors Degree of minimum three year duration in any discipline from a University recognized by the University Grants Commission (UGC) and with valid rank in CMAT shall be eligible to apply for MBA course. In case candidates with valid CMAT Score are not available the seats shall be filled on the basis of inter-se-merit in qualifying examination.	Valid CMAT Scores & Inter-se-merit	NA	NA	NA
6.	MCA 1st Year	Gen. Res.	All those candidates who have passed any recognized Bachelor's degree of minimum three years duration with Mathematics at 10+2 level or at Graduated Level. Obtained at least 50% (45% in case of candidate belonging to reserved category) at the qualifying Examination.	Inter-se-merit	50% 45%	50% 45%	NA
7.	MCA Lateral Entry	Gen. Res.	All those candidates who have passed recognized Bachelor's degree of minimum three years duration in BCA, B.Sc. (IT/Computer Science) with Mathematics as a course at 10+2 level or at Graduation level. Obtained at least 50% (45% in case of Candidates belonging to reserved category) at the qualifying examination.	Inter-se-merit	50% 45%	50% 45%	NA
8.	M.Pharma. (Full Time)	Gen. Res.	All those candidates who have passed B.Pharma with atleast 55% (50% in case of candidate belonging to SC/ST category) marks in aggregate and with valid	Valid GPAT Scores & Inter se merit	55% 50%	55% 50%	NA

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
			GPAT-2018 score shall be eligible to apply for master's programme in Pharmacy (M.Pharma) Course. In case candidates with valid GPAT-2018 Score are not available the seats shall be filled on the basis of inter-se-merit in qualifying examination.				
9.	M.Tech. (Full Time)	Gen.	All those candidates who have passed B.E. / B. Tech. with at least 50% (45% in case of candidate belonging to reserved category) marks in aggregate and with valid GATE Score shall be eligible to apply for Post graduate level M.Tech. Course. In case seats haven't been filled under respective categories, admission shall be considered on the basis of inter-se-merit in qualifying examination.	Valid GATE Scores & Inter-se-merit	50%	50%	NA
		Res.			45%	45%	
10.	1st year of B.Tech. & B.Tech. Fee Waiver	Gen.	All those candidates who have passed the 10+2 examination from a board recognized or established by central/state government through a legislation with Physics and Mathematics as compulsory subjects along with one of the following subjects:- 1. Chemistry 2. Biotechnology 3. Computer Science 4. Biology If the seats of B.Tech. (Bio-Technology) remain vacant after the central counselling the seat may be filled with the candidates having following qualification also:- 10+2 with Physics and Chemistry as compulsory subjects along with one of the following subjects:- 1. Mathematics 2. Biotechnology 3. Computer Science 4. Biology **OR** Those candidates who have passed diploma in any Engineering Trade from Punjab State Board of Technical Education & Industrial Training, Chandigarh or Sant Longowal Institute of Engineering and Technology, Longowal (SLIET), or any such examination from any other recognized State Board of Technical Education. **OR** The candidates who have passed two years certificate course from Sant Longowal Institute of Engineering and	10+2 Basis	NA	NA	NA
		Res.			NA	NA	NA

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
			Technology, Longowal (SLIET) shall be eligible.				

4.2.1.3 Special Eligibility conditions for Sports/Defence/ Terrorist Victim etc. categories

If the candidate opts for categories/sub categories in Sports /Defence etc., then he/she has to submit relevant documents at the time of admission in respective institution, if a seat is allotted to him/her. Failing which, his/her claim on the seat will be forfeited and the seat will be cancelled.

4.2.2 Registration Process

4.2.2.1 Registration Rules

- Online Registration by all eligible candidates will be allowed in both 1st round and 2nd round.
- Registration Process Business Rules: candidates can update in the following ways:
    - Candidate can select Category, Sub category and ESM priority as applicable, state of eligibility, fee waiver/non fee waiver, rural status as well sikh minority status. Till the candidate confirms his/her registration, he/she can update these details. Once confirmed all selected values will be stored in database and same will be used for all future purposes i.e. for choice filling and seat allocation etc.
    - Candidates are required to furnish **Personal and contact details** (Father name, Mother name, DOB, Gender, Nationality, Mobile No, Email Id, mailing address with Pin code).
    - Candidates are also required to furnish **Qualifying Degree details** (Qualifying degree passing status (passed or appearing), year of passing/appearing, degree type, qualifying discipline name, result preparation mode (CGPA or %age) in the following ways :
        - If passing status is 'Passed' then
            - Select 'Year of passing' from Dropdown.
            - Select Qualifying Degree and Qualifying discipline Name from Dropdown
            - If result preparation Mode is '%age' then enter '%age value'
            - If result preparation Mode is 'CGPA' then select from Dropdown 'CGPA maximum point scale' and also enter 'Obtained CGPA' then 'CGPA out of 10" will be auto calculated and displayed in read only mode. 'CGPA out of 10' will be used to check the candidate eligibility for choice filling and seat allocation.
                - CGPA out of 10 = (Obtained CGPA/CGPA maximum point scale)*10
        - If passing status is 'Appearing' then
            - Value of 'Year of passing' will be '2019' only.
            - Select Qualifying Degree and Qualifying discipline Name from Dropdown
            - Result preparation mode and value of CGPA/%age will be hidden
- Candidate is also required to choose his own password. Next time, the candidate can login directly with his /her Login Id and the chosen password as Password.

- Candidate is also required to choose security Question and their Answer, that is required, if candidate Forgot the password.

4.2.2.2 Registration Fee

After successful registration at IKGPTU website as 1st step for attending counselling, each candidate has to pay Rs. 2500/- as the Counselling Registration Fee using HDFC bank online services.

4.2.2.3 Choice Filling & Saving

- Choices submitted in the 1st round of counselling will be processed in 1st round only. Fresh choices submission will be permitted in 2nd round of counselling.
- **'Save Choice'** button will be enabled as per counselling schedule.
- If candidates fail to explicitly lock their choices by **last date & time**, their last saved choices will be automatically locked by system after this deadline.

4.2.3 Seat Allotment

4.2.3.1 Seat Allotment – General Rules

- During this step, the choices submitted by the candidates will be processed centrally and seats will be allotted in the order of Rank for various streams and in the order of submitted choices. The allotment result will be available on the website https://ptuadmissions.nic.in. Individual allotment letters will not be sent to the candidates by post. However, candidates MUST get a printout of the allotment details from the website.
- Candidates who are fresh allotted or upgraded a seat in any round will have to personally report to the allotted institute for document verification and seat confirmation during specified Reporting Period. Failing to report and/or produce required documents at the reporting institute will lead to cancellation of the offered seat. The seats thus falling vacant due to non-reporting will be considered for allotment in the subsequent round of Normal Counselling.
- For fee waiver seats candidate whose family gross annual income is less that Rs. 6.0 Lakhs shall be eligible.

4.2.3.2 Seat Allotment procedure for First Counselling for candidates of Punjab 85% and Other State 15% Rank-wise Seat Allotment procedure for First and subsequent counselling

Since the allotment of seats is to be done by the software using the seat matrices and seat allotment procedure, therefore every bit of required procedure is needed to be coded. As per the study and detailed discussions with the user/core committee, following procedure has been designed.

For allotment of a seat, Merit Number (Rank) is not only the criteria but also the eligibility and reservation criteria of candidates are checked. The admissions shall be subjected to the verification of credential and documents in the allotted institution.

For any course, before the allotment starts, Candidate must complete following steps
Step-1: The candidate should deposit the counselling fees of Rs. 2000/- non-refundable.
Step-2: The candidate has to fill up the choices and save it successfully. The candidate is advised to give as many choices as desirable. There is no maximum limit for the choices.
The offline processing module gives the feature of round wise processing and generation of MIS (Institute wise, Rank wise Candidates) Reports

Assumption:

a. Candidate has to register himself and fill choices. If candidate does not fill any choices, he will not be eligible for counselling.
b. Seat Matrix is to be uploaded fresh before the start of counselling.
c. Based on test Rank will be unique i.e. no two candidates will have same rank in general merit list. The general merit list will include candidates of all categories.
d. Candidates from Punjab residents will be considered under Punjab 85%.
e. Candidates from Chandigarh UT are only eligible to participate in online counselling through 15% quota. However only in case of PAU, PUNJAB and Chandigarh are considered as One State. For rest of the Universities i.e. IKGPTU and MRSPTU Punjab and Chandigarh are different states.

Algorithm:

1. Sort the candidate's data stored in Registration table rank wise with condition where choices have been locked.
2. Process the data of first candidate.
3. Store the value of sex, category code, sub-category code, in the temporary variables.
4. Identify eligible categories, subcategories on the basis of category, subcategory and Priority as applicable of candidate and store it in arrays.
5. Process the choices of candidate for each category in the same sequence as described elsewhere in the document.
6. If seat is available then allocate the seat to candidate
7. Update the seat master and reduce the value of seats available in the seat matrix by 1 against the particular institute
8. Repeat above steps for all candidate.

4.2.3.3 Internal Algorithm for Seat Allocation Procedure for 85% Punjab Candidates

For 85% Punjab Candidates: Following categories/sub-categories exist;

- General
- SC/ST
- Backward Class (BC)
- T-Sunami(TS)
- Border Area(BR)
- Backward Area (BA)
- Sports Person (SP)
- Widows of Defence Personnel (DF)
- Widow / Divorced Women
- Terrorists/Riots victims (RT)
- Children/Widows of Para military forces (PM)
- Freedom Fighter (FF)
- Disabled Person-Blind (DPB)
- Disabled Person -Deaf (DPD)
- Disabled Person-Others (DPO)

Seat Allocation sequence for 85% Punjab Quota

Following rules shall be applicable for seat allotment for counselling for 85% Punjab category for all the institutions under IKGPTU participating in counselling located in Punjab.

Counselling for seats for the Children /Widows of Defence Personal category, Sports Person, under Para Military Forces Personal and under Terrorist/Riot affected category

- Counselling for these categories is done in the order of sub-category, priority, rank (as applicable) and eligibility condition.

The following cases are checked and searched for a Candidate until seat is allotted or options are exhausted for merit Rank.

FOR General Merit List:

The seats based on rank wise list, will be allotted in the following sequence:

Case 1: If candidate is General, no subcategory

Check the seat for **General (Open quota)**, if it is available then seat is allotted else go to candidate's next choice. Repeat till a seat is allotted or all the choices are processed.

Case 2: If candidate is having any one of the reserved category, following is the seat allotment criteria

All the reserve category candidates will first be considered in General Category. In this case IKGPTU generated Rank is the allotment criteria. Check the seat for **General (Open quota)**, if it is available then seat is allotted else check the seat in respective Reserve Category (SC/ST,BC, T-Sunami (TS)/BA/ BR/ FF). If seat is available then allot the seat else go to candidate's next choice. Repeat this process till a seat is allotted or all the choices are processed.

- ✓ If candidate is DF then allocation is done on the basis of sub-category and priority.
- ✓ If candidate is PM then allocation is done on the basis of sub-category.
- ✓ If candidate is RT then allocation is done on the basis of sub-category.
- ✓ If the candidate is SP than allocation is done on the basis of subcategory and eligibility criteria of the participating universities.
- ✓ If candidate is DPB/DPD/DPO, then allocation is done on the basis of respective category(i.e. DPB/DPD/DPO) and checking for leftout seats in any of (DPB/DPD/DPO) categories.

Fee Waiver	General	Category (SC/ST,BC, T-Sunami(TS) / DF/ BA/ BR/ FF /RT/ PM/ DPB/ DPD/ DPO)	Sequence of Allotment
☑			**Fee Waiver**
	☑		**General (Open)**
		☑	**General (Open), (SC/ST,BC, T-Sunami(TS)/ DF/BA/BR/FF/SP / RT/ PM / DPB/DPD/DPO/WD)** For Categories (DF, SP, PM, RT) Seat Allotment Sequence will be General, category of Candidate (In General category seat allotment will be done on the basis of Rank whereas in his own Category allotment will be done on the basis of sub-category, priority , rank and eligibility criteria of participating universities). In all other category (General, SC/ST, BC, T-Sunami(TS), BA, BR, FF,WD) JEEMAIN Rank is the allotment criteria.

			In Handicap categories (DPB/DPD/DPO), Seat allotment sequence will be General, category of Candidate and balance seats of any of DPB/DPD/DPO) categories. JEEMAIN Rank is the allotment criteria.

Note: In Sports Category selection criteria for participating universities is as follows

IKG Punjab Technical University, Jalandhar/ MRSPTU Bathinda	Accepts Grade A, Grade B, Grade C & Grade D and Priorities of Medals (Gold/Silver/Bronze/Participation)

4.2.3.4 Algorithm for Seat Allocation Procedure for 15% General for candidates outside Punjab

Following rules shall be applicable for seat allotment for counselling for 15% JEEMAIN All India category for all the institutions under IKGPTU/MRSPTU participating in counselling located in Punjab

- For 15 % seats (Other State): Following categories/sub-categories exist;
  General, SC/ST, BC
- Under the 15% All India category further reservation is provided for 70% General, 25% SC/ST category and 5% for BC category.
- All the cases, irrespective of the category, will be dealt one by one as per rules and regulations applicable and as per the case/category.

Case 1: If candidate is General and under Non Sikh Minority
Check the seat for **Non Sikh Minority General (Open i.e. from 70% quota)**, if it is available then the seat is allotted else his/her next choice is searched for.
Case 2: If candidate is from any one of the Non Sikh Minority reserved category, following is the seat allotment criteria
Check the seat from Non Sikh Minority general quota if seat is not available then check the seat from respective Non Sikh Minority reserved category.
Case 3: If Candidate is under Sikh Minority and General
Check the seat for **Sikh Minority General (i.e. from 70% quota)**, if it is available then seat is allotted else check the seat from Non Sikh Minority General else his/her next choice is searched for.
Case 4: If candidate is from any one of the Sikh Minority reserved category, following is the seat allotment criteria
Check the seat from Sikh Minority general quota if seat is not available then check from Non Sikh Minority general quota if seat is not available there then check the seat from respective Sikh Minority reserved category else check from Non Sikh Minority reserved category . If seat is available than it will be allotted to the candidate else his/her next choice is searched for.

4.2.3.5 Seat Allotment procedure for Second Counselling for candidates of 85% / 15% (2nd Round)

Pre-requisites/Assumptions:

a. Candidates falling under 85% / 15% quota will be eligible for 2nd Round of Counseling. Candidate has to reconfirm his registration for the 2nd counselling and fill fresh choices. Candidates, who have participated in 1st counselling, need not pay counselling fee again,

whereas new candidates appearing in counselling for the first time will have to deposit counselling fee and register themselves in the website. If candidate does not fill any choice for 2nd counselling, then he will not be eligible for 2nd counselling.

b. Candidate can also include the same choice in 2nd counselling against which he is allotted seat in the first counselling. In such case choices which are listed before this choice will be processed. For example a candidate has filled 5 choices in 2nd counselling and choice no 3 is same for which candidate is allotted seat in first counselling. In this case first two choices will be processed.

c. Seat Matrix will be uploaded afresh before the start of second counselling.

d. Seat Allocation will be done exactly as per rules adopted in 1st round of Counselling, i.e. no seats will be merged.

e. If a candidate has been admitted against his allotted seat in his category (reserve) in previous counselling, the seat will not be changed in the subsequent round of counselling for the same branch and Institute with regards to category.

Note: Candidates once opted a category cannot change his category without the permission of Chief Coordinator (admission).

Algorithm:

a. Sort the candidate's data rank wise once the choices are locked
b. Process the data of first candidate.
c. Store the value of sex, sub-category, and category temporarily.
d. Identify eligible categories, subcategories on the basis of category and subcategory of candidate, priority (as applicable) and store it in arrays.
e. Process the choices of candidate for each category in the same sequence as described in first counselling.
f. If seat is available then temporarily allocate the seat to candidate
g. Update the Seat matrix and reduce the value of seats available for the particular branch by 1 against the particular institute
h. Transfer the seat allotted to the candidate in the first counselling to vacant pool.
i. Repeat above steps for all candidate. (first iteration is complete)
j. Next iteration will start and will repeat all the above steps till vacant pool seats become 0.

4.2.4 Withdrawal Rules

- A candidate, who takes provisional admission by reporting at allotted institute and want to cancel his/her allotted seat and seek the refund of fee, will have to login into the system and get the withdrawal as per given schedule.
- The fee shall be refunded by IKGPTU later on.

4.2.5 Physical Reporting at Allotted Institute after 2nd round

- All candidates who wish to take admission in upgraded seat in 2nd round, will have to report physically at the Allotted Institution as per the schedule, *failing which their final allotted seat will be cancelled.*
- All Participating Institutions must update online physical reporting status at IKGPTU website through their login Id.

4.2.6 Other Policies/Rules

4.2.6.1 Password Policy

- Password must be 8 to 13 characters long.

- Password must have at least one Upper case, one lower case alphabet and one numeric value and at least one special characters**!@#$%^&*-**
- New Password cannot be identical to any of the previous three passwords.

4.2.6.2 Mobile Number and Email Id

- Mobile number and Email Id should be unique and will be verified through OTP.

4.3 Business operational constraints

This sub-section describes conditions to be imposed in conducting the business process. The conditions may be on a performance constraint (e.g., the process shall be finished within a day after the triggering event occurs), or may be from a management requisite such as 'every occurrence of the process shall be monitored and recorded.

4.3.1 General Constraints

eCounselling System will be an internet based application which will be designed, developed and centrally hosted in .Net Framework in NIC's Data Centre. The users will be accessing the software application using popular latest browsers (Internet Explorer 8.0 and above, Mozilla Firefox, Google Chrome).

Only designated user can login and performed the operations as per their predefined role and responsibilities.

The application software will not take care of the virus problems. Manual interfaces cannot be fully avoided. Although, the software will take care of all feasible criteria like uploading of scanned documents etc. On-line validation checks as far as possible will be provided in the application software to ensure clean data entry at source. The system will display error messages in case of wrong data.

4.3.2 Network, Hardware/Software Constraints

- The server resources may be a constraint in case of peak load, however, dashboard for server monitoring has been made available for regular monitoring and at time of such situation.

4.3.3 Data and Content Constraints

- The quality of data in terms of correct email address/mobile numbers and other such information may be constraints for notifications/alerts. Contact details may be captured in encrypted format.

4.3.4 General Exceptional Handling

The Following are the common exceptions that are to be handled in the various user interfaces:

- Any error – The database errors and application errors should not be displayed to the user but a customized user friendly error should be displayed.
- When the session time out – If the session is lapsed and the user is attempting to access any part of the application that requires authentication, the system should respond with the message "Session timed out. Please login again to continue".
- For all mandatory fields mentioned – If the mandatory field is left blank and the user attempts to save - the system should respond with the message "Please enter the {field name}".
- For all Mobile no fields - Mobile no. is entered with characters other than [0-9] and the actor attempts to save. - The system responds with the message "Please enter only numbers [0-9] in mobile no. "

4.4 Business operation modes

This sub-section describes methods to conduct the business operation in an unsteady state, for example, a state when business operations might be extremely busy due to some intensive occurrence of events. An unsteady state of business operation includes a manual operation mode when the proposed system is not available due to some unexpected situation like an accident or natural disaster.

During peak load, necessary resources will be augmented. However, in case of unavoidable circumstances, appropriate action may be taken by competent authority.

4.5 Business operational quality

This sub-section defines the level of quality required for the business operation. For example, a business process may address required urgency with higher priority than the reliability of the business process.

The capability of the software product will provide functions which meet stated and implied needs when the software is used under specified conditions.

4.6 Business structure

This sub-section identifies and describes the structures in the business relevant to the system, such as organizational structure (divisions and departments), role and responsibility structures, geographic structures, and resource sharing structures. There may be a need to alight the system functions to these structures, and to support future structural changes.

4.6.1 Organising University Team

Various Committees have been formed by Chief Coordinator, IKGPTU Admissions 2019, vide its letter no IKGPTU/REG/53 dated ……..

Functions of the Core Committee:

1. Recommendations for finalization of
   - Process and procedure, contents development for website.
   - SRS approvals.
   - Testing of developed software
   - Acceptance of software
2. Verifying the sanctioned seat for allotment / approved institutions before publication
3. Finalization of training requirement / needs
4. Monitoring and coordinating the training
5. Inspecting the facilities of participating institutions regarding online counselling.
6. Coordinating with various concerned agencies related with counselling / admissions
7. Coordination with participating institutions, other Govt. departments / private agencies and various committees
8. All other jobs assigned by the Chief Coordinator and Vice Chancellor cum Chairman, IKGPTU.

4.6.2 NIC Team

1. Head of Group (e-Counselling)
2. 2 Sr. Technical Director
3. Technical Director

4. Scientist "B"
5. PMU Incharge

4.6.3 Payment Gateway Integrator Team

1. Designated Bank Officials
2. EPG Integration Team

5 User requirements

User requirements (within the context of the StRS) include required inputs/selections/information observations which users/operators/maintainers need to perform through the use of the system; any outputs they require from the system in order to perform these tasks; and any applicable conditions or constraints governing their interaction with (i.e., usability of) the system. These requirements are then used to describe the operational scenarios which specify how to meet these requirements when interacting with the system.

The context of use specified for a design (i.e., the context in which the system will be used) should be specified as part of the user requirements specification to clearly identify the conditions under which the requirements apply. Usability requirements and objectives for the system include measurable effectiveness, efficiency, and satisfaction criteria in specific contexts of use.

5.1 Public

Anyone may be able to view website/portal of IKGPTU-2019 e-Counselling. The website will have the information about IKGPTU, news & events, important links etc. Candidates can visit the home page, registered themselves by filling Registration Form and sign-in for registered candidates.

5.1.1 Visit Public Home Page

On entering the URL, the system will display the home page of the website. The home page provides the option to login using registration id and password, register as new candidate, important instructions, news & events etc. During this step, all the eligible candidates on the basis of Inter se merit are required to register through Internet from places of their convenience.

5.1.2 Pay Registration Fee

After successful registration, candidate has to login into system and required to pay the Registration Fee using HDFC MOPS services. After successful payment, candidate will be allowed to fill the online choices.

5.1.2.1 Payment by Debit Card/ Credit Card/Net Banking:

Once candidate click "Pay Registration Fee", then the system will automatically redirect to HDFC MOPS page. Candidate can select any of the options like Debit Card/ Credit Card/Net Banking as per his/her convenience and follow the online instructions to complete the payment process. After successful payment, HDFC MOPS payment gateway will redirect to the candidate's home page that will show the status of fee payment. If status is "Success" then candidate can view the fee payment details.

5.1.3 View Registration Fee Payment Details

As candidate pay the registration fee, he/she can view the receipt of registration fee like transaction no, transaction date, payment mode etc.

5.1.4 New Candidate Registration

On the public home page, a link will be resided named as "New candidate Registration". By clicking on this link, registration form will be shown to the candidate. The candidate can registered in IKGPTU Counselling based on courses… as the case may be. Online Registration by all eligible candidates will be allowed before 1st round of seat allotment. New candidates, who deposit counselling fees after completion of 1st round will be allowed to register in the 2nd round of counselling, whereas already registered candidates will reconfirm their registration and can take part in the 2nd round of counselling, even if he/she has taken admission in any institute against the seat allotted in 1st round of counselling.

5.1.4.1 Fill New Candidate Authentication Form for Registration

The candidate is required to enter roll no, Rank, name, date of birth(in case of counselling) or Fee roll no, name, father name and date of birth (in case of 10+2 inter se merit counselling) and submit the form.

5.1.4.2 Submit Consent Form

The system verifies the data submitted by candidate in Authentication Form with the table/Fee database. The system display pop-up message and prompts to agree with terms and conditions governing the admission process. The Consent Form contains the instructions regarding the process of counselling, choice locking rules, reporting rules etc.

5.1.4.3 Fill On-line Registration Form

After acceptance of terms & conditions, the system displays Online Registration Form. The Registration Form will be divided in multiple parts. The top part is "**READ Only Mode**" and showing the information like (ROLL NO, RANK)/ (Fee roll no), Candidate Name, Father Name and date of birth from Candidate database. Any updates in this part will not be allowed under any circumstances.

The Personal Details section will have the category, sub category, ESM priority, gender, mobile number, email address, complete address, state, district and pincode. Category/ Sub category /ESM priority will be bound from the candidate database and can be edited as per the business rule mentioned in the relative section of this document. Rest of the information will be newly entered.

In the Qualifying Degree Details section, candidate will enter the details like passing status, passing year, qualifying degree, discipline name, result mode (CGPA, Percentage) and marks details. In case of CGPA, candidate will enter the CGPA maximum point scale, CGPA value, CGPA out of 10 whereas in case of percentage, candidate will enter obtained marks, maximum marks and percentage of marks.

At the same time, candidate will choose the password, security question and its answer for the subsequent login.

5.1.4.3.1 Review Form

After entering all the information, candidate has to click 'NEXT button. A review page will be displayed to verify before final submission.

5.1.4.3.2 Submit Registration Form

Candidate has to verify entered data carefully and if wishes to change any, he/she may do by pressing "EDIT CREDENTIALS" button. If all the data are correct, candidate has to click "CONFIRM REGISTRATION" button. Once this personal data is Verified and Confirmed, the candidate cannot change the registration form data.

After submission of Registration Form, database of candidate along with eligibility symbol will be updated and the same updated database will be used for choice filling and seat allocation.

5.1.5 Sign-in

For sign-in, candidate will enter Login Id and password created at the time of registration. If the candidate furnishes this information successfully, then system will redirect to the candidate's Home Page.

5.1.6 Forget Password

Applicant can reset his/her password by using the following options.

5.1.6.1 Reset password using Security Question & Answer

Candidates are required to enter system generated Application Number, Security question and their Answer chosen during IKGPTU registration process. If above data entered by candidate matches with backend database, then system will prompt for resetting New Password.

5.1.6.2 Reset password using a verification code via SMS

Candidate has to enter their Roll No and Date of Birth. If above data entered by candidate matches with backend database then system will send verification code through SMS at the registered mobile no. Candidates are required to enter verification code, if verification code matches with database then system will prompt for resetting New Password.

5.1.6.3 Reset password using a reset link via Email

Candidate has to enter their Roll Number and Date of Birth. If data entered by candidate matches with backend database then system will send email at the registered email id. Candidates are required to see their inbox and follow the online instruction for resetting the New Password.

5.1.7 View Institute Profile

A list of participating institutes will be available on the website. It may contains institute code, institute name, address, contact details. Complete details of the institute can also be seen by clicking on the view button. It contains the details of the institute, contact details, fee structure, academic structure, faculty details, facilities, training and placement details etc.

5.1.8 View Seat Matrix

The seat matrix will be published in public domain and any one can view. The seat matrix will have the various options for filtering seat matrix so that candidates can find out the intakes easily. Candidate can view the seat matrix institute wise, department wise, program wise, category wise etc.

5.1.9 View Institute wise Seat Allotment Result

A report will be published in public domain to view the institute wise seat allotment result. This will be have course wise minimum rank and maximum rank. Candidate can filter this list by institute wise.

5.2 Signed-in Applicant

After successful sign-in, the system will automatically redirect to the candidate's Home Page.

5.2.1 Visit Candidate's Home Page

- Home page will show the current status of the candidate.
- Home page may also contain the View Fee Payment Details, Candidate Profile, Choice Available, Choice Filling and Locking and Change Password.
- Further as per the schedule the links will be added like Online Withdrawal.

5.2.2 View Candidate Profile

Candidate can view the details submitted during registration like GATE examination details, candidate's personal details, qualifying degree details, bank details and uploaded document.

5.2.3 View Choice Availability

As per candidate eligibility and business rules, all valid choices will be shown to the candidate in terms of institute name and program name. Registered Candidate can view the available choices.

5.2.3.1 Filter Choices based on Institute Type/Institute/Program

All the available choices can be filtered by Institute Type or/and Institute Name or/and Program. Candidate can filter the choices as per selected parameters.

5.2.4 Choice Filling and Saving

5.2.4.1 Filter Choices based on Institute Type/Institute Name/Program Name

All the available choices can be filtered by Institute Type or/and Institute Name or/and Program. Candidate can filter the choices as per selected parameters.

5.2.4.2 Choices Filling

All registered candidates can submit their choices of Institute and course in order of their preference.

- Candidates can fill in as many choices in the order of preference as they wish to from the list of available choices.
- Candidates are permitted, if they so desire, to change or re-order their choices, delete earlier choices and add new choices any number of times until they save their final choices.
- Choices should be positively saved before last date & time failing which last saved choices will be consider for seat allotment.
- Choices submitted in the 1st round of counselling will be processed in 1st round only. Fresh choices submission will be permitted in 2nd of counselling.
- Registered candidates who do not exercise any choices will not be considered for seat allotment.

5.2.4.2.1 Add Choice

Choice filling page is divided into two panes. The left pane shows the all available choices and the right pane shows the all submitted choices. Candidates can add as many choices in the order of preference as they wish to from the left pane (available choices). As they press the "Add" button of left pane to add a particular choices, that choice will be added to the right pane and removed from the left pane. The choices submitted and resides in right pane will be considered as submitted choices.

5.2.4.2.2 Delete Submitted Choice(s)

Candidate can delete any submitted choice by pressing "Delete" button of right pane (submitted choices). As they press the “Delete” button of right pane, that choice will be removed from the right pane and will be added in left pane (list of available choice).

5.2.4.2.3 Move-Up

Candidate can move up any submitted choice by pressing "Move Up" button. As candidate presses the “Move Up” button, the choice will be shifted one place above and the above choice will be shifted one place down. So by doing this, candidate can move up any choice in the list of submitted choices.

5.2.4.2.4 Move-Down

Candidate can move down any submitted choice by pressing "Move Down" button. As candidate presses the “Move Down” button, the choice will be shifted one place down and the below choice will be shifted one place up. So by doing this, candidate can move down any choice in the list of submitted choices.

5.2.4.3 Arrange Filled Choices

There is a separate interface to arrange the filled choices. Candidate can delete, move up and move down any filled choice on single page.

5.2.4.4 Interchange Filled Choices

Candidate can interchange/swap two submitted choice by this interface. Two drop down list will be available on this page. These lists will be populated by the filled choices. Candidate will choose the different choices in the lists and press the interchange button. As candidate press the button, both the choices will be interchanged.

5.2.4.5 Rearrange Choices

A separate page will be available to change/edit the preference order of multiple submitted choices. All the submitted choices will be listed as per their preference order on this page and the preference number will be in editable mode. Candidate can edit any preference order with a valid number and submit the choices with new preference orders.

5.2.4.6 Multiple Deletion of Filled Choices

If any candidate wants to delete multiple submitted choices in a single go, then he/she will choose this interface. For each submitted choices, there is a checkbox to select the choice. Candidate will select the multiple choices and press the delete button to delete at a go.

5.2.5 Print Saved Choices

Candidate may take printout of the saved choices.

5.2.6 Change Password

After login, the change password facility will be available to signed-in applicants. This form may ask old password, new password, confirm new password, security question and its answer with verification code to change the password. If old password matches and new password is as per the password policy then the form will be submitted and the password will be changed successfully.

5.2.7 Seat Allotment Result for each round

As per the schedule, seat allotment result of each round will be published on website. Candidate can view seat allotment result by login with login Id and Password. After each round of allotment, individual allotment result, institute wise allotment result and maximum & minimum rank list will be published.

5.2.7.1 View Seat Allotment Result

Candidate can login with login Id and Password and see the result. If seat is allotted then seat allotment result will be displayed which includes candidate’s basic details (Login Id, Candidate Name, Father Name, Mother Name, Date of Birth, Gender, Category, Sub Category, ESM Priority etc.), qualifying degree details (passing status, passing year, qualifying degree, discipline name, marks details), allotment details and reporting centre and schedule.

5.2.7.2 Download Provisional Seat Allotment Letter

This letter may have the candidate's basic detail (Login Id, Candidate Name, Father Name, Mother Name, Date of Birth, Gender, Category, Sub category, ESM Priority), qualifying degree details (passing status, passing year, qualifying degree, discipline name, marks details), allotment details and important instructions for taking admission.

5.3 Organising Institute Administrator (Board Admin)

5.3.1 User Management

5.3.1.1 Create Participating Institute User (PI User)

The Board Admin will create the PI User by filling the user creation form. The form will ask salutation, name, designation, email address, mobile number and password details. The user id will be auto generated. System will force the PI user to change the password on first time login.

5.3.1.2 View PI User List

The system displays the drill-down summary of PI users. The system displays list of users for a given role from User Summary. The list contains user-id, user name, email, designation, address, mobile number, verified, active status. The Board Admin can change the active status of the users and also can edit the information like address and other details.

5.3.2 Manage Master Directories

5.3.2.1 View Master Directories

Board Admin can only view the master directories data like Gender, Categories, Nationality, Institutes, State, Institute Type, Qualifying Discipline, Course details, Institute Special Eligibilities. The interface will display the code and descriptions.

5.3.3 Seat Matrix

5.3.3.1 View seat Matrix

Board Admin can view the seat matrix. He/she will select the institute type, institute name, department, program name and group name. After selection of parameters, the seat matrix will be shown and may contain the category and subcategory wise total intakes.

5.3.3.2 View Seat Matrix at a glance

Board Admin can view the seat matrix at a glance. He/she will select the institute type only and the report will show the institute wise and category wise total intakes along with the freezing status.

5.3.3.3 View Mapping of Institute, & Courses

Board Admin can view the mapping of Courses, Qualifying Degree and Institute. For this, board admin will select the institute name, department, Course, Qualifying Degree will shown as per the selected parameters.

5.3.4 Manage Registration & Choice Filling

5.3.4.1 View Site Monitoring

The system will show the statistics related to the registration and choice filling & locking. It shows total registered candidates, total fee paid candidates, total candidates who filled choices, total filled choices, category wise details, gender wise details and last registration time.

5.3.4.2 View Date wise Registration and Fee Payment

The system will show the date wise no. of registered candidates and no of candidates who have paid the registration fee.

5.3.4.3 Registration Initialization

Board Admin will have the rights of registration initialization. If a candidate submits any wrong details during registration and wants to correct then he/she will approach to the board admin and board admin will perform registration initialization. For this, admin will enter the Login id, name and date of birth and submit. After validation of data, board admin will be allowed to initialize the registration and will ensure that the same candidate should get re-registered.

5.3.4.4 View List of Initialized Candidates

The system will show the list of those candidates whose registration have been initialized. It may be filter date wise and contain Login Id, Name, Initialization Date along with the registration status whether the candidate has re-registered or not.

5.3.4.5 Bank Summary (HDFC)

The system will show the date wise and for particular candidate report. It may have Login id, customer id, candidate name, transaction id, transaction date, fee type and amount. Board Admin can also download this report in excel format.

5.3.4.6 View Range of Submitted Choices

The system will display a report, which will show number of candidates who have not submitted no choices (zero choice), total candidates who have submitted 1 to 10 choices, 11 to 50 choices, 51 to 100 choices, 101 to 200 choices, 201 and above choices.

5.3.4.7 Edit Candidate Mobile No/Email Id

Board Admin can edit candidate's mobile number or email address. For this, board admin will enter Login id and will submit the form. After submission, mobile number and email address will be shown in editable mode and can be edited.

5.3.4.8 View Candidate Choice Preferences: Institute Wise

The system will show the report which has the list of institutes along with the total number of candidates who have submitted as a choice of that respective institute.

5.3.4.9 View Candidate Choice Preferences: Course Wise

The system will show the report which has the list of Courses along with the total number of candidates who have submitted as a choice of that respective institute.

5.3.4.10 View Candidate Choice Preferences: Institute & Course Wise

The system will show the report which has the list of Institutes and Courses along with the total number of candidates who have submitted as a choice of that respective institute and program.

5.3.4.11 View Candidate Profile

Board Admin can view the history of a candidate. Board admin will enter the Login id and press the submit button. After submission, the report having the entire details of the candidate as per their stage. It may contain candidate's basic details, registration details, submitted choices, allotment details, fee details, document verification details, PI reporting details etc.

5.3.4.12 Audit Reports

The system will display the audit reports of all the users as well as for the candidates.

5.3.4.12.1 View Admin Login Session Summary

Board Admin will choose the official name from the list of all users. The system will display the login session summary of that user in ascending order of date and time. The report may contain user name, user id, ip address, activity and activity date and time.

5.3.4.12.2 View Candidate Login Session Summary

Board Admin will enter the Login id of the candidate. As admin will submit, the system will display the login session summary of that candidate in ascending order of date and time. The report may contain application number, activity, ip address and activity date and time.

5.3.5 Manage Online Reporting

5.3.5.1 View Allotment Dashboard

This is a dashboard related to the seat allotment for each round. It may contain registration details (total registered candidates, total registered and fee paid candidates, fee paid and submitted choices, total ineligible candidates, total candidates who have not filled any choice), seat allotment details (category wise total offered seats, allotted seats and balance seats), cancelled candidate status and reporting status.

5.3.5.2 View Institute Wise Allotment Status

Board Admin can view allotment & reporting status. This report contains the Institute Name, Total Allotments, Total Seat Confirmed and Total Seat cancelled. Total allotments, total seat confirmed and total seat cancelled will be clickable. After clicking on link Board Admin can view the details of candidates containing Login id, course, allotted seat type, candidate category, reporting date and reporting status whether the candidate is reported or not.

5.3.5.3 Date Wise Cancelled Seats

The system will generate a report contains the list of candidates whose seat has been cancelled during document verification. This report may have Login id, course, allotted seat type, candidate category, reporting date, changes occurred during the document verification.

5.4 Participating Institution Module (PI User)

5.4.1 Sign-in

For sign-in, PI User will enter the user id and password provided by the Board Admin. As PI User will login first time, the system will force him/her to change the password. After changing the password, system will show a customized home page specific to PI user.

5.4.2 Visit Home Page

After successful login, the system will automatically redirect to the home page. Home page will show the logged in user details, last login history and the available services for PI User.

5.4.3 View Master Directories

PI can only view the master directories data like Gender, Categories, Nationality, Institutes, State, Institute Type, Qualifying Discipline, course, Institute Special Eligibilities. The interface will display the code and descriptions.

5.4.3.1 View Dashboard

This is a dashboard related to the seat allotment for each round. It may contain seat allotment details like category wise total offered seats, allotted seats and balance seats. It may also have total fresh allotment, total candidates who have retained their last allotted seats and total upgraded candidates.

5.4.3.2 View Institute wise Seat Allotment Result for each round

PI User can see the list of allotted candidates of his/her institute in each round. This report will have the candidate's basic details (like Login id, candidate name, candidate's category, sub category, ESM priority, gender, DOB), allotment details (allotted course, allotted seat type, allotted choice number, round number).

5.4.3.3 Physical Reporting

5.4.3.3.1 List of Eligible Candidates for PI Reporting

The system will show a list of eligible candidate for PI Reporting in PI Admin role. Every PI admin can have only his/her institutes list. This list may have basic details (like Login id, candidate name, candidate's category, sub category, ESM priority, gender, dob), allotment details (allotted course, allotted seat type, allotted choice number, round number The registration id will be clickable and after click on this, system will prompt an authentication form.

5.4.3.3.2 Authentication form for PI reporting

As PI admin click on the Login id, the authentication form will be shown. Login id will be pre-printed and text box for entering date of birth will be prompted. PI admin will enter the date and submit the form. After verify the inputs, system will show the candidate details page and will asked for confirming the PI reporting.

5.4.3.3.3 Confirm PI Reporting

The page will have the candidate's basic details, qualifying degree details, allotment details and all types of fee payment details. After confirmation, physical reporting participation slip will be generated.

5.4.3.3.4 Physical Reporting Participation Slip

Physical reporting participation slip will have the candidate's basic details, qualifying degree details, allotment details and all types of fee payment details. This slip will be signed by the PI admin and candidate.

5.4.3.3.5 Reprint PI Reporting Slip

For re-printing the PI Reporting Slip, PI admin will enter Login id and date of birth of the candidate. After successful verification, Physical Reporting Participation Slip will be generated.

5.5 Website Content Manager

Content Management System (CMS) is a software application that is used to manage digital information on the website through creating and maintaining content without prior knowledge of web programming.

It is very easy to maintain the website through CMS. There will be separate user for website management. Website has the three sections to maintain the information available to public. Website Content Manager can perform the following tasks.

- Manage links of top menu bar.
- Manage the links of current event.
- Manage the links/link buttons in centre section.
- Create/update the news.
- Manage the important links.
- Publishing of any information.

6 Concept of Proposed System

6.1 Operational concepts

This sub-section describes the proposed system in a high-level manner, indicating the operational features that are to be provided without specifying design details. The following information should be included:

a) Operational policies and constraints
b) Description of the proposed system
c) Modes of system operation
d) User classes and other involved personnel
e) Support environment

6.1.1 Operational policies and constraints

6.1.2 Description of the proposed system

6.1.3 Modes of system operation

6.1.4 User classes and other involved personnel

6.1.5 Support environment

The proposed system will be web based solution and it will be accessible using any popular browser. Only designated user can login and performed the operation as per their predefined role.

6.2 Operational scenarios

This sub-section describes examples of how users/operators/maintainers will interact with the system (context of use). The scenarios are described for an activity or a series of activities of business processes supported by the system. The scenario should be uniquely named and numbered, and should be referenced in the description of the business processes.

1. Candidate Login Process
   - Fill Login Form entering Login id, password, security verification code (captcha).
   - On successful login, the system displays candidate's home.
2. Registration Process
   - The candidate will fill the personal details; contact details and chooses password, security question and its answer.
3. Choice Filling and Locking

- After successful registration, candidate can fill the choices and rearrange them as per their preferences.

4. Result Publication
   - After seat allotment, candidate will view the seat allotment result by logging into the system.
5. Physical Reporting
   For finalizing the admission, candidates are required to physically reported at allotted institute

7 Project constraints

This sub-section describes constraints to performing the project within cost and schedule.

The system is to be customised within limited time.

7.1 General and Design Constraints

- The Proposed Application system will be an internet based (except Offline Module) which will be designed, developed and centrally hosted in .Net Framework in NIC's Data Centre located at Delhi. The users will be accessing the software application using popular latest browsers (IE, Mozilla Firefox, and Google Chrome).
- Rank Generation and Seat Allocation module will be offline system and will be running at local system

8 Appendix

8.1 Acronyms and Abbreviations

Item	Description
Web based e-Counselling	Online Form Filling & Submission of Choices from any Internet point
Provisional Admissions at PI.	Verification of documents, fees and acknowledging provisional admission
Participating Institute (PI)	An Institute participating in counselling.
Help Center	An Institute providing help to the candidate for training, registration, choice selection, saving etc.
Course/stream	Stream like Engineering
Branch	Discipline under which candidate would be offered a seat
Counselees	Candidates Qualified for Counselling
Seat Allotment	Seat allotted on the basis of merit Number (Rank) provided by the IKGPTU
Bank	A bank designated by IKGPTU for collection of counselling fee
Registration fee	As per Appendix V
Open Category	Seat available for all
Reserved categories	SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others

Seat matrix	A table showing the available seats and their bifurcation among different categories as per the reservation policy of the state. The seat matrices are institute, course/ branch and categories wise
MERIT NUMBER(RANK)	Unique Position of the counselees as defined and provided by IKGPTU
Intake	Sanctioned Intake as per AICTE (seats in a discipline)
StRS	Stakeholder Requirement Specification

8.2 Master Directories

8.2.1 Engineering Four Years Degree programmes

Course Code	Course Name	Short Name
1	APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING	AEIE
2	AUTOMOBILE ENGINEERING	AE
3	BIO MEDICAL ENGINEERING	BME
4	BIO TECHNOLOGY	BT
5	CHEMICAL ENGINEERING	CHE
6	CIVIL ENGINEERING	CIVIL
7	COMPUTER ENGINEERING	CE
8	COMPUTER SCIENCE & ENGINEERING	CSE
9	ELECTRICAL ENGINEERING	EE
10	ELECTRICAL AND ELECTRONICS ENGINEERING	EEE
11	ELECTRONICS & COMMUNICATION ENGINEERING	ECE
12	ELECTRONICS AND ELECTRICAL COMMUNICATION ENGINEERING	EECE
13	ELECTRONICS AND INSTRUMENTATION ENGINEERING	EIE
14	FOOD TECHNOLOGY	FT
15	INDUSTRIAL ENGINEERING	IE
16	INFORMATION TECHNOLOGY	IT
17	INSTRUMENTATION AND CONTROL ENGINEERING	ICE
18	MECHANICAL ENGINEERING	ME
19	PRODUCTION ENGINEERING	PE
20	TEXTILE CHEMISTRY	TXC
21	TEXTILE ENGINEERING	TXE
22	AGRICULTURAL ENGINEERING	AGR

B. Pharmacy 4 year Degree Course & Fee Waiver Course

B. Architecture 4 years Degree Course

Engineering Master Degree Courses (M.Tech):

Course Code	Course Name	Short Name
1.	Bio Technology	
2.	Chemical Engineering	
3.	Civil Engineering (Construction Technology & Management)	
4.	Geo Technical Engineering	
5.	Soil Mechanics & Foundation Engineering	
6.	Structural Engineering	
7.	Computer Science & Engineering	
8.	Information Technology	
9.	CAD / CAM	
10.	Mechanical Engineering (Machine Design)	
11.	Mechanical Engineering (Production Engineering)	
12.	Mechanical Engineering (Thermal Engineering)	
13.	Electronics Product Design	
14.	Electronics & Communication Engineering	
15.	Micro Electronics	
16.	Electrical Engineering	
17.	Power Engineering	
18.	Energy Engineering	
19.	Environmental Science & Engineering	
20.	Industrial Engineering	
21.	Textile Engineering	
22.	VLSI Design	
23.	E Security	
24.	Robotics and Mechatronics	
25.	Instrumentation & Control Engineering	
26.	Nano Technology / Nano Science Technology	
27.	Embedded System	

Pharmacy Master Degree Courses:

1	M. Pharmacy Pharmaceutics	
2	M. Pharmacy Pharmacognosy	
3	M. Pharmacy Pharmacology	
4	M. Pharmacy Pharmaceutical Analysis	
5	M. Pharmacy Pharmaceutical Chemistry	

Note: NIC shall provide the complete database of all the candidates, applied and registered on line to IKGPTU. IKGPTU will process the data as per admission rules and criteria and prepare the merit list of all eligible candidates along with reserved category candidates. IKGPTU will provide the same database to NIC after inserting merit rank of eligible candidates**.**

8.2.1 M.Tech – Course wise Eligibility

Sr No	Courses	Eligibility
1.	Bio Technology	B. Tech. Bio Technology/ B. Pharmacy/ M.Sc. Life Sciences
2.	Chemical Engineering	B.E. / B. Tech. in Chemical Engineering
3.	Civil Engineering (Construction Technology & Management)	B.E. / B. Tech. in Civil Engineering
4.	Geo Technical Engineering	
5.	Soil Mechanics & Foundation Engineering	
6.	Structural Engineering	
7.	Computer Science & Engineering	B.E. / B. Tech. in Computer Science Engineering / IT
8.	Information Technology	
9.	CAD / CAM	B.E. / B. Tech. in Mechanical / Industrial / Production / Manufacturing / Welding / Material Science / Metallurgy Engineering
10.	Mechanical Engineering (Machine Design)	
11.	Mechanical Engineering (Production Engineering)	
12.	Mechanical Engineering (Thermal Engineering)	
13.	Electronics Product Design	B.E. / B. Tech. in Electronics & Communication / Electronics & Instrumentation / Applied Electronics / Instrumentation & Control / Electrical & Electronics Engineering M Sc in Physics (with specialization in Electronics)
14.	Electronics & Communication Engineering	
15.	Micro Electronics	
16.	Electrical Engineering	B.E. / B. Tech. in Electrical / Electronics & Instrumentation /Applied Electronics / Instrumentations & Control / Electrical & Electronics Engineering
17.	Power Engineering	
18.	Energy Engineering	B.E. / B. Tech. in any Branch of Engineering
19.	Environmental Science & Engineering	
20.	Industrial Engineering	
21.	Textile Engineering	B.E. / B. Tech. in Textile Engineering
22.	VLSI Design	B.E. / B. Tech. in Electronics & Communication / Electrical Engineering / Electronics & Instrumentation / Electrical & Electronics / CSE / IT / Control / Micro Electronics Engineering
23.	E Security	B. Tech. CSE/IT/ECE/EIE

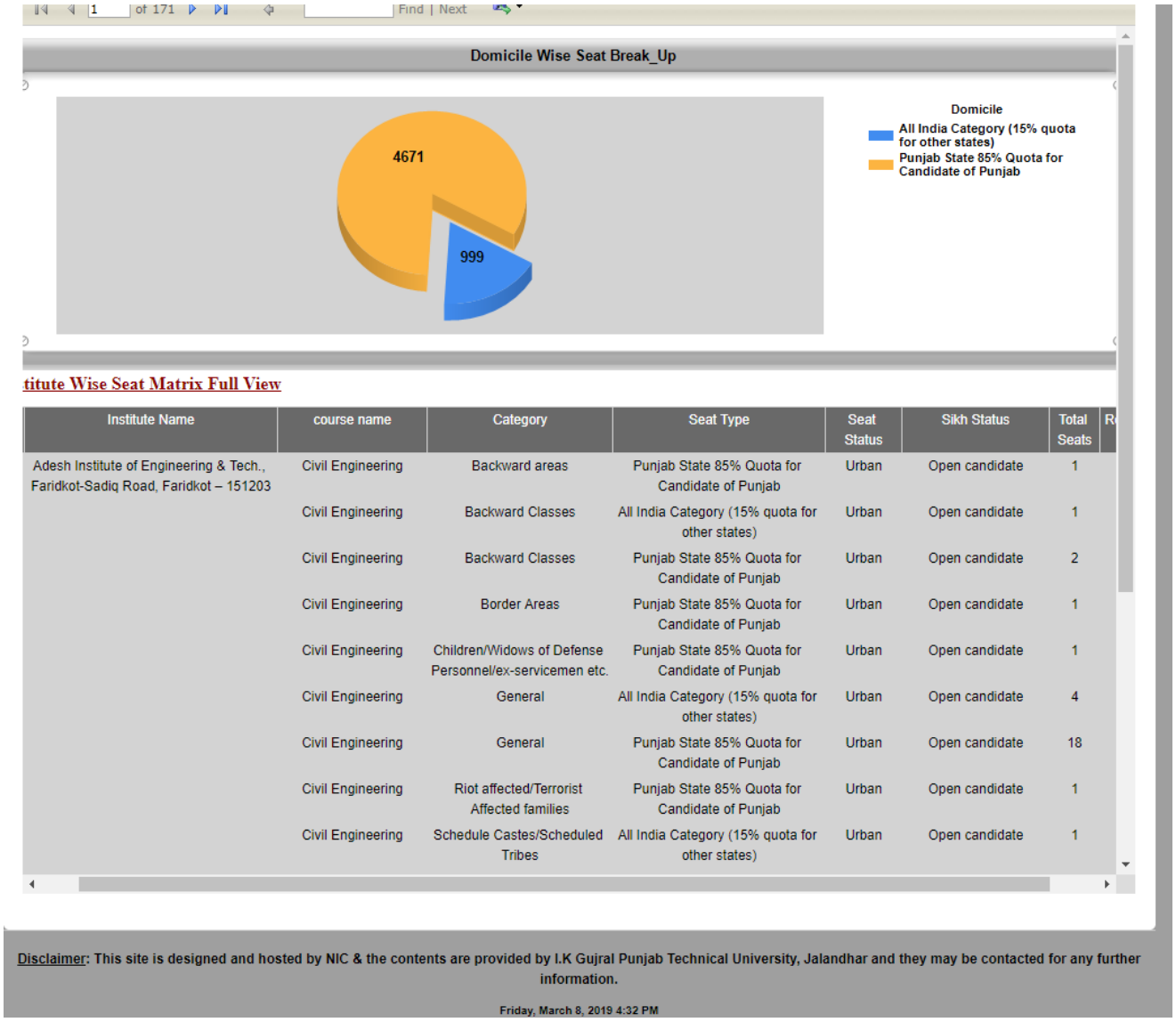
24.	Robotics and Mechatronics	B.E. / B. Tech. in Electronics & Communication / Electrical Engineering /Mechanical Engg. & Industrial Engg..
25.	Instrumentation & Control Engineering	B. E./ B. Tech. in Electronics and Communication / Electronics and Instrumentation/ Applied Electronics / Instrumentation & Control / Electrical and Electronics Engineering / Electrical Engg. / M Sc in Physics (with specialization in Electronics)
26.	Nano Technology / Nano Science Technology	B.E. / B. Tech. (All branches), M.Sc. Zoology / Life Sciences / Physics/ Chemsitry / Bio-technology
27.	Embedded System	B.E. / B. Tech. in Electronics & Communication / Electronics & Instrumentation / Applied Electronics / Instrumentation & Control / Electrical & Electronics Engineering / M. Sc. in Physics (with specialization in Electronics)

Reports

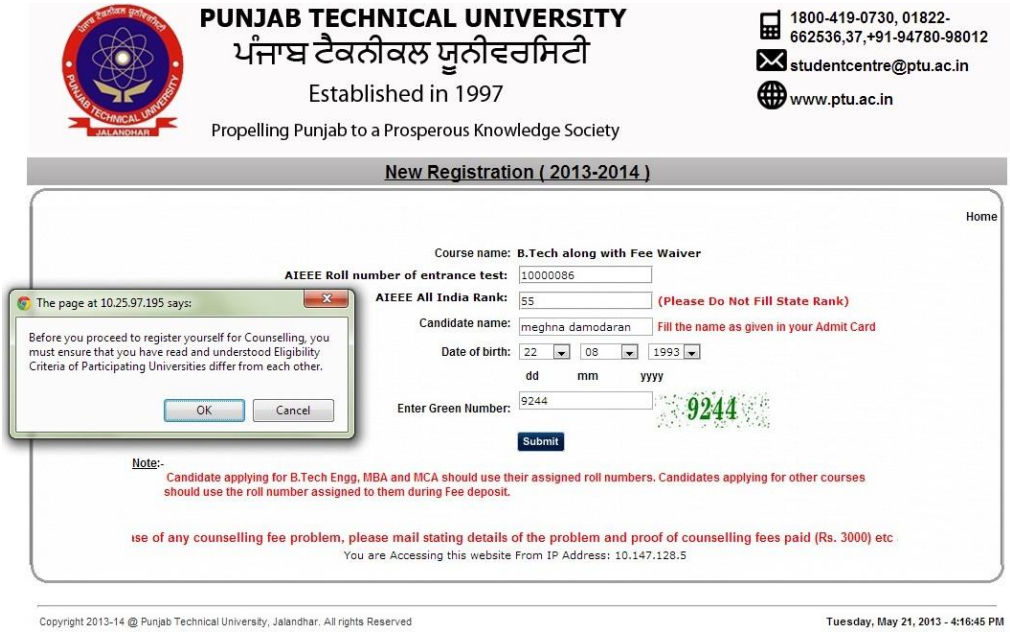
8.2.2 Statistics summary

No. of Participating Institutes	44
No. of Departments	75
No. of ME Programs	274
No. of Qualifying Discipline	394
Total No. of Seats	9911

8.2.3 Total Freezed Seats for Year 2018

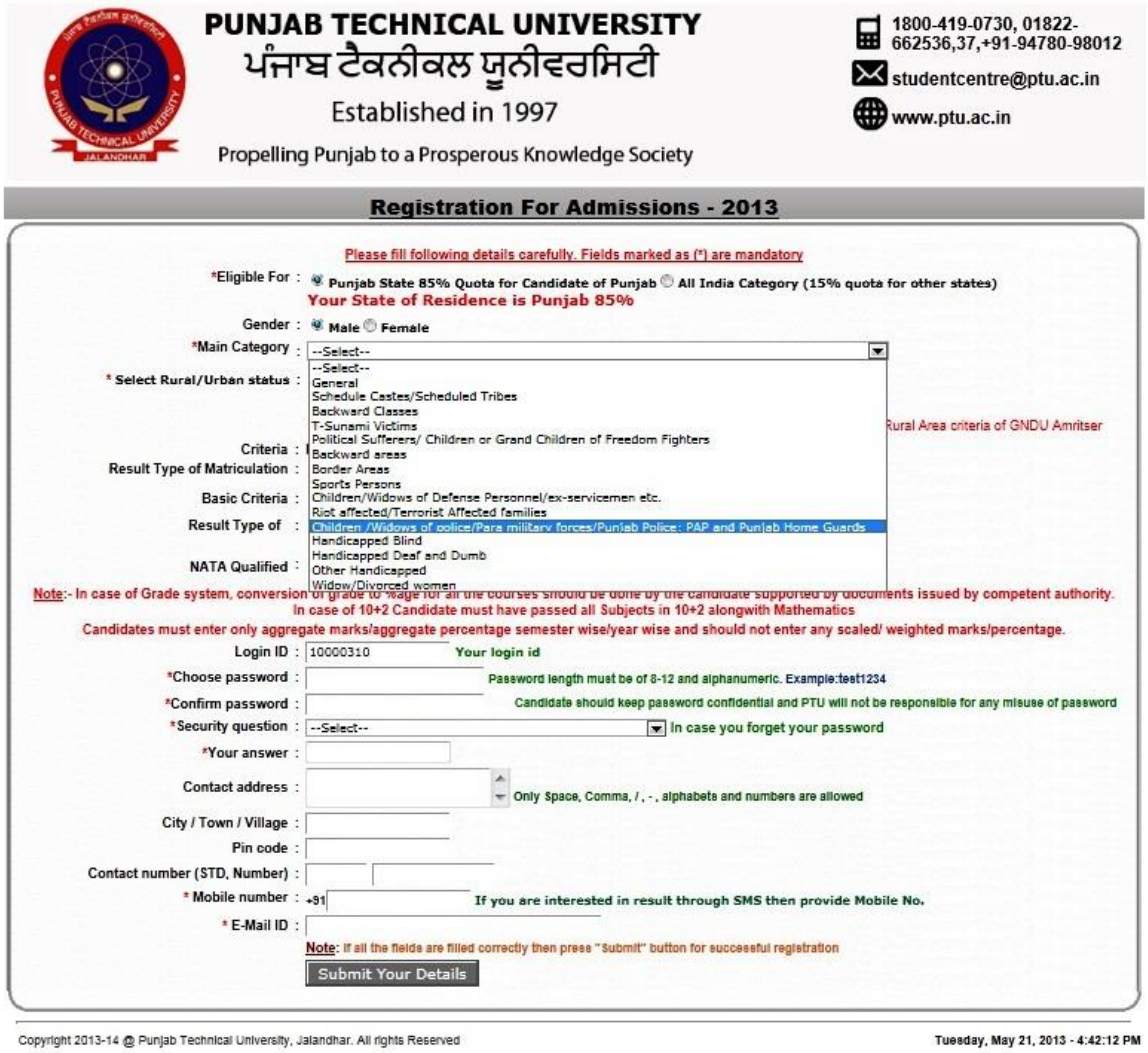


8.2.4 Candidates' Registration Initialization

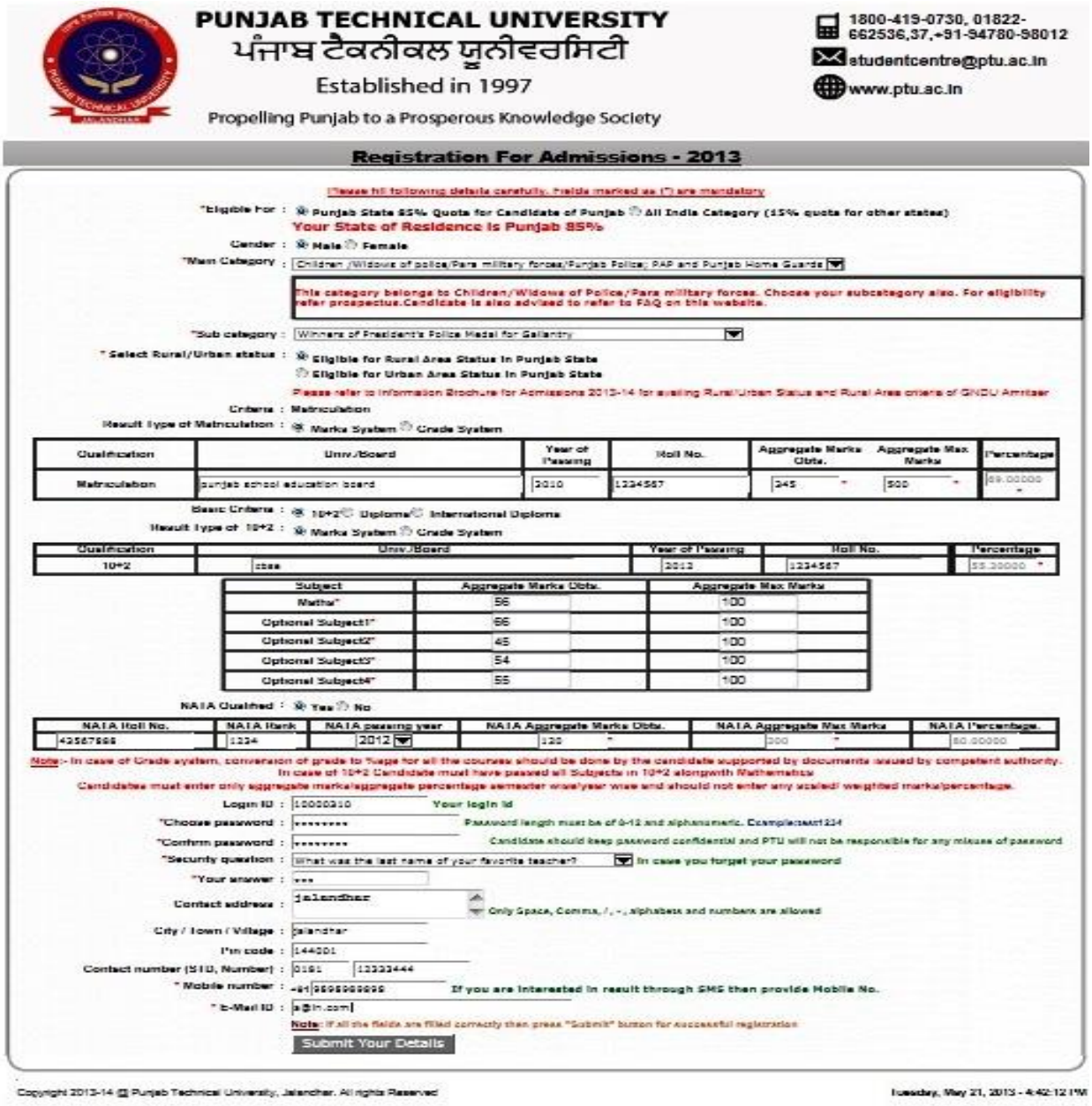


8.2.5 Candidates' Registration

8.2.5.1 Registration Screen



8.2.5.2 B.Architecture



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studentcentre@ptu.ac.in
www.ptu.ac.in

Registration For Admissions - 2013

(Please fill following details carefully. Fields marked as (*) are mandatory

*Eligible For : Punjab State 85% Quota for Candidate of Punjab / All India Category (15% quota for other states)
Your State of Residence is Punjab 85%
Gender : Male / Female
*Main Category : Children /Widows of police/Para military forces/Punjab Police; PAP and Punjab Home Guards
This category belongs to Children/Widows of Police/Para military forces. Choose your subcategory also. For eligibility refer prospectus.Candidate is also advised to refer to FAQ on this website.
*Sub category : Winners of President's Police Medal for Gallantry
* Select Rural/Urban status : Eligible for Rural Area Status in Punjab State / Eligible for Urban Area Status in Punjab State
Please refer to Information Brochure for Admissions 2013-14 for availing Rural/Urban Status and Rural Area criteria of GNDU Amritsar
Criteria : Matriculation
Result type of Matriculation : Marks System / Grade System

Qualification	Univ./Board	Year of Passing	Roll No.	Aggregate Marks Obtd.	Aggregate Max Marks	Percentage
Matriculation	punjab school education board	2010	1234567	345	500	69.00000

Basic Criteria : 10+2 / Diploma / International Diploma
Result type of 10+2 : Marks System / Grade System

Qualification	Univ./Board	Year of Passing	Roll No.	Percentage
10+2	cbse	2012	1234567	55.20000

Subject	Aggregate Marks Obtd.	Aggregate Max Marks
Maths*	56	100
Optional Subject1*	66	100
Optional Subject2*	45	100
Optional Subject3*	54	100
Optional Subject4*	55	100

NATA Qualified : Yes / No

NATA Roll No.	NATA Rank	NATA passing year	NATA Aggregate Marks Obtd.	NATA Aggregate Max Marks	NATA Percentage.
42567898	1234	2012	120	200	60.00000

Note:- In case of Grade system, conversion of grade to %age for all the courses should be done by the candidate supported by documents issued by competent authority.
In case of 10+2 Candidate must have passed all Subjects in 10+2 alongwith Mathematics
Candidates must enter only aggregate marks/aggregate percentage semester wise/year wise and should not enter any scaled/ weighted marks/percentage.

Login ID : 10000310 Your login id
*Choose password : ******** Password length must be of 8-12 and alphanumeric. Example:test1234
*Confirm password : ********
Candidate should keep password confidential and PTU will not be responsible for any misuse of password
*Security question : What was the last name of your favorite teacher? In case you forget your password
*Your answer : ***
Contact address : Jalandhar
Only Space, Comma, /, -, alphabets and numbers are allowed
City / Town / Village : Jalandhar
Pin code : 144001
Contact number (STD, Number) : 0181 12333444
* Mobile number : +91 9999999999 If you are interested in result through SMS then provide Mobile No.
* E-Mail ID : a@in.com
Note: If all the fields are filled correctly then press "Submit" button for successful registration
Submit Your Details

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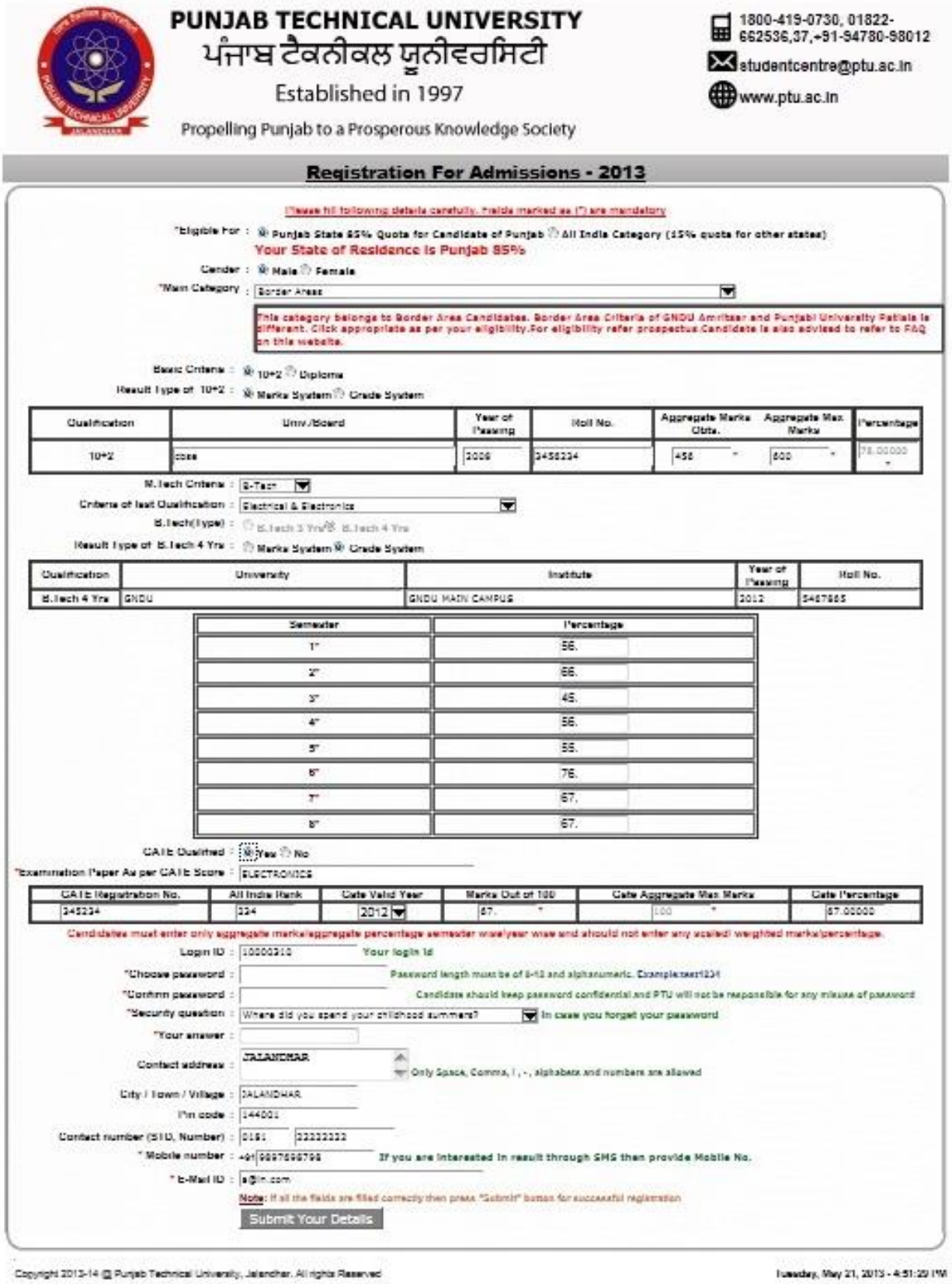
Tuesday, May 21, 2013 - 4:42:12 PM

8.2.5.3 MTech Full Time



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studentcentre@ptu.ac.in
www.ptu.ac.in

Registration For Admissions - 2013

(Please fill following details carefully. Fields marked as (*) are mandatory

*Eligible for : Punjab State 85% Quota for Candidate of Punjab / All India Category (15% quota for other states)
Your State of Residence is Punjab 85%

Gender : Male / Female

*Main Category : Border Area

This category belongs to Border Area Candidates. Border Area Criteria of GNDU Amritsar and Punjabi University Patiala is different. Click appropriate as per your eligibility.For eligibility refer prospectus.Candidate is also advised to refer to FAQ on this website.

Basic Criteria : 10+2 / Diploma

Result Type of 10+2 : Marks System / Grade System

Qualification	Univ./Board	Year of Passing	Roll No.	Aggregate Marks Obtd.	Aggregate Max. Marks	Percentage
10+2	cbse	2009	3458234	458 *	600 *	76.00000 *

M.Tech Criteria : B-Tech

Criteria of last Qualification : Electrical & Electronics

B.Tech(Type) : B.Tech 3 Yrs / B.Tech 4 Yrs

Result Type of B.Tech 4 Yrs : Marks System / Grade System

Qualification	University	Institute	Year of Passing	Roll No.
B.Tech 4 Yrs	GNDU	GNDU MAIN CAMPUS	2012	5467865

Semester	Percentage
1st	56.
2nd	66.
3rd	45.
4th	56.
5th	55.
6th	76.
7th	67.
8th	67.

GATE Qualified : Yes / No

*Examination Paper As per GATE Score : ELECTRONICS

GATE Registration No.	All India Rank	Gate Valid Year	Marks Out of 100	Gate Aggregate Max. Marks	Gate Percentage
345234	334	2012	67. *	100 *	67.00000

Candidates must enter only aggregate marks/aggregate percentage semester wise/year wise and should not enter any scaled/ weighted marks/percentage.

Login ID : 10000310 Your login Id

*Choose password : Password length must be of 8-10 and alphanumeric. Example:test1234

*Confirm password : Candidate should keep password confidential and PTU will not be responsible for any misuse of password

*Security question : Where did you spend your childhood summers? In case you forget your password

*Your answer :

Contact address : JALANDHAR Only Space, Comma, (, - , alphabets and numbers are allowed

City / Town / Village : JALANDHAR

Pin code : 144001

Contact number (STD, Number) : 0181 22222222

* Mobile number : +91 9897698798 If you are interested in result through SMS then provide Mobile No.

* E-Mail ID : a@in.com

Note: If all the fields are filled correctly then press "Submit" button for successful registration

Submit Your Details

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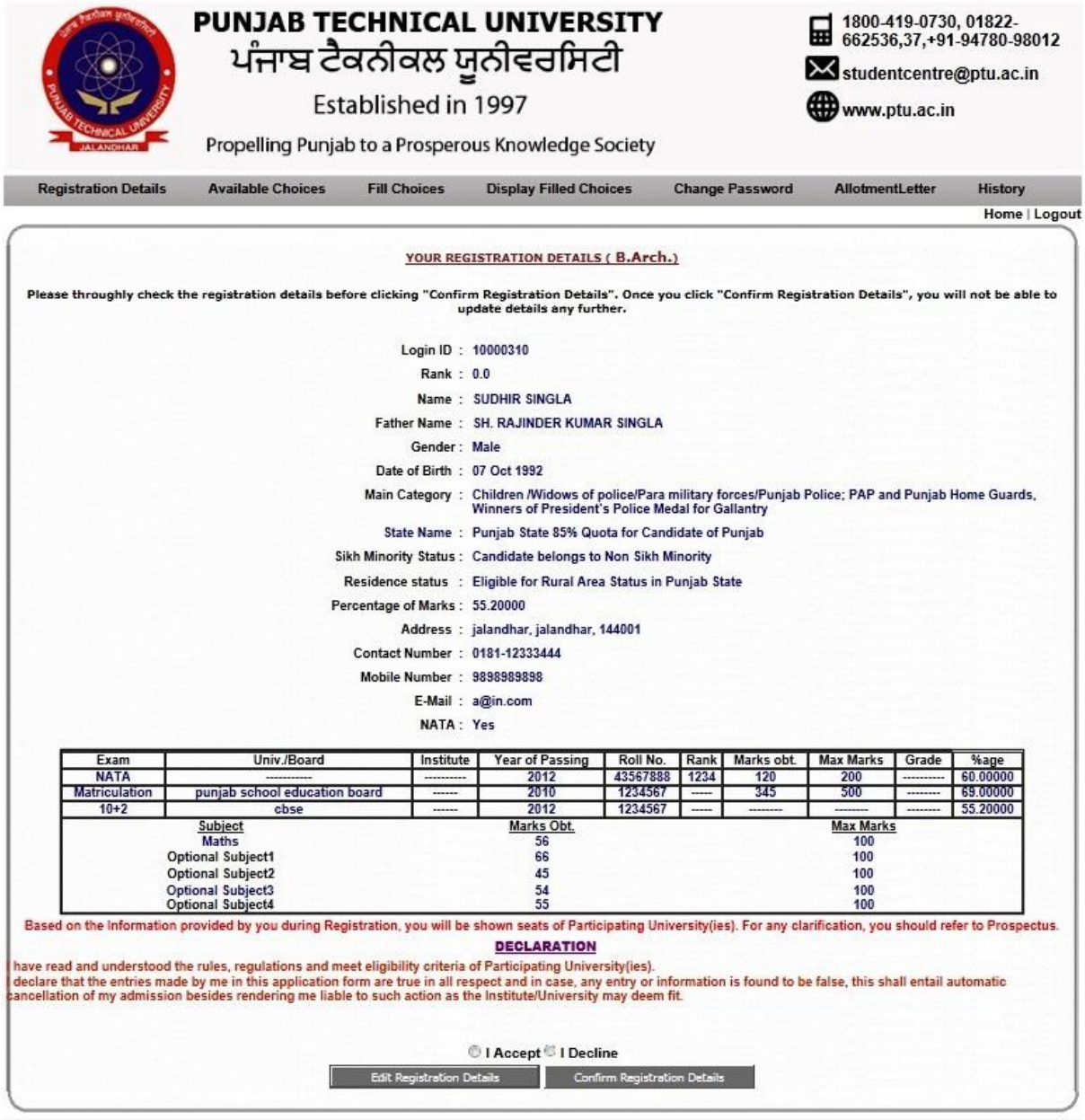
Tuesday, May 21, 2013 - 4:51:29 PM

8.2.5.4 Confirm Registration



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Registration Details | Available Choices | Fill Choices | Display Filled Choices | Change Password | AllotmentLetter | History

Home | Logout

YOUR REGISTRATION DETAILS (B.Arch.)

Please throughly check the registration details before clicking "Confirm Registration Details". Once you click "Confirm Registration Details", you will not be able to update details any further.

Login ID : 10000310
Rank : 0.0
Name : SUDHIR SINGLA
Father Name : SH. RAJINDER KUMAR SINGLA
Gender : Male
Date of Birth : 07 Oct 1992
Main Category : Children /Widows of police/Para military forces/Punjab Police; PAP and Punjab Home Guards, Winners of President's Police Medal for Gallantry
State Name : Punjab State 85% Quota for Candidate of Punjab
Sikh Minority Status : Candidate belongs to Non Sikh Minority
Residence status : Eligible for Rural Area Status in Punjab State
Percentage of Marks : 55.20000
Address : jalandhar, jalandhar, 144001
Contact Number : 0181-12333444
Mobile Number : 9898989898
E-Mail : a@in.com
NATA : Yes

Exam	Univ./Board	Institute	Year of Passing	Roll No.	Rank	Marks obt.	Max Marks	Grade	%age
NATA	----------	----------	2012	43567888	1234	120	200	----------	60.00000
Matriculation	punjab school education board	------	2010	1234567	-----	345	500	--------	69.00000
10+2	cbse	------	2012	1234567	-----	--------	--------	--------	55.20000

Subject	Marks Obt.	Max Marks
Maths	56	100
Optional Subject1	66	100
Optional Subject2	45	100
Optional Subject3	54	100
Optional Subject4	55	100

Based on the Information provided by you during Registration, you will be shown seats of Participating University(ies). For any clarification, you should refer to Prospectus.

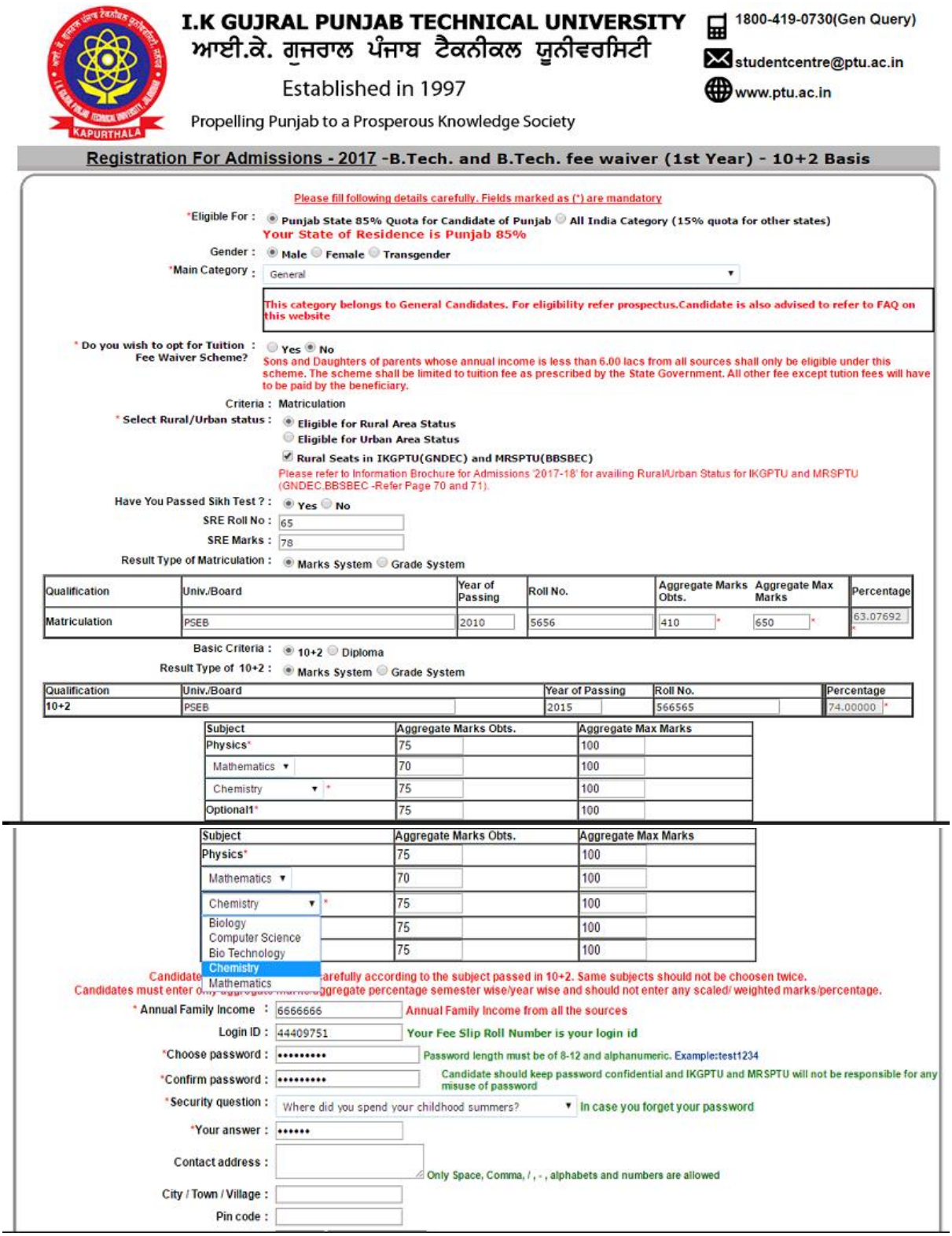
DECLARATION

I have read and understood the rules, regulations and meet eligibility criteria of Participating University(ies).
I declare that the entries made by me in this application form are true in all respect and in case, any entry or information is found to be false, this shall entail automatic cancellation of my admission besides rendering me liable to such action as the Institute/University may deem fit.

I Accept I Decline

Edit Registration Details | Confirm Registration Details

8.2.5.5 Edit Registration



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studentcentre@ptu.ac.in
www.ptu.ac.in

Registration For Admissions - 2017 -B.Tech. and B.Tech. fee waiver (1st Year) - 10+2 Basis

Please fill following details carefully. Fields marked as (*) are mandatory

*Eligible For : Punjab State 85% Quota for Candidate of Punjab / All India Category (15% quota for other states)
Your State of Residence is Punjab 85%

Gender : Male / Female / Transgender

*Main Category : General

This category belongs to General Candidates. For eligibility refer prospectus.Candidate is also advised to refer to FAQ on this website

* Do you wish to opt for Tuition Fee Waiver Scheme? : Yes / No
Sons and Daughters of parents whose annual income is less than 6.00 lacs from all sources shall only be eligible under this scheme. The scheme shall be limited to tuition fee as prescribed by the State Government. All other fee except tution fees will have to be paid by the beneficiary.

Criteria : Matriculation

* Select Rural/Urban status : Eligible for Rural Area Status / Eligible for Urban Area Status
Rural Seats in IKGPTU(GNDEC) and MRSPTU(BBSBEC)
Please refer to Information Brochure for Admissions '2017-18' for availing Rural/Urban Status for IKGPTU and MRSPTU (GNDEC,BBSBEC -Refer Page 70 and 71).

Have You Passed Sikh Test ? : Yes / No

SRE Roll No : 65

SRE Marks : 78

Result Type of Matriculation : Marks System / Grade System

Qualification	Univ./Board	Year of Passing	Roll No.	Aggregate Marks Obts.	Aggregate Max Marks	Percentage
Matriculation	PSEB	2010	5656	410 *	650 *	63.07692 *

Basic Criteria : 10+2 / Diploma

Result Type of 10+2 : Marks System / Grade System

Qualification	Univ./Board	Year of Passing	Roll No.	Percentage
10+2	PSEB	2015	566565	74.00000 *

Subject	Aggregate Marks Obts.	Aggregate Max Marks
Physics*	75	100
Mathematics	70	100
Chemistry *	75	100
Optional1*	75	100

Subject	Aggregate Marks Obts.	Aggregate Max Marks
Physics*	75	100
Mathematics	70	100
Chemistry *	75	100
	75	100
	75	100

Biology
Computer Science
Bio Technology
Chemistry
Mathematics

Candidate arefully according to the subject passed in 10+2. Same subjects should not be choosen twice.
Candidates must enter ggregate percentage semester wise/year wise and should not enter any scaled/ weighted marks/percentage.

* Annual Family Income : 6666666 Annual Family Income from all the sources

Login ID : 44409751 Your Fee Slip Roll Number is your login id

*Choose password : ••••••••• Password length must be of 8-12 and alphanumeric. Example:test1234

*Confirm password : ••••••••• Candidate should keep password confidential and IKGPTU and MRSPTU will not be responsible for any misuse of password

*Security question : Where did you spend your childhood summers? In case you forget your password

*Your answer : ••••••

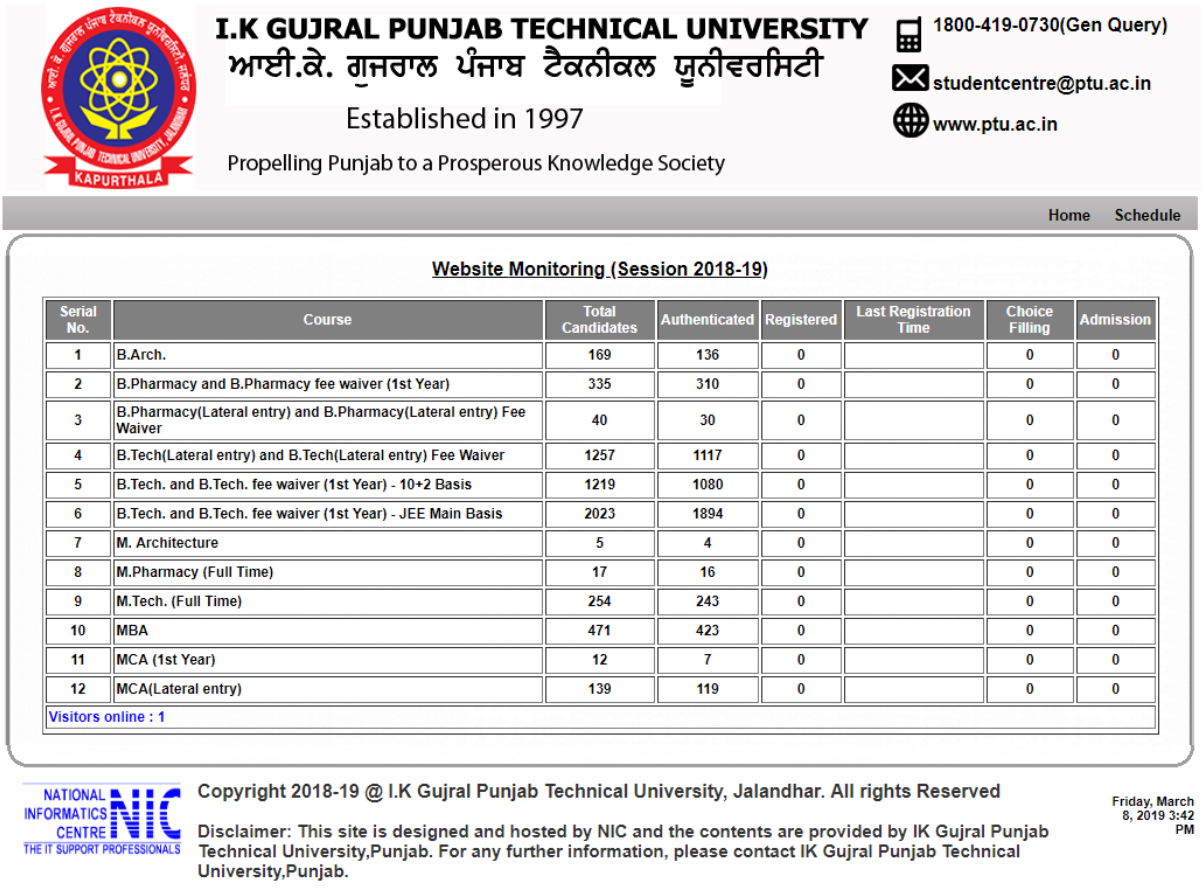
Contact address : Only Space, Comma, / , - , alphabets and numbers are allowed

City / Town / Village :

Pin code :

Similarly, data of B.Tech Lateral Entry, B.Pharmacy, B. Pharmacy Lateral Entry, MCA, MCA (LEET), M. Architecture and MBA will be captured.

8.2.6 Reporting Activities Monitoring



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Home Schedule

Website Monitoring (Session 2018-19)

Serial No.	Course	Total Candidates	Authenticated	Registered	Last Registration Time	Choice Filling	Admission
1	B.Arch.	169	136	0		0	0
2	B.Pharmacy and B.Pharmacy fee waiver (1st Year)	335	310	0		0	0
3	B.Pharmacy(Lateral entry) and B.Pharmacy(Lateral entry) Fee Waiver	40	30	0		0	0
4	B.Tech(Lateral entry) and B.Tech(Lateral entry) Fee Waiver	1257	1117	0		0	0
5	B.Tech. and B.Tech. fee waiver (1st Year) - 10+2 Basis	1219	1080	0		0	0
6	B.Tech. and B.Tech. fee waiver (1st Year) - JEE Main Basis	2023	1894	0		0	0
7	M. Architecture	5	4	0		0	0
8	M.Pharmacy (Full Time)	17	16	0		0	0
9	M.Tech. (Full Time)	254	243	0		0	0
10	MBA	471	423	0		0	0
11	MCA (1st Year)	12	7	0		0	0
12	MCA(Lateral entry)	139	119	0		0	0

Visitors online : 1

NATIONAL INFORMATICS CENTRE NIC THE IT SUPPORT PROFESSIONALS

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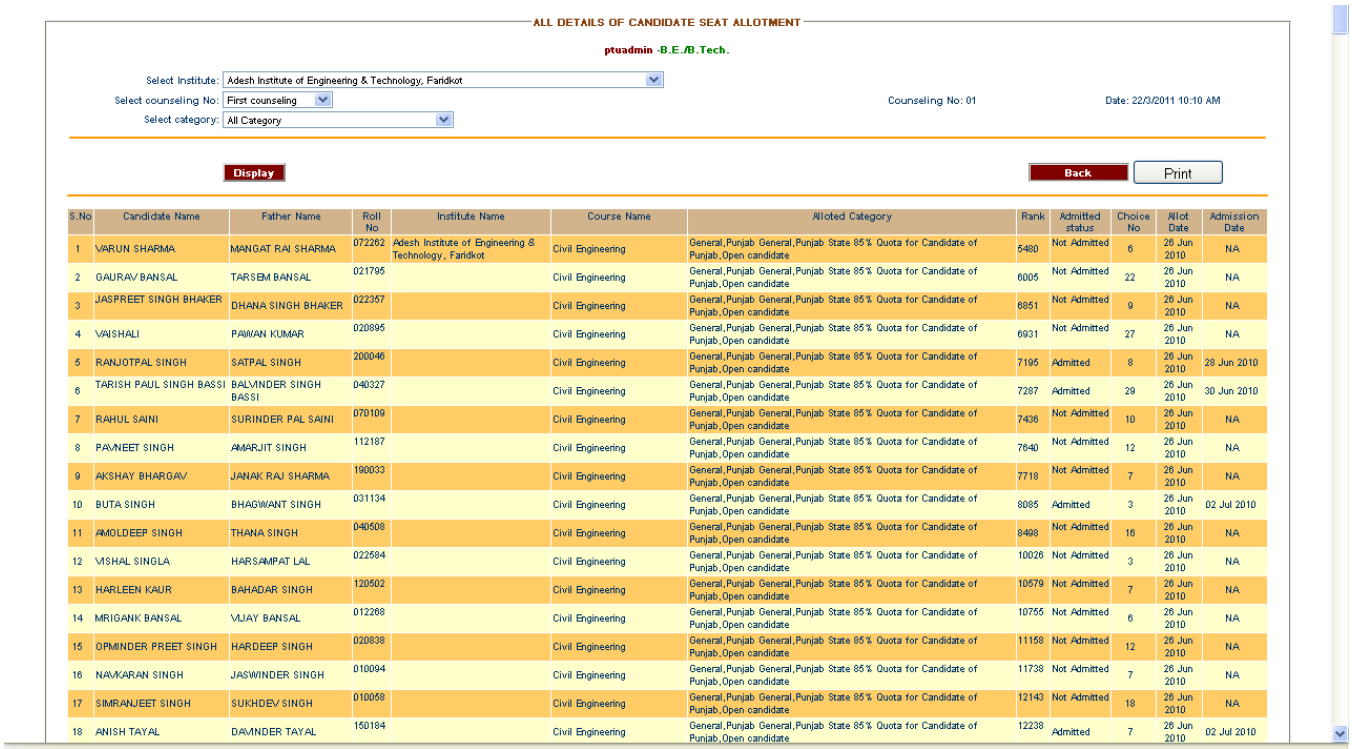
Friday, March 8, 2019 3:42 PM

8.2.7 Date Wise Reporting Status



ALL DETAILS OF CANDIDATE SEAT ALLOTMENT

ptuadmin -B.E./B.Tech.

Select Institute: Adesh Institute of Engineering & Technology, Faridkot

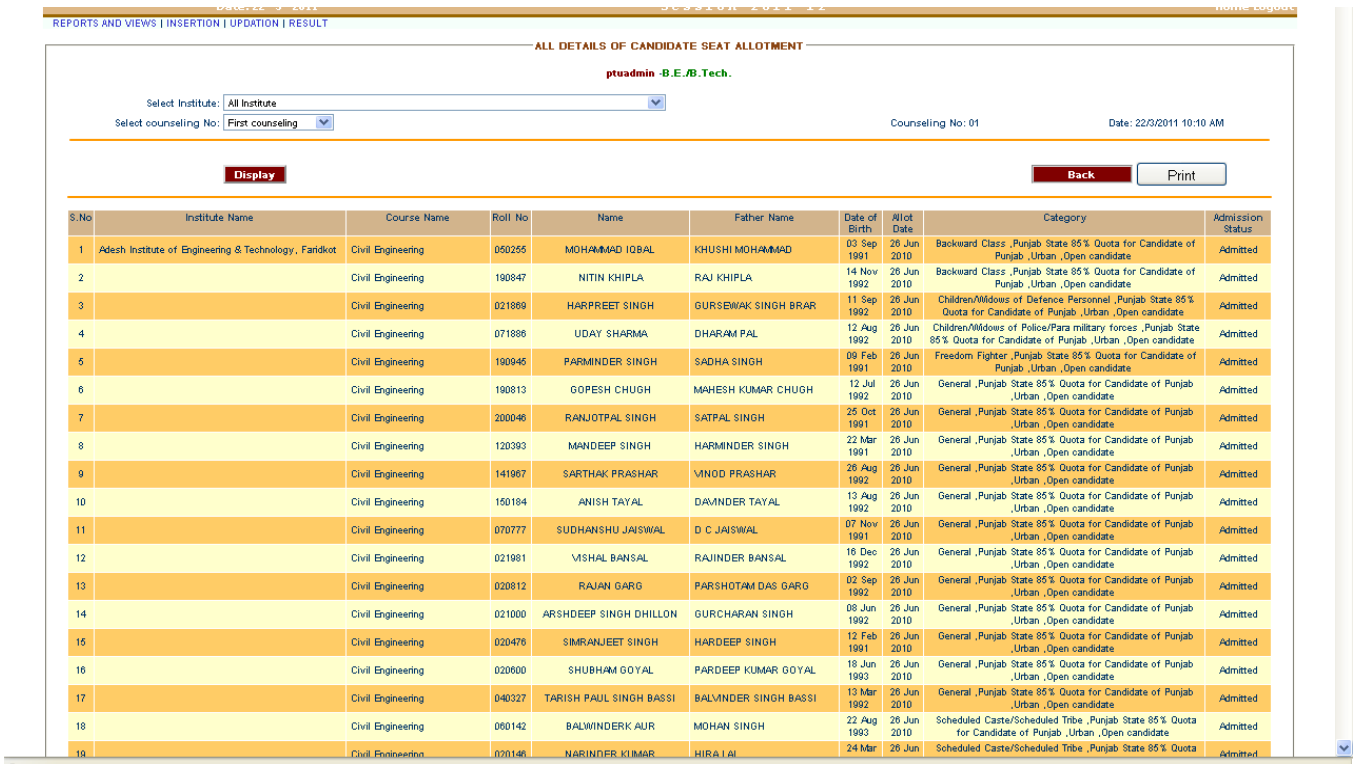
Select counseling No: First counseling — Counseling No: 01 — Date: 22/3/2011 10:10 AM

Select category: All Category

Display | Back | Print

S.No	Candidate Name	Father Name	Roll No	Institute Name	Course Name	Alloted Category	Rank	Admitted status	Choice No	Allot Date	Admission Date
1	VARUN SHARMA	MANGAT RAI SHARMA	072262	Adesh Institute of Engineering & Technology, Faridkot	Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	5480	Not Admitted	6	26 Jun 2010	NA
2	GAURAV BANSAL	TARSEM BANSAL	021795		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	6005	Not Admitted	22	26 Jun 2010	NA
3	JASPREET SINGH BHAKER	DHANA SINGH BHAKER	022357		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	6851	Not Admitted	9	26 Jun 2010	NA
4	VAISHALI	PAWAN KUMAR	020895		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	6931	Not Admitted	27	26 Jun 2010	NA
5	RANJOTPAL SINGH	SATPAL SINGH	200046		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	7195	Admitted	8	26 Jun 2010	28 Jun 2010
6	TARISH PAUL SINGH BASSI	BALVINDER SINGH BASSI	040327		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	7287	Admitted	29	26 Jun 2010	30 Jun 2010
7	RAHUL SAINI	SURINDER PAL SAINI	070109		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	7436	Not Admitted	10	26 Jun 2010	NA
8	PAVNEET SINGH	AMARJIT SINGH	112187		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	7640	Not Admitted	12	26 Jun 2010	NA
9	AKSHAY BHARGAV	JANAK RAJ SHARMA	190033		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	7718	Not Admitted	7	26 Jun 2010	NA
10	BUTA SINGH	BHAGWANT SINGH	031134		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	8085	Admitted	3	26 Jun 2010	02 Jul 2010
11	AMOLDEEP SINGH	THANA SINGH	040508		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	8498	Not Admitted	16	26 Jun 2010	NA
12	VISHAL SINGLA	HARSAMPAT LAL	022584		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	10026	Not Admitted	3	26 Jun 2010	NA
13	HARLEEN KAUR	BAHADAR SINGH	120502		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	10579	Not Admitted	7	26 Jun 2010	NA
14	MRIGANK BANSAL	VIJAY BANSAL	012268		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	10755	Not Admitted	6	26 Jun 2010	NA
15	OPMINDER PREET SINGH	HARDEEP SINGH	020838		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	11158	Not Admitted	12	26 Jun 2010	NA
16	NAVKARAN SINGH	JASWINDER SINGH	010094		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	11738	Not Admitted	7	26 Jun 2010	NA
17	SIMRANJEET SINGH	SUKHDEV SINGH	010058		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	12143	Not Admitted	18	26 Jun 2010	NA
18	ANISH TAYAL	DAVINDER TAYAL	150184		Civil Engineering	General,Punjab General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	12238	Admitted	7	26 Jun 2010	02 Jul 2010

8.2.8 Allotment and Reporting status



REPORTS AND VIEWS | INSERTION | UPDATION | RESULT

ALL DETAILS OF CANDIDATE SEAT ALLOTMENT

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Select Institute: All Institute

Select counseling No: First counseling — Counseling No: 01 — Date: 22/3/2011 10:10 AM

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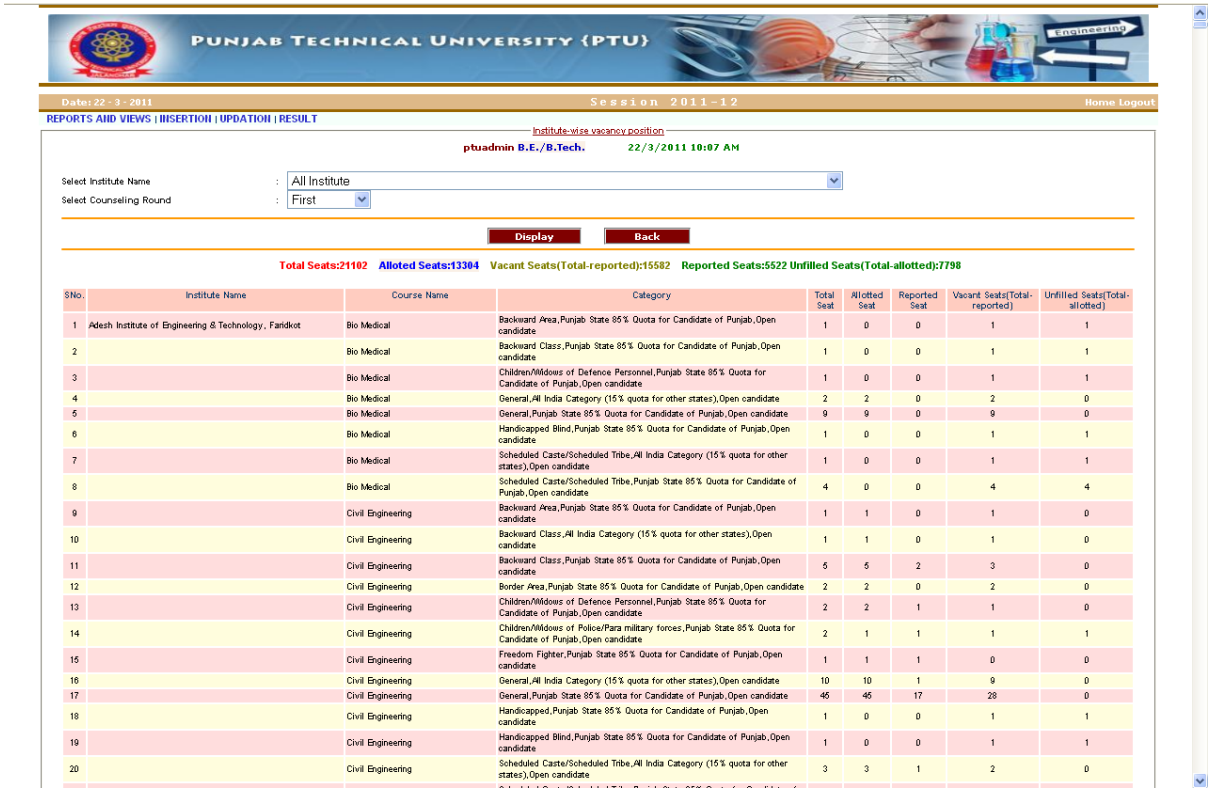
S.No	Institute Name	Course Name	Roll No	Name	Father Name	Date of Birth	Allot Date	Category	Admission Status
1	Adesh Institute of Engineering & Technology, Faridkot	Civil Engineering	050255	MOHAMMAD IQBAL	KHUSHI MOHAMMAD	03 Sep 1991	26 Jun 2010	Backward Class ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
2		Civil Engineering	190847	NITIN KHIPLA	RAJ KHIPLA	14 Nov 1992	26 Jun 2010	Backward Class ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
3		Civil Engineering	021869	HARPREET SINGH	GURSEWAK SINGH BRAR	11 Sep 1992	26 Jun 2010	Children/Widows of Defence Personnel ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
4		Civil Engineering	071886	UDAY SHARMA	DHARAM PAL	12 Aug 1992	26 Jun 2010	Children/Widows of Police/Para military forces ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
5		Civil Engineering	190945	PARMINDER SINGH	SADHA SINGH	09 Feb 1991	26 Jun 2010	Freedom Fighter ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
6		Civil Engineering	190813	GOPESH CHUGH	MAHESH KUMAR CHUGH	12 Jul 1992	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
7		Civil Engineering	200046	RANJOTPAL SINGH	SATPAL SINGH	25 Oct 1991	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
8		Civil Engineering	120393	MANDEEP SINGH	HARMINDER SINGH	22 Mar 1991	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
9		Civil Engineering	141967	SARTHAK PRASHAR	VINOD PRASHAR	26 Aug 1992	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
10		Civil Engineering	150184	ANISH TAYAL	DAVINDER TAYAL	13 Aug 1992	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
11		Civil Engineering	070777	SUDHANSHU JAISWAL	D C JAISWAL	07 Nov 1991	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
12		Civil Engineering	021981	VISHAL BANSAL	RAJINDER BANSAL	16 Dec 1992	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
13		Civil Engineering	020812	RAJAN GARG	PARSHOTAM DAS GARG	02 Sep 1992	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
14		Civil Engineering	021000	ARSHDEEP SINGH DHILLON	GURCHARAN SINGH	08 Jun 1992	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
15		Civil Engineering	020476	SIMRANJEET SINGH	HARDEEP SINGH	12 Feb 1991	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
16		Civil Engineering	020600	SHUBHAM GOYAL	PARDEEP KUMAR GOYAL	18 Jun 1993	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
17		Civil Engineering	040327	TARISH PAUL SINGH BASSI	BALVINDER SINGH BASSI	13 Mar 1992	26 Jun 2010	General ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
18		Civil Engineering	060142	BALWINDERK AUR	MOHAN SINGH	22 Aug 1993	26 Jun 2010	Scheduled Caste/Scheduled Tribe ,Punjab State 85% Quota for Candidate of Punjab ,Urban ,Open candidate	Admitted
19		Civil Engineering	020146	NARINDER KUMAR	HIRA LAL	24 Mar	26 Jun	Scheduled Caste/Scheduled Tribe ,Punjab State 85% Quota	Admitted

8.2.8 Institute wise and Course Wise Total Seats, Allotted Seats and Reported Seats



PUNJAB TECHNICAL UNIVERSITY (PTU)

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Institute-wise vacancy position

ptuadmin B.E./B.Tech. 22/3/2011 10:07 AM

Select Institute Name : All Institute

Select Counseling Round : First

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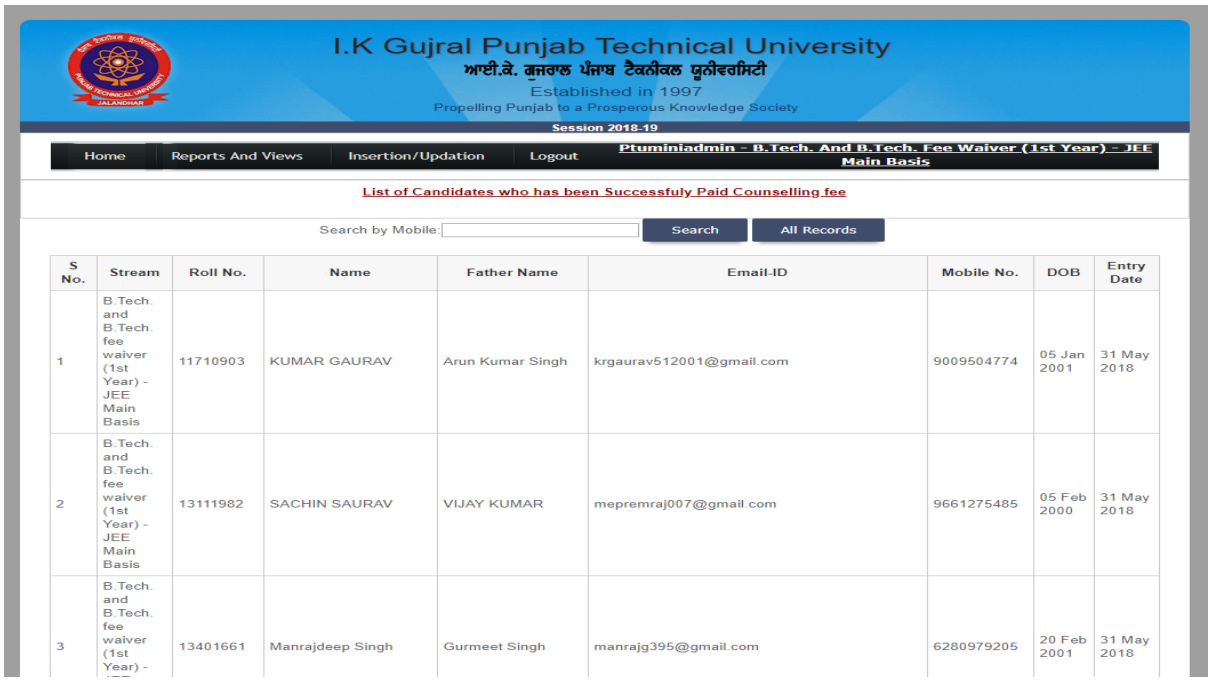
Total Seats:21102 Alloted Seats:13304 Vacant Seats(Total-reported):15582 Reported Seats:5522 Unfilled Seats(Total-allotted):7798

SNo.	Institute Name	Course Name	Category	Total Seat	Allotted Seat	Reported Seat	Vacant Seats(Total-reported)	Unfilled Seats(Total-allotted)
1	Adesh Institute of Engineering & Technology, Faridkot	Bio Medical	Backward Area,Punjab State 85% Quota for Candidate of Punjab,Open candidate	1	0	0	1	1
2		Bio Medical	Backward Class,Punjab State 85% Quota for Candidate of Punjab,Open candidate	1	0	0	1	1
3		Bio Medical	Children/Widows of Defence Personnel,Punjab State 85% Quota for Candidate of Punjab,Open candidate	1	0	0	1	1
4		Bio Medical	General,All India Category (15% quota for other states),Open candidate	2	2	0	2	0
5		Bio Medical	General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	9	9	0	9	0
6		Bio Medical	Handicapped Blind,Punjab State 85% Quota for Candidate of Punjab,Open candidate	1	0	0	1	1
7		Bio Medical	Scheduled Caste/Scheduled Tribe,All India Category (15% quota for other states),Open candidate	1	0	0	1	1
8		Bio Medical	Scheduled Caste/Scheduled Tribe,Punjab State 85% Quota for Candidate of Punjab,Open candidate	4	0	0	4	4
9		Civil Engineering	Backward Area,Punjab State 85% Quota for Candidate of Punjab,Open candidate	1	1	0	1	0
10		Civil Engineering	Backward Class,All India Category (15% quota for other states),Open candidate	1	1	0	1	0
11		Civil Engineering	Backward Class,Punjab State 85% Quota for Candidate of Punjab,Open candidate	5	5	2	3	0
12		Civil Engineering	Border Area,Punjab State 85% Quota for Candidate of Punjab,Open candidate	2	2	0	2	0
13		Civil Engineering	Children/Widows of Defence Personnel,Punjab State 85% Quota for Candidate of Punjab,Open candidate	2	2	1	1	0
14		Civil Engineering	Children/Widows of Police/Para military forces,Punjab State 85% Quota for Candidate of Punjab,Open candidate	2	1	1	1	1
15		Civil Engineering	Freedom Fighter,Punjab State 85% Quota for Candidate of Punjab,Open candidate	1	1	1	0	0
16		Civil Engineering	General,All India Category (15% quota for other states),Open candidate	10	10	1	9	0
17		Civil Engineering	General,Punjab State 85% Quota for Candidate of Punjab,Open candidate	45	45	17	28	0
18		Civil Engineering	Handicapped,Punjab State 85% Quota for Candidate of Punjab,Open candidate	1	0	0	1	1
19		Civil Engineering	Handicapped Blind,Punjab State 85% Quota for Candidate of Punjab,Open candidate	1	0	0	1	1
20		Civil Engineering	Scheduled Caste/Scheduled Tribe,All India Category (15% quota for other states),Open candidate	3	3	1	2	0

8.2.9 Counselling Fee Deposit Report



I.K Gujral Punjab Technical University

ਆਈ.ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ

Established in 1997

Propelling Punjab to a Prosperous Knowledge Society

Session 2018-19

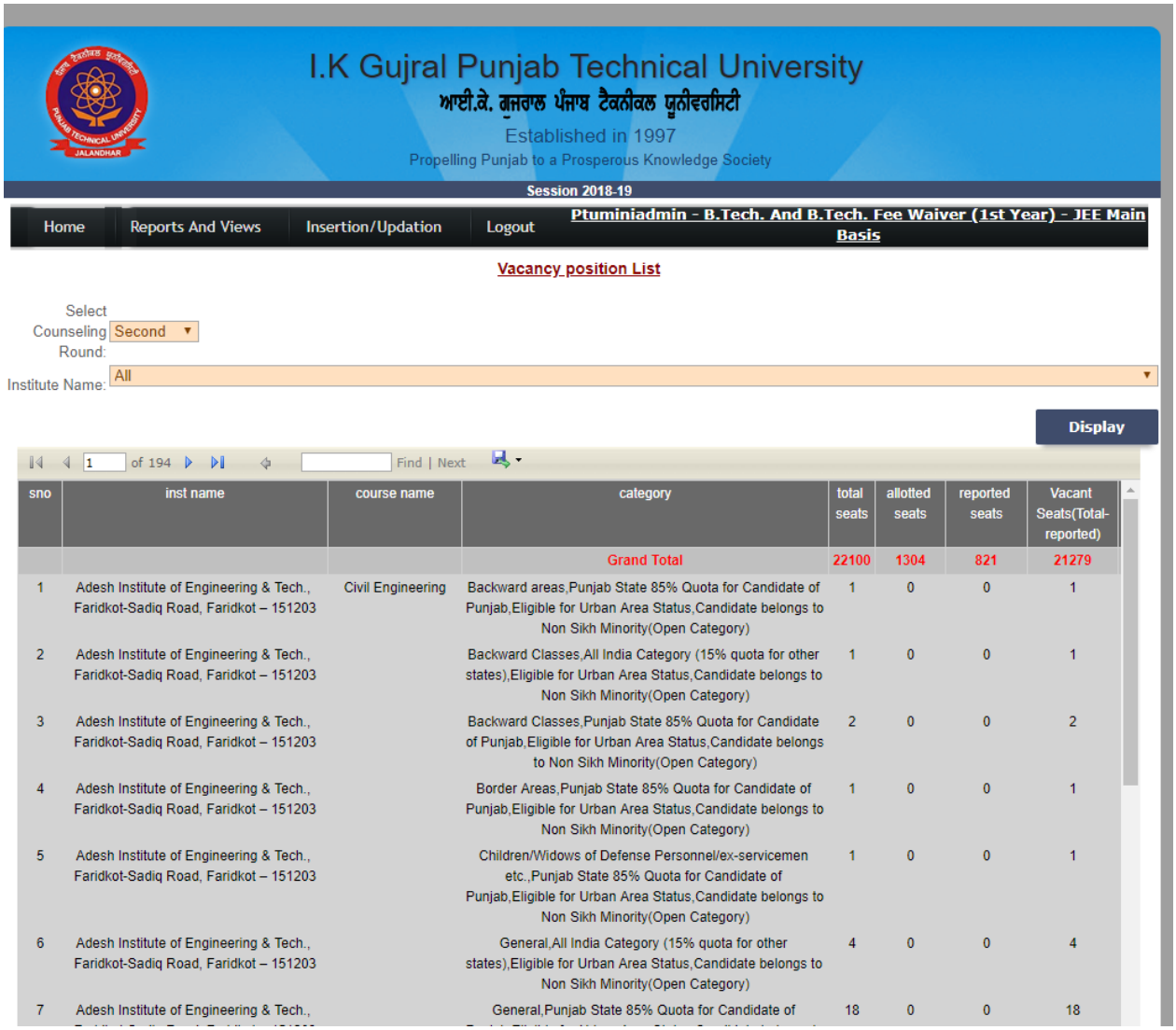
Home | Reports And Views | Insertion/Updation | Logout | Ptuminiadmin - B.Tech. And B.Tech. Fee Waiver (1st Year) - JEE Main Basis

List of Candidates who has been Successfuly Paid Counselling fee

Search by Mobile: Search All Records

S No.	Stream	Roll No.	Name	Father Name	Email-ID	Mobile No.	DOB	Entry Date
1	B.Tech. and B.Tech. fee waiver (1st Year) - JEE Main Basis	11710903	KUMAR GAURAV	Arun Kumar Singh	krgaurav512001@gmail.com	9009504774	05 Jan 2001	31 May 2018
2	B.Tech. and B.Tech. fee waiver (1st Year) - JEE Main Basis	13111982	SACHIN SAURAV	VIJAY KUMAR	mepremraj007@gmail.com	9661275485	05 Feb 2000	31 May 2018
3	B.Tech. and B.Tech. fee waiver (1st Year) -	13401661	Manrajdeep Singh	Gurmeet Singh	manrajg395@gmail.com	6280979205	20 Feb 2001	31 May 2018

8.2.10 List of Vacant Seats Round Wise



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Vacancy position List

Select Counseling Round: Second

Institute Name: All

Display

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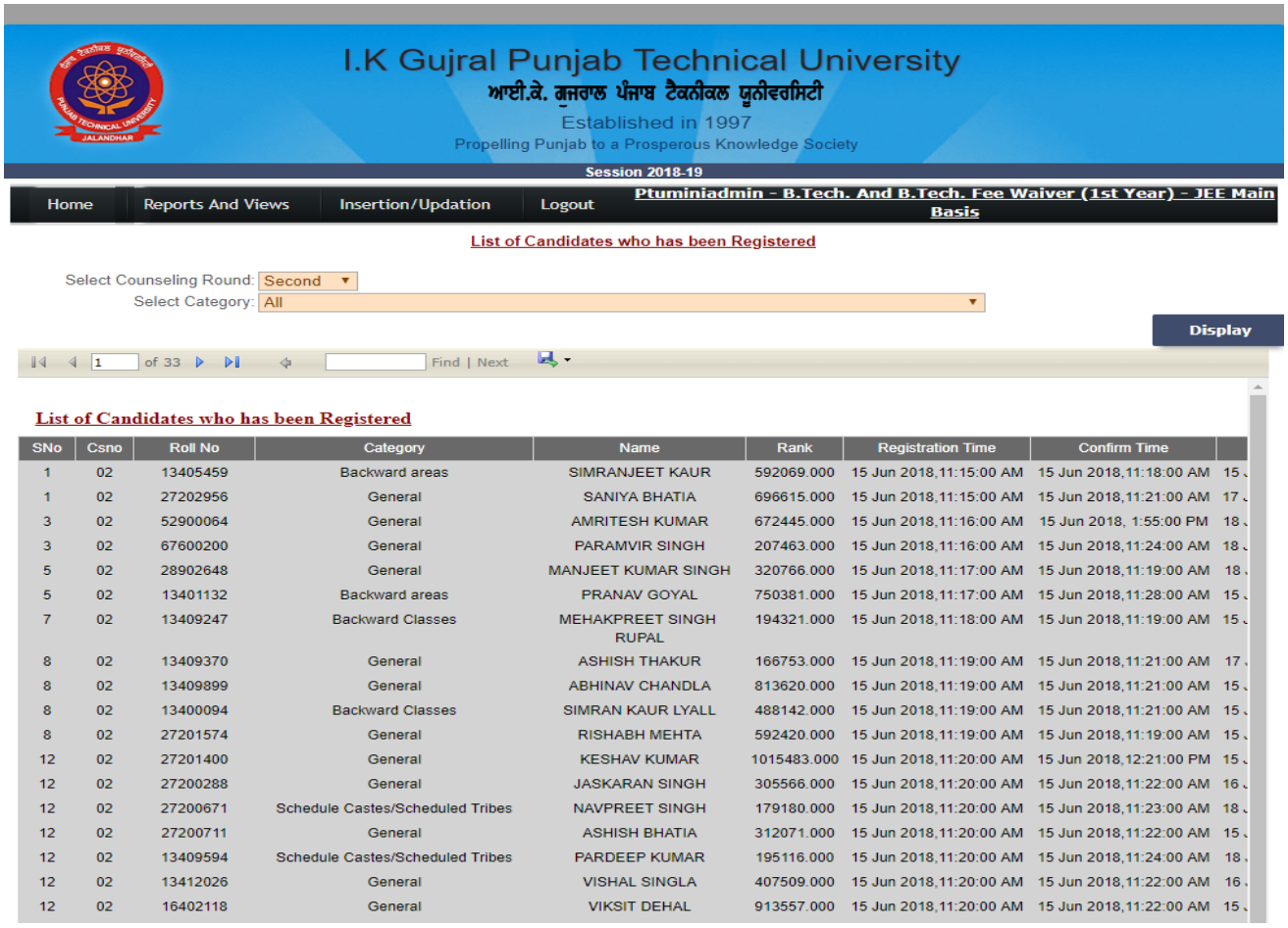
sno	inst name	course name	category	total seats	allotted seats	reported seats	Vacant Seats(Total-reported)
			Grand Total	22100	1304	821	21279
1	Adesh Institute of Engineering & Tech., Faridkot-Sadiq Road, Faridkot – 151203	Civil Engineering	Backward areas,Punjab State 85% Quota for Candidate of Punjab,Eligible for Urban Area Status,Candidate belongs to Non Sikh Minority(Open Category)	1	0	0	1
2	Adesh Institute of Engineering & Tech., Faridkot-Sadiq Road, Faridkot – 151203		Backward Classes,All India Category (15% quota for other states),Eligible for Urban Area Status,Candidate belongs to Non Sikh Minority(Open Category)	1	0	0	1
3	Adesh Institute of Engineering & Tech., Faridkot-Sadiq Road, Faridkot – 151203		Backward Classes,Punjab State 85% Quota for Candidate of Punjab,Eligible for Urban Area Status,Candidate belongs to Non Sikh Minority(Open Category)	2	0	0	2
4	Adesh Institute of Engineering & Tech., Faridkot-Sadiq Road, Faridkot – 151203		Border Areas,Punjab State 85% Quota for Candidate of Punjab,Eligible for Urban Area Status,Candidate belongs to Non Sikh Minority(Open Category)	1	0	0	1
5	Adesh Institute of Engineering & Tech., Faridkot-Sadiq Road, Faridkot – 151203		Children/Widows of Defense Personnel/ex-servicemen etc.,Punjab State 85% Quota for Candidate of Punjab,Eligible for Urban Area Status,Candidate belongs to Non Sikh Minority(Open Category)	1	0	0	1
6	Adesh Institute of Engineering & Tech., Faridkot-Sadiq Road, Faridkot – 151203		General,All India Category (15% quota for other states),Eligible for Urban Area Status,Candidate belongs to Non Sikh Minority(Open Category)	4	0	0	4
7	Adesh Institute of Engineering & Tech.,		General,Punjab State 85% Quota for Candidate of	18	0	0	18

8.2.11 List of Candidate Applied in 2nd Round



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List of Candidates who has been Registered

Select Counseling Round: Second

Select Category: All

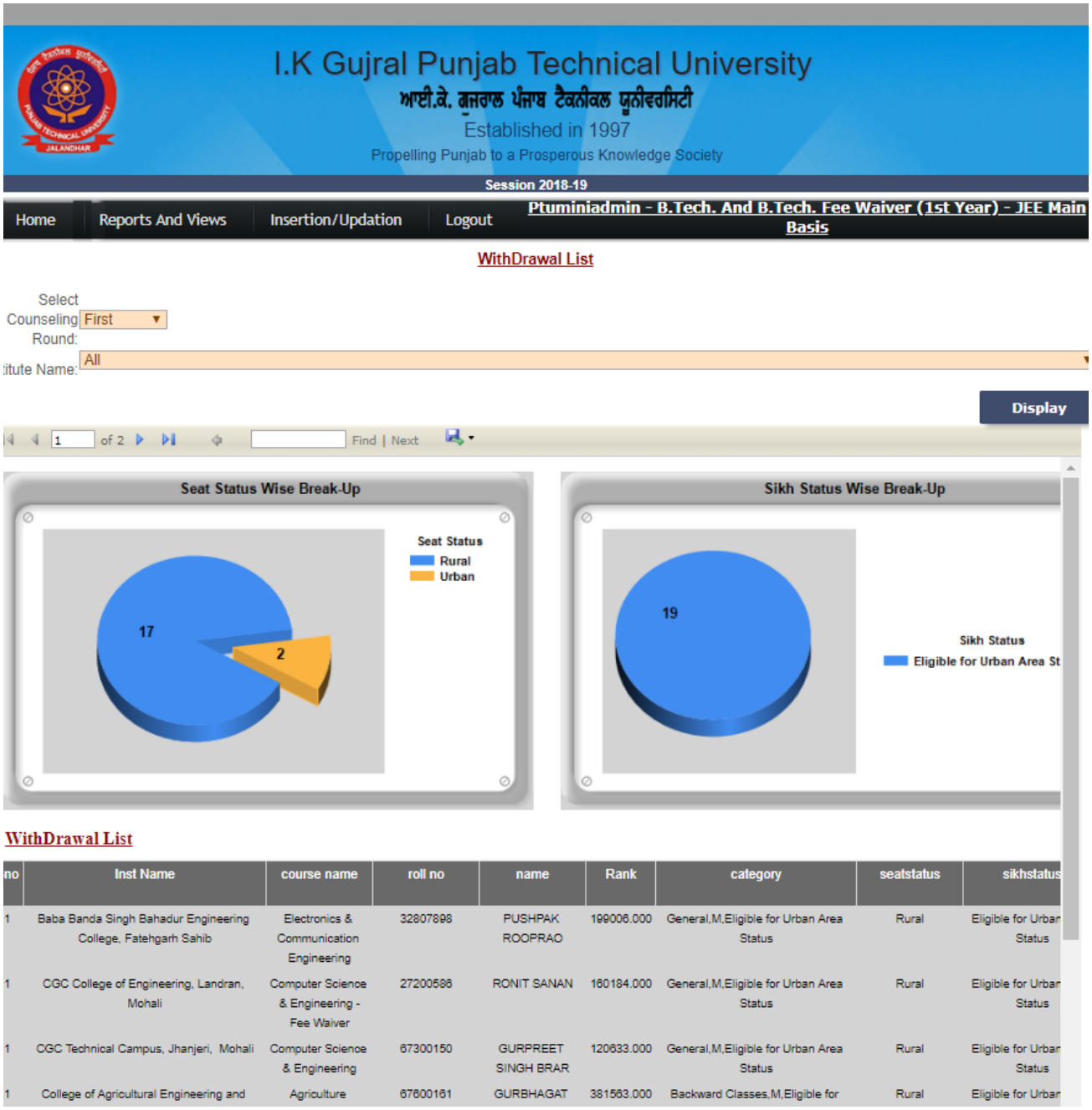
Display

1 of 33 Find | Next

List of Candidates who has been Registered

SNo	Csno	Roll No	Category	Name	Rank	Registration Time	Confirm Time	
1	02	13405459	Backward areas	SIMRANJEET KAUR	592069.000	15 Jun 2018,11:15:00 AM	15 Jun 2018,11:18:00 AM	15
1	02	27202956	General	SANIYA BHATIA	696615.000	15 Jun 2018,11:15:00 AM	15 Jun 2018,11:21:00 AM	17
3	02	52900064	General	AMRITESH KUMAR	672445.000	15 Jun 2018,11:16:00 AM	15 Jun 2018, 1:55:00 PM	18
3	02	67600200	General	PARAMVIR SINGH	207463.000	15 Jun 2018,11:16:00 AM	15 Jun 2018,11:24:00 AM	18
5	02	28902648	General	MANJEET KUMAR SINGH	320766.000	15 Jun 2018,11:17:00 AM	15 Jun 2018,11:19:00 AM	18
5	02	13401132	Backward areas	PRANAV GOYAL	750381.000	15 Jun 2018,11:17:00 AM	15 Jun 2018,11:28:00 AM	15
7	02	13409247	Backward Classes	MEHAKPREET SINGH RUPAL	194321.000	15 Jun 2018,11:18:00 AM	15 Jun 2018,11:19:00 AM	15
8	02	13409370	General	ASHISH THAKUR	166753.000	15 Jun 2018,11:19:00 AM	15 Jun 2018,11:21:00 AM	17
8	02	13409899	General	ABHINAV CHANDLA	813620.000	15 Jun 2018,11:19:00 AM	15 Jun 2018,11:21:00 AM	15
8	02	13400094	Backward Classes	SIMRAN KAUR LYALL	488142.000	15 Jun 2018,11:19:00 AM	15 Jun 2018,11:21:00 AM	15
8	02	27201574	General	RISHABH MEHTA	592420.000	15 Jun 2018,11:19:00 AM	15 Jun 2018,11:19:00 AM	15
12	02	27201400	General	KESHAV KUMAR	1015483.000	15 Jun 2018,11:20:00 AM	15 Jun 2018,12:21:00 PM	15
12	02	27200288	General	JASKARAN SINGH	305566.000	15 Jun 2018,11:20:00 AM	15 Jun 2018,11:22:00 AM	16
12	02	27200671	Schedule Castes/Scheduled Tribes	NAVPREET SINGH	179180.000	15 Jun 2018,11:20:00 AM	15 Jun 2018,11:23:00 AM	18
12	02	27200711	General	ASHISH BHATIA	312071.000	15 Jun 2018,11:20:00 AM	15 Jun 2018,11:22:00 AM	15
12	02	13409594	Schedule Castes/Scheduled Tribes	PARDEEP KUMAR	195116.000	15 Jun 2018,11:20:00 AM	15 Jun 2018,11:24:00 AM	18
12	02	13412026	General	VISHAL SINGLA	407509.000	15 Jun 2018,11:20:00 AM	15 Jun 2018,11:22:00 AM	16
12	02	16402118	General	VIKSIT DEHAL	913557.000	15 Jun 2018,11:20:00 AM	15 Jun 2018,11:22:00 AM	15

8.2.12 List of Withdrawal Candidate Round Wise



no	Inst Name	course name	roll no	name	Rank	category	seatstatus	sikhstatus
1	Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib	Electronics & Communication Engineering	32807898	PUSHPAK ROOPRAO	199006.000	General,M,Eligible for Urban Area Status	Rural	Eligible for Urban Status
1	CGC College of Engineering, Landran, Mohali	Computer Science & Engineering - Fee Waiver	27200588	RONIT SANAN	160184.000	General,M,Eligible for Urban Area Status	Rural	Eligible for Urban Status
1	CGC Technical Campus, Jhanjeri, Mohali	Computer Science & Engineering	67300150	GURPREET SINGH BRAR	120633.000	General,M,Eligible for Urban Area Status	Rural	Eligible for Urban Status
1	College of Agricultural Engineering and	Agriculture	67600161	GURBHAGAT	381563.000	Backward Classes,M,Eligible for	Rural	Eligible for Urban

NIC's Counselling & Admissions System (NIC-CAS) for IKGPTU

Stakeholder Requirement Specifications

NIC-Cas-StRS-0.4

Abstract: The requirement document is an attempt to the requirements for a system that can provide the services needed by users and other stakeholders in a defined environment.

Keywords: Registration, Counselling, Admissions, IKGPTU

National Informatics Centre (MeitY),
"A" Block, CGO Complex, Lodhi Road,
New Delhi – 110 003
India

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Amendment log

Version	Date	Brief Description	Section Change
0.1	02/03/2020	The StRS document defines the requirements for IKGPTU Counselling 2020. It contains the scope of application, business environment, goals, operational requirements and user requirements etc.	
0.2	29/07/2020	Changes incorporated in StRS as per NIC HQ guidelines	All Sections were vetted and amended suitably.
0.3	10/08/2020	Changes incorporated in StRS as per NIC HQ guidelines	All Sections were vetted and amended suitably.
0.4	19/08/2020	Chages suggested by IKGPTU were incorporated	All Sections were vetted and amended suitably.

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1 Introduction

The e-Counselling system is an one stop solution for all the counselling needs right from application form, on-line fee payment, selection of courses/institutes, document verification, seat allocation, PI reporting, reports/dashboards. The solution cater to all the stakeholders namely Aspirants, Counselling Board, and Participating Institutions with end-to-end support towards a hassle-free transparent admission processes in the Technical and Academic Institutions in Punjab State.

NIC counselling solutions has been widely accepted by a number of professional institutes and universities in the last 15 years. The system has evolved with the change of technology over the period of time to stay relevant.

This document defines the requirements for e-counselling system that can provide the services needed by users and other stakeholders in a defined environment. It transforms the requirements to the intended interaction in the system and it acts as a reference against which each resulting operational service is validated.

1.1 Business Purpose

Inder Kumar Gujral Punjab Technical University(IKGPTU) was established in the year 1997 under The Punjab Technical University Act, 1996 (Punjab Act No. 1 of 1997) to provide for the establishment and incorporation of a University for the advancement of technical education and development thereof in the State of Punjab and for matters connected therewith. In pursuance of this Act, the University started its journey with 09 engineering colleges and few management colleges affiliated to it. Since then the University has come in a long way and during the Academic Session 2017-18, the University has affiliated 65 Engg. Colleges, 109 management and Computer Application courses, 33 institutions imparting Pharmacy education, 08 colleges imparting hotel management education, 06 colleges providing Architecture Education, 11 Regional Centres for M.Tech and Ph.D. in different branches of Engineering and Management and 01 Regional Centre for M. Pharmacy. The IKGPTU is responsible for producing quality technical manpower in the field of Engineering and Technology through AICTE approved Govt. / Govt. Aided / Self-financed Institutions and University Departments. The norms and standards prescribed by AICTE are being followed.

The Centralized Counselling is a convenient platform for the students to apply for B. Tech and B. Tech 10+2 Inter se Merit programmes, based on their JEEMAIN/ IKGPTU generated rank, in all institutions of participating Universities. This centralized system has replaced the older system, wherein students had to apply individually to various institutes and visit every institute for appearing in interview/counselling. The current system facilitates students to fill single online application form and apply to all programmes in all the participating institutions to which they are eligible. The overall convenience of students has increased enormously due to this centralized counselling.

The centralised counselling has been successfully organised for IKGPTU since 2009 for centralized admission in B. Tech and B. Tech 10+2 Inter se Merit programmes offered by institutions of participating Universities.

The proposed system will be configured/customised to provide counselling services to organising university i.e. Inder Kumar Gujral Punjab Technical University based on previous experiences to improve it further.

1.2 Business Scope

This sub-section defines the business domain under consideration by

The proposed system (IKGPTU-2020) cover e-counselling services to organising University i.e. IKGPTU by performing following activities.

1. Customise/Configure IKGPTU website https://ptuadmissions.nic.in for IKGPTU-2020.
2. Customise/configure online eCounselling system as per the **Business Rules** finalized by Technical Committee of IKGPTU-2020.
3. Conduct training and handholding sessions to officials of organizing University and participating institutes at a central location.
4. Hand-over entire database to organizing university after closing of admission process for further reports, query and usages.
5. Integrate SMS/Email services for sending alert to applicants.
6. Integration of ICICI Bank payment gateway Services.
7. Storage of candidate's mobile number and email id in encrypted format and would be utilized only for sending alerts to the candidates during registration & result publication process.

1.2.1 Out-of-scope

The following are considered excluded from current scope of work

- Reconciliation of Fee with ICICI Bank for adjustment/refund would be done by IKGPTU and is not in the scope of work of NIC.
- IKGPTU would reconcile with the bank the double/multiple payment made by a candidate.
- Any other activities that is not mentioned under the above Scope of Work.

1.2.2 Assumptions and Dependencies

1.2.2.1 Pre-requisite

The proposed system of counselling is web based and shall be applicable for admissions to all AICTE approved technical professional courses run by different technical institutes in the state (Govt./Aided/University Departments/self-financed/Private Institutes) to overcome the problems faced by the candidates during manual system.

To meet the requirements of web based counselling, the website **https://ptuadmissions.nic.in** shall be launched. The website shall keep following required links for different activities of counselling.

1. Counselling Website (procedural) with URL: **https://ptuadmissions.nic.in** shall contain procedures and information for counselling w.r.t institutes, availability of seats in different disciplines and categories, profile of institutes, eligibility criteria and counselling procedure.
2. Counselling website with URL: **https://ptuadmissions.nic.in** for registration, exercising of choices and saving/saving the choices during actual counselling and for publishing of results of counselling etc **(**The link shall be activated during actual counselling days).
3. Actual Admission intranet website, URL: **https://ptuadmissions.nic.in** , which shall be accessible through a prescribed User-ID and Password.

All above websites links shall perform following functions:

- Provision for online Counselling fee payment.
- After paying the counselling fees, students can register themselves on the website

- Information relating to Institutes, disciplines (Engineering), branches (e.g. Civil Engineering or Computer Science etc.) and categories (General, SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others) should be displayed through relevant menus.
- Secure user/password based Login and the system will provide the facility to add, change, re-order, delete the choices in respect of institutions and branches.
- Candidate can save their choices, when ever required using <Save Choices> button.
- Candidate can get print of their choices after Final saving, but list of choices and indicative seat matrix can be printed, whenever required.
- The system shall process the submitted choices and generate the indicative seat Matrix (latest positions of seat availability)
- Processing for Seat allotment & final seat allotment shall be published on Website.
- Candidates shall print their allotment letter and will report to the PIs for admission with in prescribed time period.
- Document Verification, generation of document verification checklist and updation of final admissions by Institutes will be done by PIs on the Website.
- The system shall provide required online query/Reports.
- After completion of admission period for counselling, the leftover/unfilled seats shall be transferred for consequent counselling.
- Online Withdrawal facility will be managed by IKGPTU Administration. Candidates, who are willing to withdraw from Counselling after taking admission in allotted college, will give the request to IKGPTU administration.
- Subsequent rounds are on based on the vacant seats/leftover /unfilled / merged

- Organising university need to finalize

  - IKGPTU will provide Information Brochure for all courses and Institutes Profiles to NIC for uploading it to the above-mentioned counselling websites along with the counselling procedure & seat matrices.
  - IKGPTU will provide following information to NIC:
    - Participating Institutes Information, categorization with Govt. / University/ self-finance/Pvt. Institutes, Engineering /Pharmacy wise.
    - Course/Branches wise list containing branches/disciplines.
    - Unique Merit Number (Rank) and detailed data of candidates appeared in All India Engineering Entrance Examination(B.Arch).
    - Seat Matrix – for every technical institute having category wise breakup of seats as applicable (GEN,SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others)
    - Eligibility criteria's & Reservation Categories master
    - All input and output format/reports like Registration Form, Choices Page, Provisional Seat Allotment letter, Provisional Admission Letter, Cancellation Letter, Withdrawal Letter etc.
    - All SMS/Email message formats and content.
    - Payment related formalities with bank before starts of Counselling.

1.2.2.2 Assumptions

- All Counselling's would be based on IKGPTU Rank for B.Tech (LEET), B.Pharmacy, B.Pharmacy(LEET), B.Architecture, M.Tech, M.Pharma,MBA &MCA
- Merit Numbers (Rank) for each candidate should be UNIQUE (i.e. no two candidates can have same Merit Number (Rank) in a stream).

- IKGPTU will finalize/provide and upload all required master data including seat matrices(of all the colleges/streams/branches, comprising of the distribution of the seats in absolute terms as per the state reservation policy), Institute profile etc well in advance before the start of the counselling.
- Eligible Candidates, who have paid counselling fees, will register online and obtain unique-ID based on roll number and password (as given by the candidate at the time of registering on the web) prior to exercising of choices.
- Seat allotment would be as per the seat matrices given by IKGPTU according to reservation policy of the state.
- IKGPTU shall reserve all right pertaining to any changes in any master data including candidate master. Changes in **Candidates' Master Database**, like **DOB, Gender,** etc. Permitted through web interface by authorized IKGPTU officials.
- A candidate shall be able to fill unlimited choices as decided by IKGPTU
- Saving of Choices by Candidates is must for the seat allotment. Unsaved choices will be considered as deemed choice.
- Saving of Choices by Candidates would be taken as the last choices submitted by the candidate. In case the candidate does not explicitly lock the choices, the choices submitted till last moment of the last cut-off time shall be taken as the final choices by that candidate.
- All the PIs should have the prescribed computer infrastructure, trained manpower and Internet connectivity through an Internet Service Provider (ISP) with specific IP addresses (obtained from the ISP by the PIs) for accessing secured databases for making admissions and updating of admission data on website.
- Data updation from PIs will not be allowed.
- IKGPTU will provide all functional, regulatory and non-functional requirements for the project.
- Students data base shall be the property of IKGPTU
- IKGPTU will test the application software and sign User Acceptance Test (UAT) before launching of the application.
- Payment Gateway
  - Organising University makes an agreement with bank for payment gateway integration.
  - Organising University and Bank will handle all the financial matters relating to payments, receipts, refund and reconciliation of fee payment etc.
- Seat Matrix
  - All Participating Institutions (PIs) will follow the same Seat Matrix structure.
  - All PIs will update their Seat Matrix through online Portal. After updates, PI should freeze the Seat Matrix and send signed, stamped printout to IKGPTU.
  - The seat matrix data will be prepared as per prevailing reservation policy of State / participating institutes.
- Registration Form
  - New candidates will register through the registration form and get the userid and password. All the candidates will have to register on the website provided they have deposited requisite counselling Fee in the designated bank. The system will ask for details like roll no, rank, date of birth etc for cross-verification. It will ask for other details like category, sub-category, Priority etc. It will then ask the candidate to create the password. Candidates will be directed to read the reservation policies of participating universities and Government notifications and give their acceptance. The successful completion of above will complete the registration process.

  - If there is any change from the already available information, candidate has to report to the IKGPTU with necessary documentary proofs and IKGPTU Administrator will modify/ update the data.
  - Registered candidate can view his data from view profile. If the necessary change does not reflect in view profile, he/she has to contact CCR.
- Registered Candidate Sign In / Login
  - Change Password
  - Registration details
  - Choices Available
  - Standard Template for Choice with User Defined Scroll up/down on Template without change Original Template after Copied into Choice Fill
  - Branch wise
  - College wise
  - Choices Edit – Interchange(Swap)
  - Choices Edit – Rearrange(Move)
  - Choices Delete
  - Save choices
  - Choices Print (report format)
  - Result
  - Withdrawal of Seat
  - Generation and printing of Allotment letter
  - Log out

1.3 Business Overview

1.3.1 Major Internal Divisions

1.3.1.1 Organising Board/Institute

Government of Punjab has authorised IKGPTU to conduct e-counselling for 2020-21 session for IKGPTU and participating universities.

1.3.1.2 Participating Universities

- Inder Kumar Gujral Punjab Technical University's affiliated Engineering / Institutions for Engineering & Technology.
- Maharaja Ranjit Singh Punjab Technical University affiliated Engineering / Institutions for Engineering & Technology

1.3.1.3 Reporting Centres

All participating institutes would act as Reporting Centre for physical verification of documents and admitting the students in their institute.

1.3.2 External Entities

1.3.2.1 National Informatics Centre (NIC)

NIC provides e-counselling services by

- configuring its e-counselling solution
- customising the solution to meet specific requirements
- hosting the e-counselling solution

- SMS/Email integration
- On-line payment gateway integration

1.3.2.2 National Informatics Centre Services Inc. (NICSI)

NICSI will take care of all the financial matters.

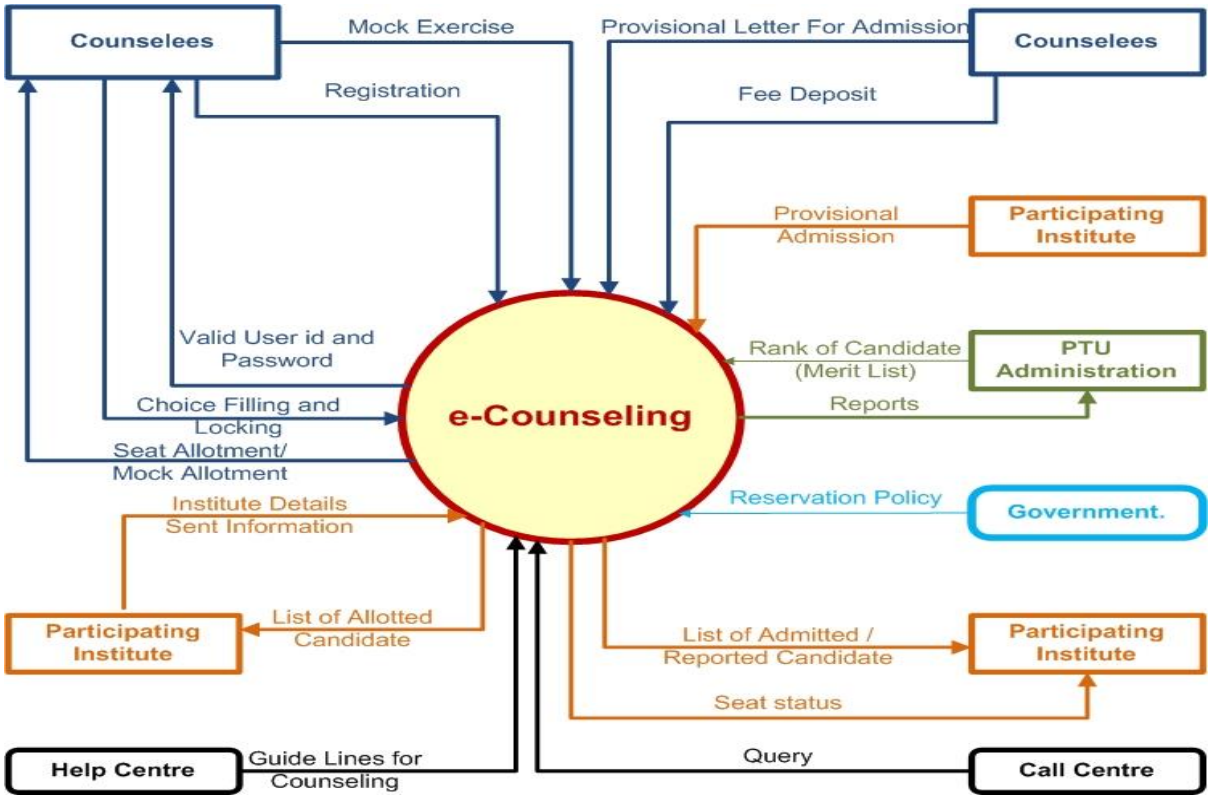
1.3.2.3 Payment Gateway Integrator (PGI)

The PGI will provide the electronic payment gateway (EPG) services for all the applications for payment of fees/charges towards various services provided by organising institute.

1.3.3 Interrelationships

The following diagram describes how all the entities are interrelated.

- IKGPTU would be the organising university for conducting eCounselling 2020.
- Hosting of application includes the design, customize & configure of all the interfaces mentioned in scope of work will be done by the NIC. NIC will assist IKGPTU in establishing value-added services such as SMS and Email over NICNET to meet the IT requirements for the Counselling & Admissions System. NIC will ensure possible information secrecy and security in its network and databases for all facilities and services as per the current technology standards and to the extent feasible keeping in view of resource constraints & involved sensitivity.
- NICSI will take care of all the financial matters. NICSI would receive the funds as per the Proforma Invoice submitted to IKGPTU, procure all required hardware, software and consumables. NICSI will submit the utilization certificate/statement of accounts as per the requirements of IKGPTU.



1.4 Definitions

1.4.1 User Characteristics

The following users will have a role in the proposed Centralized Counselling for Seat Allocation

S. No.	User category	Description
1	Eligible Candidates	Eligible candidates based on JEEMAIN rank, IKGPTU generated ranks
2	Organising University Administrator (IKGPTU Board Administrator)	Privilege users who have special permissions to manage the counselling process.
3	Participating Institution Users (PI Admin)	Institutes who offer seats will update institute profile, academic program and seat matrix and mapping tables.
4	Reporting Centre(PI) Users (RC Users)	IKGPTU would designate all participating Institutes for document verification and confirmation of provisional admission.
5.	**Bank MIS User**	Less Privilege user who will view only the payment status of the candidate and daily MIS related with payment of fee.
6.	**Website Content Manager**	Who will manage digital information on the website through creating and maintaining content without prior knowledge of web programming

1.4.2 User Hierarchy

IKGPTU Administrator Interface

- List of Institutes, Institute Profile & Institute Course Summary
- Seat Matrix Entry , Seat Matrix Summary and different views
- Candidate Details (Registered Candidate) and Edit Registration
- Message Entry, Counselling Schedule
- Candidate Original Information (Unregistered Candidate)
- Admission Status (Course Wise Details, Name Wise Allotment, Admitted Candidate List, Candidate Who Got Refund, Admission Withdrawal and Vacancy Position)

PI Interface

- Candidates Reported at PIs
- Online candidate information Display (for verification)
- Online Fee verification
- Provisional Admission
- Document verification with generation of document verification checklist and signed by candidate and PI.
- Printing of Admission Letter.
- Updation of admission status on the counselling website.

1.4.3 Category Class

For the purpose of seat allocation, qualified candidates are partitioned into different categories as per their preferred category/sub category/ESM priority. Based on such a partition, each candidate is assigned a category tag as given below.

State Codes

State code	State Name
28	Punjab
98	Other States

Master List of Categories/Sub-Categories/Sub-Sub-Categories (Priorities)

Category	Description
General	General
SC/ST	Scheduled Caste/Scheduled tribe
BC	Backward Class
TS	T-Sunami Victims
FF	Wards of Political Sufferers/ Freedom Fighter
BA	Backward Area
BR	Border Area
SP	Sports Person
DF	Children/Widows of Defense Personnel
RT	Terrorist/Riots affected victims
PM	Children/Widows Para military forces
DPB	Handicapped- Blind
DPD	Handicapped- Deaf & Dumb
DPO	Handicapped- Others
RURAL	RURAL
URBAN	Urban
SM	Sikh Minority
WD	Widows/ Divorced Women

Sub-Category for Defense Personnel

Subcategory Code	Description
01	Posthumous Awardees
02	Other Awardees
03	Children/Wards of the Defence Personnel killed or disabled to the extent of 50% or more
04	Serving Defense Personnel/Ex-Serviceman

Priority(Sub-Sub-Category) for Defense Personnel

Priority Code	Description
1	Param Vir Chakra
2	Ashok Chakra
3	Sarvottam Yudh Seva Medal
4	Maha Vir Chakra (MVC)
5	Kirti Chakra
6	Uttam Yudh Seva Medal (UYSM)
7	Vir Chakra (VrC)
8	Shaura Chakra (SC)
9	Yudh Seva Medal (YSM)
10	Sena Nau Sena /Vayu Medal(Gallentry only)
11	Mention in Despatches
12	PVSM
13	AVSM
14	VSM
15	Sena Medal/ Nau Sena/Vayu Sena Medal
16	No Received any distinguished Medal

Sub-Category for Terrorist/Riots affected victims Quota

Subcategory Code	Description
01	Persons killed in 1984 riots / killed as a result of terrorist violence or killed by the security forces acting in aid of civil authority, including innocent civilians and Army Deserters as well as those of these categories who have been disabled physically to the extent of 100% in accordance with the policy already in place
02	Person who were disabled to an extent less than 100%
03	All other categories mentioned in the existing policy under this head

Sub-Category for PM (Children/Widows Para military forces) Quota

Subcategory Code	Description
01	Winners of President's Police Medal for Gallantry
02	Winners of Police Medal
03	Killed or disabled to extent of 50%
04	Children of serving para-military personnel and ex-para military personnel
05	Remaining categories already mentioned

Sub-Category for SP(Sports Person)

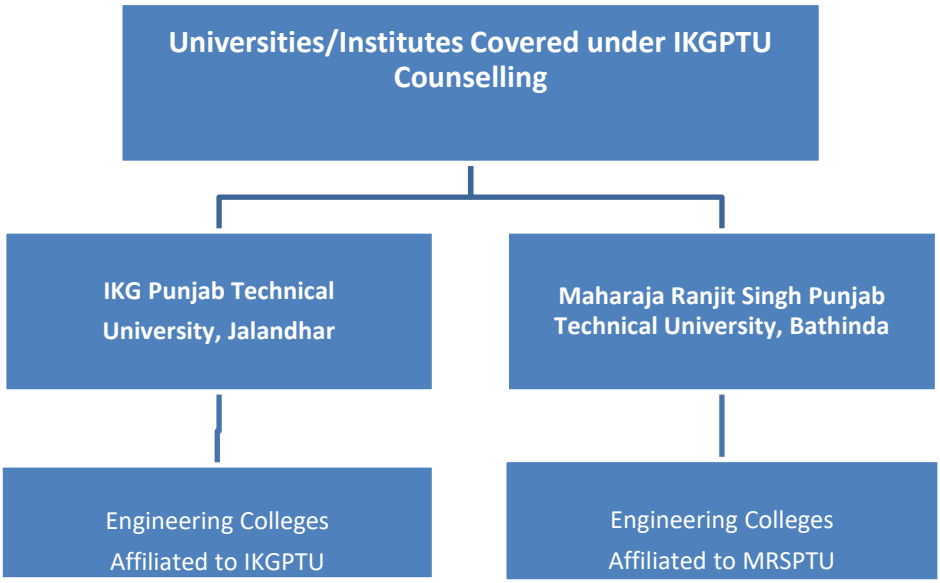
Subcategory Code	Description
01	Grade A
02	Grade B
03	Grade C
04	Grade D

Priority(Sub-Sub-Category) for Sports Persons

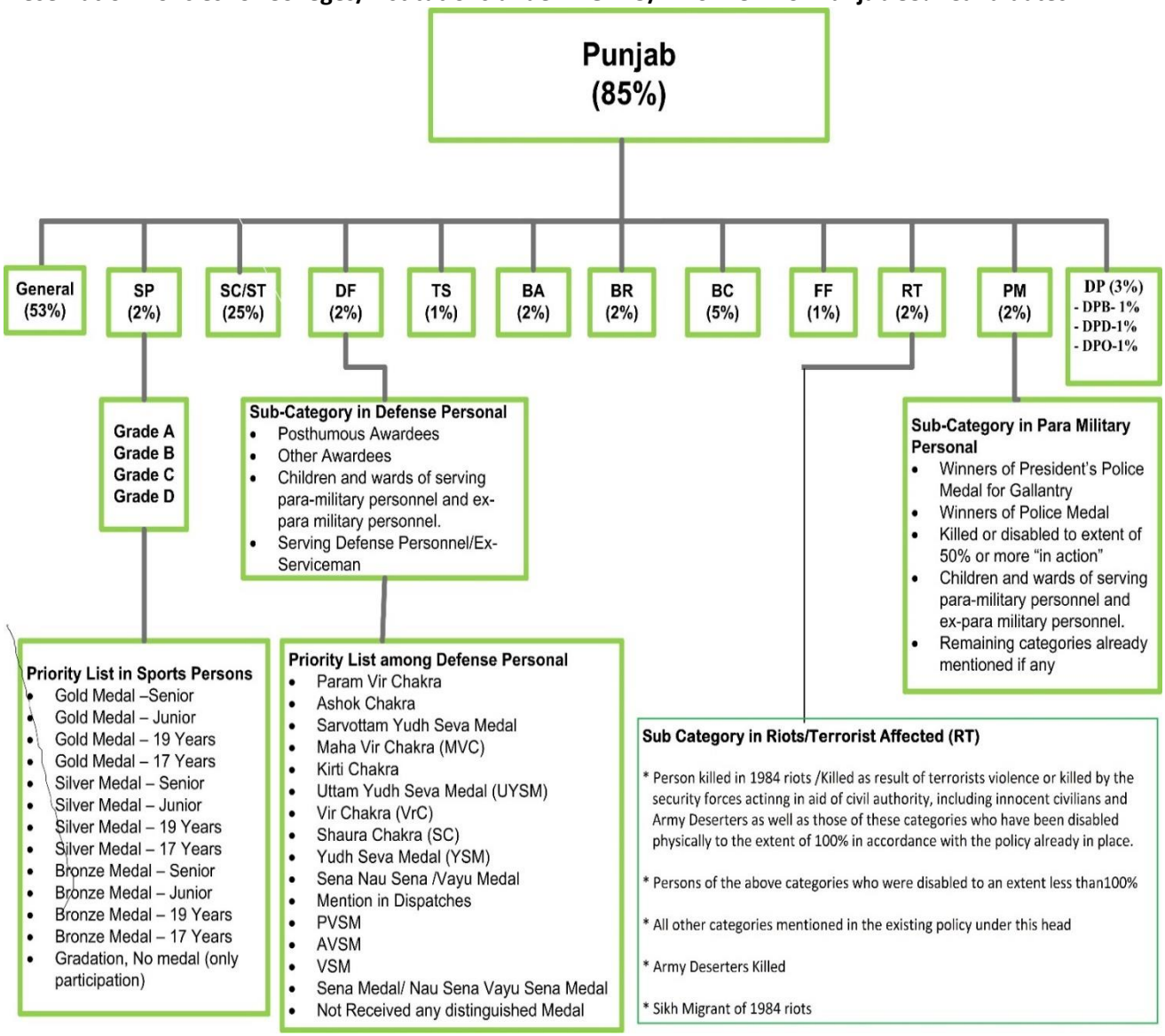
Priority Code	Description
1	Gold Medal –Senior
2	Gold Medal – Junior
3	Gold Medal – 19 Years
4	Gold Medal – 17 Years
5	Silver Medal – Senior
6	Silver Medal – Junior
7	Silver Medal – 19 Years
8	Silver Medal – 17 Years
9	Bronze Medal – Senior
10	Bronze Medal – Junior
11	Bronze Medal – 19 Years
12	Bronze Medal – 17 Years
13	Gradation, No medal (only participation)

1.4.4 Seat Categories

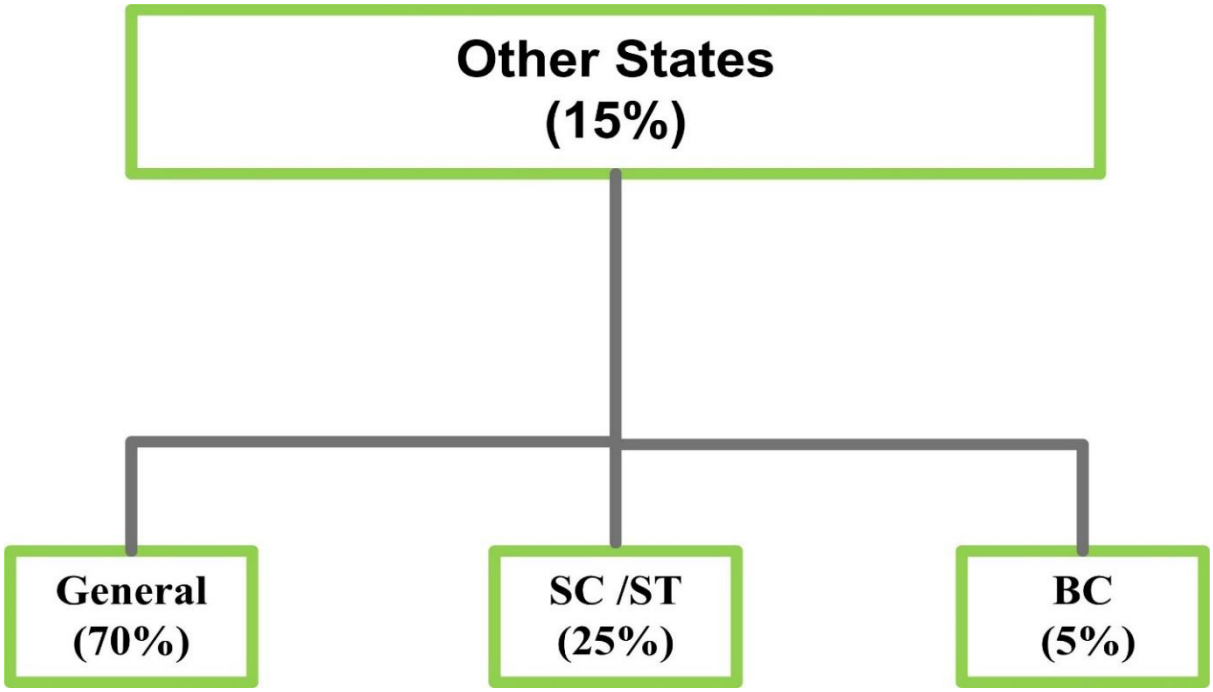
The total intake for B.Tech (LEET), B.Pharmacy, B.Pharmacy(LEET), B.Architecture, M.Tech, M.Pharma, MBA & MCA programs offered by participating institutions are divided into fifteen different seat categories. Following reservation policies as adopted by Universities will be used in the project.



Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU – for Punjab 85% Candidates



Reservation Chart for 15 % Other State Quota in IKGPTU/MRSPTU



1.5 Stakeholders

- Organizing University (IKGPTU)
- Participating Institutes
- National Informatics Centre
- National Informatics Centre Services Inc.
- Payment Gateway Integrator
- Applicants

2 References

- IKGPTU website (https://ikgptu.admissions.nic.in)
- Business Rules finalized by IKGPTU Technical Committee for the session 2020-21
- Discussion with Organising University officials.
- Stakeholder Requirement Specifications (StRS) of IKGPTU e-Counselling 2019-20.
- IEEE Standard 29148-2011 - ISO/IEC/IEEE International Standard - Systems and software engineering -- Life cycle processes --Requirements engineering.

3 Business Management Requirements

3.1 Business environment

3.1.1 Candidates

The user interfaces for candidates will be as follows:

- Online interface for login >> Logout >> Change Password

- Resetting the Password using
  - Security Question & their Answer
  - A verification code (OTP) sent via text message (SMS)
  - A reset link sent via Email to candidate Registered email id
- Fill online Registration Form>> Multistep Application Form >> Documents Uploading>>Review >> Final submission
- Interface for payment of Registration fee
- Interface for Choice filling (Add/delete/Move-Up/Move-Down)
- Interface for Choice Locking and Printing of Locked Choices
- Interface for document discrepancy removal
- Interface for View Seat Allotment Result
- Interface for willingness for subsequent round
- Interface for fee payment of Seat Acceptance
- Interface for withdrawal

3.1.2 IKGPTU Admin

The user interfaces for Admin will be as follows:

- Online interface for login >> Logout >> Password change
- Master Directory Management
- Seat Matrix Management
- User Management
- Registration and Choice Filling Activities Monitoring
- Reporting Activities Monitoring
- Fee Management
- Application Assignment to PI for Document Verification
- MIS Reports
- Login Trails

3.1.3 PI Admin

The user interfaces for PI Admin will be as follows:

- Online interface for login >> Logout >> Password change
- Institute Profile updation
- Seat Matrix Management
- User Management
- Document verification initialization(Rollback)
- MIS Reports

3.1.4 PI User

The user interfaces for PI User will be as follows:

- Online interface for login >> Logout >> Password change
- Interface for Document verification
- MIS Reports

3.1.5 Bank User

The user interfaces for Bank user will be as follows:

- Online interface for login >> Logout >> Password change
- Online viewing the payment status of the candidate
- Online Report for daily success fee payment status

3.2 Goal and Objective

3.2.1 Goals

- Improve equity and quality thru IT delivery.
- A hassle-free and transparent service for applicants.
- Simple and user-friendly process of admission.
- 100% seat utilization.

3.2.2 Objectives

- Integrated solution for registration for counselling, seat allocation and admission.
- Integration with external systems (payment gateway, messaging services).
- Key Performance Indicators based on candidates, seat availability, allotment and feedback.
- A simple solution, easy to adopt for candidates.

3.3 Business Model

3.3.1 Cloud Services

The e-counselling services for IKGPTU will be hosted in MeghRaj Cloud Infrastructure of NIC for seamless services.

3.3.2 S/w Development Services

Regarding, software application for admission to these courses, A configurable e-counselling service framework is proposed to develop which can serve all the major requirements.

3.3.3 Payment Gateway Integration

Regarding, payment gateway integration for the examinations, it is proposed to integrate the payment gateway provided by IKGPTU which can serve all the major requirements.

3.3.4 SMS/ Email Integration

To send the alerts to applicants, it is proposed to integrate SMS and Email services. These services will help to the candidates to send the alerts or messages on important activities.

3.3.5 MOU

A tri-partite MOU need to be signed between IKGPTU, NIC and NICSI for successful implementation of the project.

3.3.6 Payment Terms

IKGPTU will have to make 100% advance payment to NICSI so as to initiate the project. The advance payment will be settled as a consolidated UC submitted by NICSI through NIC project coordinator. The balance amount, if any, shall be transferred to Central Counselling Project.

3.3.7 Exclusions

- NIC will not be responsible for reconciliation/refund of fee receipts with Bank database, in case the candidates ending in multiple (double/triple or more) payments due to transaction failures
- All the financial matters relating to payments, receipts, refunds and reconciliation would be handled by GGSIPU and Banks

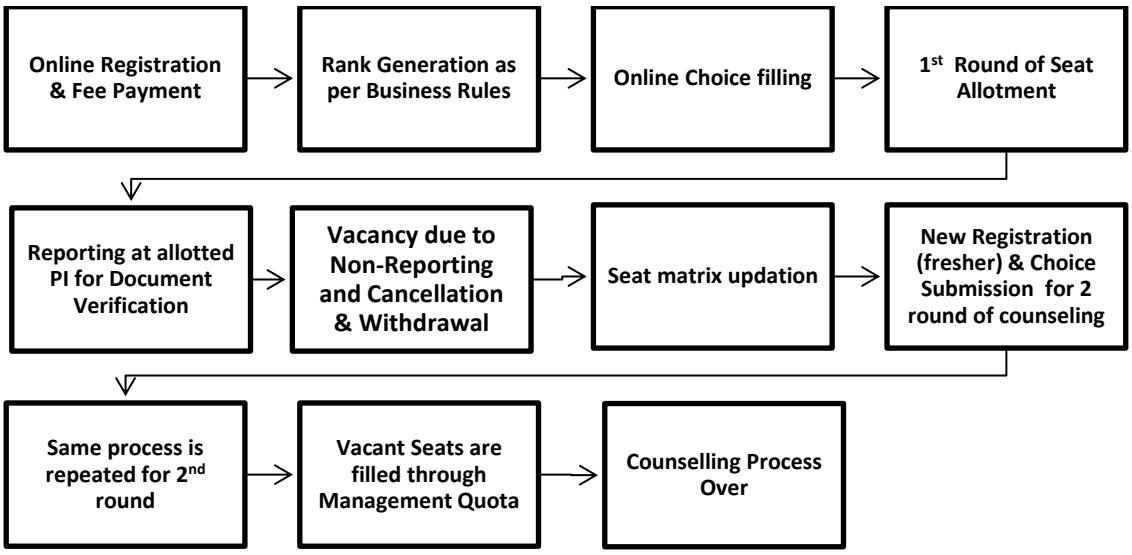
4 Business Operational Requirements

4.1 Business Processes

The following process and support services are required to be accomplished in different phases:

4.1.1 Process Overview

The following online support services are required to be accomplished in different phases:



4.1.2 Online Registration Process

In this stage, all the candidates as per eligibility criteria are required to register online from any place convenient to them. New candidate can register in both rounds, however the candidates registered in first round will reconfirm their registration detail in 2nd round.

4.1.2.1 Fresh Candidates:

The candidate is required to enter Name, Father's Name, Mother's Name, DOB, Gender, Identity proof, Email ID and Mobile Number in the registration screen. Candidate will create his/her own password upon receipt of Email and SMS. System will generate an application no , which will be used by the Candidate and chosen password for subsequent logins.

4.1.2.2 Registered Candidates

The candidate will login by using system generated application number and password to complete the remaining activities.

4.1.2.3 Sign-in

Candidate will use the Application Number and chosen password during registration for subsequent logins. After successful login, candidate will be redirected to the home page to perform the remaining activities like Application form submission, upload images and documents, registration fee payment and choice filling etc.

4.1.2.4 Multistep Application Form Submission

After submission of registration form, candidate will login to complete the remaining activities. To complete the registration process, candidate will provide personal detail, contact detail, Qualification and Competitive Exam detail etc.

4.1.2.5 Uploading of Documents

Candidate need to upload the scanned images/Documents mandatory documents as per the predefined size and format

4.1.2.6 Registration Fee Payment

Applicant will pay the examination fee online using EPG Services after uploading of documents. The payment gateway services have the various options like credit card, debit card, net banking etc to pay the registration fee.

4.1.2.7 Email and Mobile Number Verification (Optional)

A separate link/button will be available in candidate's home page for verification of his/her email address and mobile no. Candidate can verify his/her email address by sending the OTP.

4.1.3 Online Document Verification *(Optional)*

Candidates, who are registered, uploaded documents and paid registration, Online document verification will be carried out by IKGPTU within the scheduled dates.

4.1.4 Document discrepancy removal *(Optional)*

Candidate need to resubmit the document for which a discrepancy has been generated by PI user at the time of document verification for completion of document verification process by PI user.

4.1.5 Choice Filling

All the registered candidates are required to submit their choices of Institute and programme in order of their preference. Choice modifications will be available in subsequent rounds of counselling.

After successful login and on clicking the link “Available Choices”, the systems internally retrieve the credentials of the candidate like gender, category, subcategory, state of eligibility and eligibility remarks from the candidate’s database and the available choices specific to the candidate based on his/her credentials are shown as per below algorithm.

Category-wise Seat selection criteria for B.Tech (LEET), B.Pharmacy, B.Pharmacy(LEET), B.Architecture, M.Tech, M.Pharma, MBA & MCA Stream Under 85% Punjab quota and 15% Outside State quota

A. **If candidate has Punjab domicile and under 85% quota with any of the following Category (B.Tech (LEET), B.Pharmacy, B.Pharmacy(LEET), B.Architecture, M.Tech, M.Pharma, MBA & MCA)**

Input Parameters – Application No, Rank, Category, State Code, Sex

If Candidate is Male then seats under General category and Category specific (if applicable) in Coeducation colleges will be selected by system. No seats of Girls colleges will be selected for a Male candidate

If Candidate is Female, then seats under General category and Category specific (if applicable) in Coeducation colleges + Girls Colleges will be selected by system.

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU/MRSPTU General

2.	SC /ST	☑	IKGPTU/MRSPTU General, SC
3.	BC	☑	IKGPTU/MRSPTU General, BC
4	T-Sunami	☑	IKGPTU/MRSPTU General, TS
5.	Freedom Fighter	☑	IKGPTU/MRSPTU General, FF
6.	Backward Area	☑	IKGPTU/MRSPTU General, BA
7	Defence Personnel	☑	IKGPTU/MRSPTU General, DF
8	Terrorist / Riots Victims (RT)	☑	IKGPTU/MRSPTU General, RT
9	Para Military forces (WPP)	☑	IKGPTU/MRSPTU General, WPP
10	Handicapped blind (DPB)	☑	IKGPTU/MRSPTU General, DPB
11	Handicapped Deaf and Dumb (DPD)	☑	IKGPTU/MRSPTU General, DPD
12	Handicapped Others (DP).	☑	IKGPTU/MRSPTU General, DP
13	Sports	☑	IKGPTU/MRSPTU General, Sports
14	Border Area	☑	IKGPTU/MRSPTU General, Border Area

Special Case for Fee Waiver Category Seats under IKGPTU/MRSPTU only for B.Pharmacy Course

For incorporating seats under Fee Waver in B.Pharmacy Course, as per discussion with IKGPTU Officials, these seats will be added separately for each courses and shown as a separate course. These seats will be made available to those students, who at the time of registration opted for Fee Waiver scheme. These students will also be eligible for B.Pharmacy Course normal seats as well.

Category	Eligibility for IKGPTU & MRSPTU opted by the Candidate	Seats to be shown
Fee Waiver	☑	(IKGPTU+MRSPTU Fee Waiver Category)

B. **If candidate has other State domicile and under 15% with any of the following Category**

Sr no.	Category	Opted by the Candidate	Total Number of Seats to be shown
1	General	☑	IKGPTU General + MRSPTU General
2.	SC /ST	☑	IKGPTU General,SC + MRSPTU General,SC
3.	BC	☑	IKGPTU General, BC + MRSPTU General, BC

All the choices of B.Tech (LEET), B.Pharmacy(includes both Fee waiver and non-Fee waiver B.Pharm Courses), B.Pharmacy(LEET), B.Architecture, M.Tech, M.Pharma, MBA & MCA will be displayed in choice filling section for these candidates and they can select as many choices in the order of preference from the list of available choices. The candidates may opt same course for fee wavering scheme and as well as for Non fee wavering Scheme(only for B.Pharm). Various interfaces will be available to candidates to swap/re-arrange/ delete earlier filled choices. On clicking the "Choice Submission" button, the available choices to the candidate will be displayed in the left side frame and on clicking the add button, it will be removed from the left frame and will be added into right frame. User can sort their choices University-wise also. Choices submitted in the 1st round of counselling will be processed after expiry of choice filling period. Fresh choices submission will be permitted in 2nd round of counselling.

During choice selection, Candidate can click on "Save Choices" button to save his choices. System will save the choices and keep the screen open for Candidate to select more choices.

4.1.6 Choice Locking and Printing of Locked Choices

Locking of choice will be enabled as per schedule. Candidates MUST lock their choices only after they have finalized them.

4.1.7 Rank Generation Process

The Rank Generation process will follow a specific and predefined set of rules. Ranks will be unique and generated before 1st round of seat allotment. Ranks will be unique and generated before each round of seat allotment. Only those candidates who have registered and also paid registration fee will be considered for Unique Rank generation.

4.1.8 Seat Allotment

IKGPTU team with help of NIC will run Seat Allotment by downloading the choices filled by registered candidates and processing as per approved algorithm. During this step, the choices submitted by the candidate will be processed and seat will be allotted in the order of merit (as per rules of allotment) on the basis of the saved choices. Seat allotment will be done in each Round i.e. 1st and 2nd round. In the first round, all the seats will be available for seat allotment. In the second round, seats will be allotted against the available vacancies in the respective round.

4.1.9 Seat Allotment Result Publishing

In each round, seat allotment result will be published on the website. Candidate will login and see the result. Candidate need to download "Provisional Admission Letter" before proceeding for PI reporting at the allotted institute.

4.1.10 Reporting at Participating Institutes

Candidates, who are allotted seats in 1st / 2nd round must report to the respective Institute, where he/she is allotted seat, within the scheduled dates of that specific round for document verification and fee submission, failing which their allotment will be cancelled. The candidate has to report at the PI along with the provisional seat allotment letter downloaded from the website and relevant documents. Based on the document verification, candidate will be asked to deposit the admission fees in the Institute and candidate data will be updated as per the business rules and the allotted seat will be confirmed. Accordingly, Provisional Admission receipt will be generated and provided to the candidate.

4.1.11 Online Payment of Seat Acceptance Fee (Optional)

All those candidates who got the seat first time in any round, Seat Acceptance fee will be paid online before PI reporting.

4.1.12 Online Willingness (Optional)

Candidate can submit his/her willingness for subsequent round of counselling. There are two types of willingness FLOAT (YES-Upgradation) and FREEZE (No-Upgradation).

4.1.13 Withdrawal from the Counselling

A candidate, whose documents have been verified at any Reporting Center and want to cancel his/her allotted seat and seek the refund of fee, will have to login in the system and get the withdrawal during

the specified period. Withdrawal process involves a few steps after the "Withdrawal" button is clicked. This includes Agreement and re-entering of the password, confirming the withdrawal, etc.

4.1.14 Vacancy due to Non-Reporting/ Cancellation

After each round, a vacancy position will be published in public domain. These vacancies will be due to seat vacant of previous round, non-reporting candidates and seat cancelled during reporting.

4.1.15 Subsequent 2nd round student access methodology

In the subsequent rounds, new students, who wish to join Counselling for the first time will go through the same process as given above for the 1st round. Already registered Students who have exercised their choices in first round can access the system using their application no and password.

In Re-registration/Confirmation screen candidate will give an undertaking that

"Before participating in the second counselling, I have understood that if I am allotted a seat in the second counselling, my previous seat in 1st counselling shall automatically be cancelled and replaced by the seat allotted in second counselling. My claim for previously allotted seat stand forfeited. I shall have claim only on the seat allotted in second counselling. I have further understood that I should fill only those choices, which are preferred over the already confirmed seat in first counselling. "On accepting the Declaration, candidate will be registered in the system. System will give following information.

"In the second round, Candidate can also fill College/Branch even if Available seats section shows Zero (0) seats. In case any candidate, who has been allotted the seat in 1st round vacates the seat during 2nd round, the same will be made available to other candidates in the 2nd Round itself."

4.1.16 Physical Reporting at PI

General Assumptions

- Individual candidate shall print a "Provisional allotment letter" and shall report to the PIs for admission. In case of any type of problem candidate has to contact Central Control Room of IKGPTU. In case candidate fails to take admission during the slotted time period, his seat shall remain vacant and shall be declared as vacant for next counselling.
- Credential and documents shall be verified with online data by the designated PI officials.
- If candidate is found eligible, PI will issue provisional admission letter to the candidate.
- In case of up gradation by the candidate he/she will have to participate in subsequent counselling for re-scheduling and saving of choices.
- If a candidate has been allotted a seat or fail to report within specified time limit at PIs shall be allowed to participate in the subsequent phase of counselling, if candidate opts for up gradation against the available vacant seats, declared vacant by various institutions on the counselling website and compiled by the system (as per counselling schedule). If a candidate has not been allotted any seat from his/her choices, such candidate shall be allowed to participate in subsequent round of counselling.
- The candidates, who would like to upgrade their earlier allotted seats, will also be permitted to participate in the subsequent counselling, provided they give a declaration, while they are getting themselves registered for the subsequent counselling, to the effect that they would be vacating the seat allotted to them in the previous counselling. For the subsequent round of counselling, candidate will have to give his/her consent and fill fresh choices. If the candidate shall not get the admission seat from new choice of the subsequent round in such a case, his/her previous admission shall be continued.

Reporting process will start after the allotment of seats as in the previous step and this process will comprise of following steps:

a. After allotment of the seat, the candidate is required to report to the allotted institute for admission within the date specified in the allotment letter. The administrator website will have PI module secured by separate user id and password for each PIs.
b. The credentials and certificates of the candidates are to be verified by PIs as part of the admission process at the reported Institute. If the credentials and certificates are found wrong the allotment will be cancelled and the admission is denied otherwise the admission is granted.
c. Candidates are required to pay the fees in the prescribed form at the designated bank.
d. The authorized institutes can access candidates' details who have been allotted to a specific institution. All the PIs are required to update the successful candidates' data on web to complete the process of admission. It will facilitate to compile filled and vacant seats.
e. On successful verification of the documents, Institute designated officials will generate an admission slip. One part of the slip will be handed over to the candidate and second part will be retained by the Institute.

PIs can also generate reports on admitted candidate course wise round wise or roll no wise, list of vacant seats etc.

4.1.1 Board Admin Process

IKGPTU Admin will perform the various tasks like Site Monitoring, User Management, Master Directory Management, Seat matrix Management, Rank Generation, Seat Allotment, MIS Reports.

IKGPTU Administrator will be responsible for technical conduct of the counselling including initial seat matrix creation, schedule preparation, uploading of static contents, message management and interaction with NIC Hqrs Counselling helpline etc. He/she will login to the website https://ikgptu.admissions.nic.in using two level userid and password.

IKGPTU Administrator will have following facility in his account.

1. Creation of Participating Userid and details thereof
2. Seat availability, leftover & filled status and reports
3. Category Wise & Branch wise Seat Availability/filled/leftover in all institutions
4. Category wise breakup of Seat Matrix
5. Candidate Information Updation
6. Candidate Seat Allotment Details
7. Secured interface for uploading/updating of seat matrices.
8. Online Withdrawal/Cancellation of Candidates' Admission
9. List of Candidates who withdrew their seats

4.1.2 Participation Institute Process

4.1.2.1 Seat Matrix Entry

Board Admin/PI Admin will enter or update the seat matrix for all the institutes. For this, admin will choose the institute and enter the category and subcategory wise seat intakes.

4.1.2.2 View Seat Matrix

Various formats are available to view the seat matrix like institute wise seat matrix and seat matrix at a glance. All the PIs as well as public can view the seat matrix.

4.1.2.3 View Various MIS Reports

Various MIS reports related allotments, PI reporting etc are available in authorized users logins. Every user can view the reports as per their responsibilities.

4.1.3 PI Admin Process

The PI Admin can create PI Users (PI Users), view the PI users list, Active/deactivate the PI Users. PI Admin can also initialize the Document verification process performed by PI User.

4.1.4 PI user Process

PI User will do the document verification for all round and can view the various reports like reporting activities details, date wise reporting status, allotment details etc.

4.1.5 Admission Closed

All the candidates, who have reported physically at allotted institutes, will complete the other formalities of admission and will attend the classes. By this, admission in all the participating institutes affiliated with participating Universities will be closed.

4.2 Business operational policies and rules

4.2.1 Eligibility Rules

4.2.1.1 Eligibility Requirements and rank Preparation based on Qualifying Degree

For taking admission in 1st year of B.Tech (LEET), B.Pharmacy, B.Pharmacy(LEET), B.Architecture, M.Tech, M.Arch, M.Pharma(FT),MBA,MCA & MCA(LEET)

NIC will prepare the rank of registered candidates as per following procedure and IKGPTU verification team will check and approve the Rank so generated.

B.Tech (LEET)

The Governor of Punjab is also pleased to further issue the following criteria for making admissions:
Eligibility Criteria for Diploma Holders

1. All those candidates who have passed Diploma examination from an AICTE approved institution and have obtained at least 45% marks (40% in case of Candidates belonging to reserved category) in appropriate branch of Engineering / Technology shall be eligible to apply.
2. All those candidates who have passed B.Sc. Degree from a recognized University as defined by UGC, with at least 45% marks (407o in case of Candidates belonging to reserved category) and passed XII standard with mathematics as a subject shall be eligible to apply.
   i) Students, who have passed B. Sc. Degree from a recognized University as defined by UGC, shall clear the subject of Engineering Graphics / Engineering Drawing and Engineering Mechanics of the first year engineering program along with second year subjects.
   ii) Students Belonging to B. Sc. Stream may further note that they shall be consider only after filling the supernumerary seats in this category with students belonging to the Diploma stream.
3. It is further provided that students, who have passed Diploma in Engineering & Technology from an AICTE approved institution for B. Sc. Degree from a recognized University as defined by UGC, shall also be eligible for admission to the first year Engineering Degree courses provided there are vacancies in the first year of Engineering Degree. This shall be considered only after the vacancies at lateral entry are exhausted.

List of Diploma holders eligible for admission

- 3 years/ 4 years diploma in Civil Engineering
- 3 years / 4 years diploma in Electrical Engineering.
- 3 years / 4 years diploma in Electronics & T.V. Technology.
- 3 years /4 years diploma in Electronics & Microprocessor
- 3 years /4 years diploma in Electronics & Comm. Engineering.
- 2 and 1/2 years diploma after 10+2 in Electronics & Communication Engineering from SLIET, Longowal
- 3 years / 4years diploma in Instrumentation and Control.
- 2 and 1/2 years diploma after 10+2 in instrumentation and Process Control from SLIET, Longowal .
- 3 years / 4 years diploma in Mechanical Engineering.
- 3 years / 4 years diploma in Production and industrial Engineering
- 3 years / 4 years diploma in Refrigeration & Air Conditioning
- 2 and 1/2 years diploma after 10+2 from SLIET, Longowal in any one of the following :
  - Foundry Technology
  - Industrial / Production Engineering
  - Maintenance of Plant Engineering
  - Welding Technology
- 3 years / 4 years diploma in Mech. Engineering. (Refrigeration & Air conditioner)
- 3 years / 4 years diploma in Chemical Engineering
- 3 years / 4 years diploma in Plastic Technology
- 3 years / 4 years diploma in Textile Technology (Weaving)
- 3 years / 4 years diploma in Garment Technology
- 3 years / 4 years diploma in Textile Processing
- 3 years / 4 years diploma in Textile Technology
- 3 years / 4 years diploma in Mechanical Engineering (Tool & Die)
- 3 years / 4 years diploma in Computer Engineering.
- 4 years diploma in Tool & Die Technology from Central Tool Room, Ludhiana.
- 2 and ½ years diploma after 10+2 from SLIET, Longowal in any one of the following:
  - Computer Programming & Application
  - Computer Servicing & Maintenance
- 3 years / 4 years diploma in Microprocessor Applications
- 3 years / 4 years diploma in information Technology
- 3 years / 4 years diploma in Leather Technology
- 3 years / 4 years diploma in Leather Technology(Footwear)
- 3 years / 4 years diploma in Textile Chemistry
- 3 years/ 4 years diploma in Knitting Technology
- 2½ years diploma after t0+2 from in Chemical Technology from SLIET, Longowal
- 3 years / 4 years diploma in Computer Science & Engineering.
- 3 years / 4 years diploma in Architectural Assistantship
- 3 years / 4 years diploma in Garment Technology
- 3 years / 4 years diploma in Fashion Technology
- 3 years / 4 years diploma in Automobile Engineering
- 3 years diploma from Lovely Professional University, Phagwara.

Any other diploma of the duration 2½ or more years recognized by State Board of Technical Education

B.Pharmacy

As per Punjab Government notification, the eligibility for B. Pharmacy course is as under:

All those candidates who have passed the 10+2 examination from a Board recognized or established by Central / State Government through a legislation with Physics and Chemistry as compulsory subjects along with one of the Mathematics / Chemistry / Bio-technology / Biology shall eligible to apply. Further as per AICTE guidelines the candidate should have obtained at least 45% marks (40% in case of candidate belonging to reserve category) in the above subjects taken together.

OR

All those candidates who have passed Diploma Pharmacy from an Institute affiliated to the Punjab State Board of Technical Education and Industrial Training / Punjabi University or any other University or any State Board of Technical Education provided that the Diploma or the Institute is duly approved by the PCI / AICTE.

For admission to the course through online counselling merit ranking to be prepared for the students**. Following is proposed criteria for merit.**

Aggregate percentage Marks of

Compulsory subjects	**One of the following subjects**
1. Physics 2. Chemistry	3. Mathematics or Chemistry or Bio-Technology or Biology

In case tie in the above, following break-up criteria may be follows:-

(a)	Marks obtained in Physics + Chemistry
(b)	Marks obtained in Physics
(c)	Marks in 10th
(d)	Date of Birth

B.Pharmacy Lateral Entry

The minimum qualification for admission to 2nd year (3'd semester) of B. Pharmacy courses shall be as follows:

4. All those candidates who have passed the diploma in Pharmacy from an institution affiliated to the Punjab State Board of Technical Education & industrial Training/ Punjabi University, Patiala or any other University or any State Board of Technical Education shall be eligible to apply. Further, the diploma in Pharmacy and the institute where the candidate has studied must be duly approved by the Pharmacy Council of India / AICTE. Also the candidate should have obtained at least 45% marks (40% in case of candidate belonging to SC/ST category) in the above mentioned qualifying examination.
5. Students directly admitted to Pharmacy 2nd year have to pass those subjects of B. pharmacy 1st year which have not been covered under D. Pharmacy.

B.ARCH

The proposed eligibility Criteria is as under:

(i) No candidate, with less than 50% marks in aggregate, shall be admitted to the Architecture course unless he/she has passed an examination at the end of the new 10+2 scheme of Senior School Certificate Examination or equivalent with mathematics as a subject of Examination at the 10+2 level.

Or

Candidate who has passed 10+3 Diploma with subject of Mathematics duly recognized by Central / State Governments al equivalent to 10+2 level with minimum 50% aggregate marks.

Or

(c) International Baccalaureate Diploma, after 10 years of schooling with not less than 50% marks in aggregate and with Mathematics as compulsory subjects of examination.
However for SC, ST and OBC candidates the aggregate is 45% marks in the above said examinations.

(ii) All Admissions to B.Arch. Degree course shall be subject to passing of National Aptitude Test in Architecture (NATA) conducted by the COA and marks secured in the qualifying examination in the ratio of 50:50. The minimum passing score for NATA is 80 out 200 for all categories of candidates.

(iii) Vacant seats , if any, can be filled on the basis of paper -2 (JeeMain) conducted by CBSE or on the basis of an aptitude test in Architecture to be conducted by I K Gujral Punjab Technical University.

Proposed criteria for preparation for preparation of merit for the admission to the admission to the above mentioned course through Centralized Counselling.

WEIGHTAGE:

50% (NATA Score)	**50% (marks obtained in qualifying examination)**

Aggregate percentage Marks of

Compulsory subjects	**One of the following subjects**	**Two optional subject**
1. Physics 2. Mathematics	3. Computer Science or Chemistry or Biology Engineering Drawing	4. As per 10+2 DMC 5. As per 10+2 DMC

In case tie in the above, following break – up criteria may be follows

(a)	Marks obtained in NATA
(b)	Marks in 10th
(c)	Date of Birth

M.TECH

As per Punjab Govt. Notification, eligibility for M. Tech course is as under:

All those candidates who have passed B.E / B.Tech with at least 50%(45% for candidates belonging to reserved categories) marks in aggregate and with valid GATE 2019 score shall be eligible to apply for Post graduate level M.Tech course.

The merit ranking would be prepared as per the following criteria:

First preference will be given to valid GATE score 2019 or 2020 followed by Aggregate percentage marks of all semester of B. Tech / B. E In case of the tie in the above, following breakup may be followed:

a. In the case of tie (a) above, the candidates scoring higher marks in aggregate of 10+2 shall rank higher in the order of merit.
b. In the case of tie (b) above, the candidate senior in age shall rank higher in the order of merit.

However in case of the students like AMIE the grade obtained in the final year is not clear as one may complete any subject in one of the year.

M.PHARMACY

As per Punjab Govt. Notification, eligibility for **M.Pharmacy Full Time** course is as under:

All those candidates who have passed B.Pharmacy with at least 50 %(45% for candidates belonging to reserve categories) marks in aggregate and with valid GPAT 2019 score shall be eligible to apply for Master's programme in Pharmacy (M.Pharmacy).

The merit ranking would be prepared as per the following criteria
a. GPAT -2019
b. Aggregate percentage marks of all semester of B.Pharmacy – 100(based on the % of marks) Candidates with valid 2019 GPAT score will be given preference followed by aggregate percentage + experience marks.

In case of the tie in the above, following breakup may be followed:
a. In the case of tie (a) above, the candidates scoring higher marks in aggregate of 10+2 shall rank higher in the order of merit.
b. In the case of tie (b) above, the candidate senior in age shall rank higher in the order of merit.

Master of Business Administration

As per Punjab Govt. Notification, eligibility for Master of Business Administration course is as under:
All those candidates who have passed Recognized Bachelor's Degree of minimum 3 Yrs. duration at Graduate Level and CMAT qualified conducted by AICTE followed by inter se Merit.

Master of Computer Application

As per Punjab Govt. Notification, eligibility for Master of Computer Application course is as under:
Graduation and Inter Se merit in qualifying examination

4.2.1.2 Eligibility Requirements based on IKGPTU generated Rank

Eligibility requirement by participating Universities is as under:

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
1.	B.Arch.	Gen.	(i) No candidate, with less than 50% marks in aggregate, shall be admitted to the Architecture course unless he/ she has passed an examination at the end of the new 10+2 scheme of Senior School Certificate Examination or equivalent with Mathematics as a subject of examination at the 10+2 level. Or Candidates who have passed 10th + 3 year Diploma with subject of Mathematics duly recognized by Central/ State Government as equivalent to 10+2 Level with minimum 50% aggregate marks are also eligible for admission to B. Arch course. Or International Baccalaureate Diploma, after 10 years of schooling, with not less than 50% marks in aggregate and with Mathematics as compulsory subject of examination. (ii) All admissions to Architecture degree courses shall be subject to passing of National Aptitude Test in Architecture (NATA) conducted by the council of Architecture and marks secured in the qualifying examination in the ratio of 50:50. (iii) Vacant seats (if any) can be filled on the basis of Paper-2 (JEE-Main) conducted by CBSE or on the basis of an aptitude test in Architecture to be conducted by I.K. Gujral Punjab Technical University, Jalandhar.	Qualifying Marks + NATA Scores in ratio of 50:50	50%	50%	NA
		Res.			50%	50%	

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
2.	2nd year of B.Tech. & B.Tech. Fee Waiver	Gen.	(i) All those candidates who have passed Diploma examination from an AICTE approved institution and have obtained at least 45% marks (40% in case of Candidates belonging to reserved category) in appropriate branch of Engineering / Technology shall be eligible to apply. (ii) All those candidates who have passed B.Sc. Degree from a recognized University as defined by UGC, with at least 45% marks (40% in case of Candidates belonging to reserved category) and passed XII standard with mathematics as a subject shall be eligible to apply. (a) Students who have passed B.Sc. Degree from a recognized University as defined by UGC, shall clear the subject of Engineering Graphics / Engineering Drawing and Engineering Mechanics of the first year engineering program along with second year subjects. (b) Students belonging to B.Sc. Stream may further note that they shall be considered only after filling the supernumerary seats in this category with students belonging to Diploma stream.	Inter-se-merit of Qualifying Examination	45%	45%	NA
		Res.			40%	40%	
3.	1st year of B.Pharm. & B.Pharm. Fee Waiver	Gen.	All those candidates who have passed the 10+2 examination from a board recognized or established by Central/State Government through a legislation with Physics and Chemistry as compulsory subject along with one of the Mathematics/ Biotechnology/ Biology shall eligible to apply. Further as per AICTE Guidelines the candidate should have obtained at least 45% marks (40% in case of candidate belonging to reserve category) in the above subjects taken together. **OR**	Inter-se-merit of Qualifying Examination	45%	45%	NA
		Res.			40%	40%	

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
			All those candidates who have passed Diploma Pharmacy from an institute affiliated to Punjab State Board of Technical Education & Industrial Training / Punjabi University, Patiala or any other University or any State Board of Technical Education provided that the diploma or the institute duly approved by the PCI / AICTE.				
4.	2nd year of B.Pharm. & B.Pharm. Fee Waiver	Gen.	(i) All those candidates who have passed Diploma in Pharmacy from an institution affiliated to the Punjab State Board of Technical Education & Industrial Training / Punjabi University, Patiala or any other University or any State Board of Technical Education shall be eligible to apply. Further, the diploma in Pharmacy and the institute where the candidate has studied must be duly approved by the pharmacy Council of India / AICTE. Also the Candidate should have obtained atleast 45% marks (40% in case of candidates belonging to SC/ST category) in the above mentioned qualifying Examination. (ii) Students directly admitted to the Pharmacy 2nd year have to pass those subjects of B.Pharmacy 1st year which have not been covered under D. Pharmacy.	Inter-se-merit of Qualifying Examination	45%	45%	NA
		Res.			40%	40%	
5.	MBA	Gen.	All those candidates who have passed Bachelors Degree of minimum three year duration in any discipline from a University recognized by the University Grants Commission (UGC) and with valid rank in CMAT shall be eligible to apply for MBA course. In case candidates with valid CMAT Score are not available the seats shall be filled on the basis of inter-se-merit in qualifying examination.	Valid CMAT Scores & Inter-se-merit	NA	NA	NA
		Res.					
6.	MCA	Gen.	All those candidates who have passed any recognized Bachelor's degree of minimum three years	Inter-se-merit	50%	50%	NA
		Res.			45%	45%	

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
		Res.	duration with Mathematics at 10+2 level or at Graduated Level. Obtained at least 50% (45% in case of candidate belonging to reserved category) at the qualifying Examination.		45%	45%	
7.	M.Pharma.	Gen.	All those candidates who have passed B.Pharma with atleast 55% (50% in case of candidate belonging to SC/ST category) marks in aggregate and with valid GPAT-2018 score shall be eligible to apply for master's programme in Pharmacy (M.Pharma) Course. In case candidates with valid GPAT-2018 Score are not available the seats shall be filled on the basis of inter-se-merit in qualifying examination.	Valid GPAT Scores & Inter se merit	55%	55%	NA
		Res.			50%	50%	
8.	M.Tech.	Gen.	All those candidates who have passed B.E. / B. Tech. with at least 50% (45% in case of candidate belonging to reserved category) marks in aggregate and with valid GATE Score shall be eligible to apply for Post graduate level M.Tech. Course. In case seats haven't been filled under respective categories, admission shall be considered on the basis of inter-se-merit in qualifying examination.	Valid GATE Scores & Inter-se-merit	50%	50%	NA
		Res.			45%	45%	
9.	1st year of B.Tech. & B.Tech. Fee Waiver	Gen.	All those candidates who have passed the 10+2 examination from a board recognized or established by central/state government through a legislation with Physics and Mathematics as compulsory subjects along with one of the following subjects:- 1. Chemistry 2. Biotechnology 3. Computer Science 4. Biology If the seats of B.Tech. (Bio-Technology) remain vacant after the central counselling the seat may be filled with the candidates having following qualification also:- 10+2 with Physics and Chemistry as compulsory subjects along with one of the following subjects:- 1. Mathematics 2. Biotechnology 3. Computer Science 4. Biology **OR**	10+2 Basis	NA	NA	NA
		Res.			NA	NA	NA

Sr. No.	Course	Category	Eligibility	Basis of Admission through Online Counselling	%age Criteria for Admission		
					IKGPTU	MRSPTU	PAU
			Those candidates who have passed diploma in any Engineering Trade from Punjab State Board of Technical Education & Industrial Training, Chandigarh or Sant Longowal Institute of Engineering and Technology, Longowal (SLIET), or any such examination from any other recognized State Board of Technical Education. **OR** The candidates who have passed two years certificate course from Sant Longowal Institute of Engineering and Technology, Longowal (SLIET) shall be eligible.				

4.2.1.3 Special Eligibility conditions for Sports/Defence/ Terrorist Victim etc. categories

If the candidate opts for categories/sub categories in Sports /Defence etc., then he/she has to submit relevant documents at the time of admission in respective institution, if a seat is allotted to him/her. Failing which, his/her claim on the seat will be forfeited and the seat will be cancelled.

4.2.2 Registration Process

4.2.2.1 Registration Rules

- Online Registration by all eligible candidates will be allowed in both 1st round and 2nd round.
- Registration Process Business Rules: candidates can update in the following ways:
    - Candidate can select Category, Sub category and ESM priority as applicable, state of eligibility, fee waiver/non fee waiver, rural status as well sikh minority status. Till the candidate confirms his/her registration, he/she can update these details. Once confirmed all selected values will be stored in database and same will be used for all future purposes i.e. for choice filling and seat allocation etc.
    - Candidates are required to furnish **Personal and contact details** (Father name, Mother name, DOB, Gender, Nationality, Mobile No, Email Id, mailing address with Pin code).
    - Candidates are also required to furnish **Qualifying Degree details** (Qualifying degree passing status (passed or appearing), year of passing/appearing, degree type, qualifying discipline name, result preparation mode (CGPA or %age) in the following ways :
        - If passing status is 'Passed' then
            - Select 'Year of passing' from Dropdown.
            - Select Qualifying Degree and Qualifying discipline Name from Dropdown
            - If result preparation Mode is '%age' then enter '%age value'
            - If result preparation Mode is 'CGPA' then select from Dropdown 'CGPA maximum point scale' and also enter 'Obtained CGPA' then 'CGPA out of 10" will be auto calculated and displayed in read only mode. 'CGPA out of

10' will be used to check the candidate eligibility for choice filling and seat allocation.

- CGPA out of 10 = (Obtained CGPA/CGPA maximum point scale)*10

- If passing status is 'Appearing' then
  - Value of 'Year of passing' will be '2020' only.
  - Select Qualifying Degree and Qualifying discipline Name from Dropdown
  - Result preparation mode and value of CGPA/%age will be hidden

- Candidate is also required to choose his own password. Next time, the candidate can login directly with his /her Login Id and the chosen password as Password.
- Candidate is also required to choose security Question and their Answer, that is required, if candidate Forgot the password.

4.2.2.2 Registration Fee

After successful registration at IKGPTU website as 1st step for attending counselling, each candidate has to pay Rs. 2000/- as the Counselling Registration Fee using ICICI BANK online services.

4.2.2.3 Choice Filling & Saving

- Choices submitted in the 1st round of counselling will be processed in 1st round only. Fresh choices submission will be permitted in 2nd round of counselling.
- **'Save Choice'** button will be enabled as per counselling schedule.
- If candidates fail to explicitly lock their choices by **last date & time**, their last saved choices will be automatically locked by system after this deadline.

4.2.3 Rank Generation

During 1st round of Counselling, students registered under courses mentioned above will be permitted to register themselves. Rank will be prepared of registered candidates in each round as per criteria mentioned in 4.2.1.1 and PTU verification team will check and approve the Rank. On approval, the rank will be uploaded into the respective course.

4.2.4 Seat Allotment

4.2.4.1 Seat Allotment – General Rules

- During this step, the choices submitted by the candidates will be processed centrally and seats will be allotted in the order of Rank for various streams and in the order of submitted choices. The allotment result will be available on the website https://ptuadmissions.nic.in. Individual allotment letters will not be sent to the candidates by post. However, candidates MUST get a printout of the allotment details from the website.
- Candidates who are fresh allotted or upgraded a seat in any round will have to personally report to the allotted institute for document verification and seat confirmation during specified Reporting Period. Failing to report and/or produce required documents at the reporting institute will lead to cancellation of the offered seat. The seats thus falling vacant due to non-reporting will be considered for allotment in the subsequent round of Normal Counselling.
- For fee waiver seats candidate whose family gross annual income is less that Rs. 6.0 Lakhs shall be eligible.

4.2.4.2 Seat Allotment procedure for First Counselling for candidates of Punjab 85% and Other State 15% Rank-wise Seat Allotment procedure for First and subsequent counselling

Since the allotment of seats is to be done by the software using the seat matrices and seat allotment procedure, therefore every bit of required procedure is needed to be coded. As per the study and detailed discussions with the user/core committee, following procedure has been designed.

For allotment of a seat, Merit Number (Rank) is not only the criteria but also the eligibility and reservation criteria of candidates are checked. The admissions shall be subjected to the verification of credential and documents in the allotted institution.

For any course, before the allotment starts, Candidate must complete following steps
Step-1: The candidate should deposit the counselling fees of Rs. 2000/- non-refundable.
Step-2: The candidate has to fill up the choices and save it successfully. The candidate is advised to give as many choices as desirable. There is no maximum limit for the choices.
The offline processing module gives the feature of round wise processing and generation of MIS (Institute wise, Rank wise Candidates) Reports

Assumption:

a. Candidate has to register himself and fill choices. If candidate does not fill any choices, he will not be eligible for counselling.
b. Seat Matrix is to be uploaded fresh before the start of counselling.
c. Based on test Rank will be unique i.e. no two candidates will have same rank in general merit list. The general merit list will include candidates of all categories.
d. Candidates from Punjab residents will be considered under Punjab 85%.
e. Candidates from Chandigarh UT are only eligible to participate in online counselling through 15% quota. However only in case of PAU, PUNJAB and Chandigarh are considered as One State. For rest of the Universities i.e. IKGPTU and MRSPTU Punjab and Chandigarh are different states.

Algorithm:

1. Sort the candidate's data stored in Registration table rank wise with condition where choices have been locked.
2. Process the data of first candidate.
3. Store the value of sex, category code, sub-category code, in the temporary variables.
4. Identify eligible categories, subcategories on the basis of category, subcategory and Priority as applicable of candidate and store it in arrays.
5. Process the choices of candidate for each category in the same sequence as described elsewhere in the document.
6. If seat is available then allocate the seat to candidate
7. Update the seat master and reduce the value of seats available in the seat matrix by 1 against the particular institute
8. Repeat above steps for all candidate.

4.2.4.3 Internal Algorithm for Seat Allocation Procedure for 85% Punjab Candidates

For 85% Punjab Candidates: Following categories/sub-categories exist;

- General
- SC/ST

- Backward Class (BC)
- T-Sunami(TS)
- Border Area(BR)
- Backward Area (BA)
- Sports Person (SP)
- Widows of Defense Personnel (DF)
- Widow / Divorced Women
- Terrorists/Riots victims (RT)
- Children/Widows of Para military forces (PM)
- Freedom Fighter (FF)
- Disabled Person-Blind (DPB)
- Disabled Person -Deaf (DPD)
- Disabled Person-Others (DPO)

Seat Allocation sequence for 85% Punjab Quota

Following rules shall be applicable for seat allotment for counselling for 85% Punjab category for all the institutions under IKGPTU/MRSPTU participating in counselling located in Punjab.

In case of IKGPTU, seats under Fee Waiver Category will be processed as a separate category depending upon choices filled by the Candidate.

Counselling for seats for the Children /Widows of Defence Personal category, Sports Person, under Para Military Forces Personal and under Terrorist/Riot affected category is done in the order of sub-category, priority, rank (as applicable) and eligibility condition.

The following cases are checked and searched for a Candidate until seat is allotted or options are exhausted for Course merit Rank.

FOR General Merit List:

The seats based on rank wise list, will be allotted in the following sequence:

Case 1: If candidate has opted for Fee Waiver and filled Fee waiver seat choices (Applicable for B.Pharm only)

Candidate can fillup Fee waiver seat choices in addition to his category based choices. Check the seat for **Fee Waiver**, if it is available then seat is allotted else go to candidate's next choice. Repeat till a seat is allotted or all the choices are processed.

Case 2: If candidate is General, no subcategory

Check the seat for **General (Open quota)**, if it is available then seat is allotted else go to candidate's next choice. Repeat till a seat is allotted or all the choices are processed.

Case 3: If candidate is having any one of the reserved category, following is the seat allotment criteria

All the reserve category candidates will first be considered in General Category. In this case Course Rank is the allotment criteria. Check the seat for **General (Open quota)**, if it is available then seat is allotted else check the seat in respective Reserve Category (SC/ST,BC, T-Sunami(TS)/BA/ BR/ FF). If seat is available then allot the seat else go to candidate's next choice. Repeat this process till a seat is allotted or all the choices are processed.

- ✓ If candidate is DF then allocation is done on the basis of sub-category and priority.
- ✓ If candidate is PM then allocation is done on the basis of sub-category.
- ✓ If candidate is RT then allocation is done on the basis of sub-category.

- ✓ If the candidate is SP than allocation is done on the basis of subcategory and eligibility criteria of the participating universities.
- ✓ If candidate is DPB/DPD/DPO, then allocation is done on the basis of respective category (i.e. DPB/DPD/DPO) and checking for left out seats in any of (DPB/DPD/DPO) categories.

Fee Waiver	General	Category (SC/ST,BC, T-Sunami(TS) / DF/ BA/ BR/ FF /RT/ PM/ DPB/ DPD/ DPO)	Sequence of Allotment
☑			**Fee Waiver (Only B.Pharm)**
	☑		**General (Open)**
		☑	**General (Open), (SC/ST,BC, T-Sunami(TS)/ DF/BA/BR/FF/SP / RT/ PM / DPB/DPD/DPO/WD)** For Categories (DF, SP, PM, RT) Seat Allotment Sequence will be General, category of Candidate (In General category seat allotment will be done on the basis of Rank whereas in his own Category allotment will be done on the basis of sub-category, priority , rank and eligibility criteria of participating universities). In all other category (General, SC/ST, BC, T-Sunami(TS), BA, BR, FF,WD) JEEMAIN Rank is the allotment criteria. In Handicap categories (DPB/DPD/DPO), Seat allotment sequence will be General, category of Candidate and balance seats of any of DPB/DPD/DPO) categories. JEEMAIN Rank is the allotment criteria.

Note: In Sports Category selection criteria for participating universities is as follows

Inder Kumar Gujral Punjab Technical University, Jalandhar	Accepts Grade A, Grade B, Grade C & Grade D and Priorities of Medals (Gold/Silver/Bronze/Participation)
Maharaja Ranjit Singh Punjab Technical University, Bathinda	Accepts Grade A, Grade B, Grade C & Grade D and Priorities of Medals (Gold/Silver/Bronze/Participation)

4.2.4.4 Algorithm for Seat Allocation Procedure for 15% JEEMAIN General for candidates outside Punjab

Following rules shall be applicable for seat allotment for counselling for 15% All India category for all the institutions under IKGPTU/MRSPTU participating in counselling located in Punjab

- ❖ For 15 % seats (Other State): Following categories/sub-categories exist;
  General, SC/ST, BC
- ❖ Under the 15% All India category further reservation is provided for 70% General, 25% SC/ST category and 5% for BC category.
- ❖ All the cases, irrespective of the category, will be dealt one by one as per rules and regulations applicable and as per the case/category.

4.2.4.5 Seat Allotment procedure for Second Counselling for candidates of 85% / 15% (2nd Round)

Pre-requisites/Assumptions:

a. Candidates falling under 85% / 15% quota will be eligible for 2nd Round of Counselling. Candidate has to reconfirm his registration for the 2nd counselling and fill fresh choices. Candidates, who have participated in 1st counselling, need not pay counselling fee again, whereas new candidates appearing in counselling for the first time will have to deposit counselling fee and register themselves in the website. If candidate does not fill any choice for 2nd counselling, then he will not be eligible for 2nd counselling.
b. Candidate can also include the same choice in 2nd counselling against which he is allotted seat in the first counselling. In such case choices which are listed before this choice will be processed. For example a candidate has filled 5 choices in 2nd counselling and choice no 3 is same for which candidate is allotted seat in first counselling. In this case first two choices will be processed.
c. Seat Matrix will be uploaded afresh before the start of second counselling.
d. Seat Allocation will be done exactly as per rules adopted in Ist round of Counselling, i.e. no seats will be merged.
e. If a candidate has been admitted against his allotted seat in his category(reserve) in previous counselling, the seat will not be changed in the subsequent round of counselling for the Same branch and Institute with regards to category.

Note: Candidates once opted a category can not change his category without the permission of Chief Co Ordinator(admission).

Algorithm:

1. Sort the candidate's data rank wise once the choices are locked
2. Process the data of first candidate.
3. Store the value of sex, sub-category, and category temporarily.
4. Identify eligible categories, subcategories on the basis of category and subcategory of candidate, priority (as applicable) and store it in arrays.
5. Process the choices of candidate for each category in the same sequence as described in first counselling.
6. If seat is available then temporarily allocate the seat to candidate
7. Update the Seat matrix and reduce the value of seats available for the particular branch by 1 against the particular institute
8. Transfer the seat allotted to the candidate in the first counselling to vacant pool.
9. Repeat above steps for all candidate. (first iteration is complete)
10. Next iteration will start and will repeat all the above steps till vacant pool seats become 0.

4.2.5 Withdrawal Rules

- A candidate, who takes provisional admission by reporting at allotted institute and want to cancel his/her allotted seat and seek the refund of fee, will have to login into the system and get the withdrawal as per given schedule.
- The fee shall be refunded by IKGPTU later on.

4.2.6 Physical Reporting at Allotted Institute after 2nd round

- All candidates who wish to take admission in upgraded seat in 2nd round, will have to report physically at the Allotted Institution as per the schedule, *failing which their final allotted seat will be cancelled.*

- All Participating Institutions must update online physical reporting status at IKGPTU website through their login Id.

4.2.7 Other Policies/Rules

4.2.7.1 Password Policy

- Password must be 8 to 13 characters long.
- Password must have at least one Upper case, one lower case alphabet and one numeric value and at least one special characters**!@#$%^&*-**
- New Password cannot be identical to any of the previous three passwords.

4.2.7.2 Mobile Number and Email Id

- Mobile number and Email Id should be unique and will be verified through OTP.

4.3 Business operational constraints

4.3.1 General Constraints

eCounselling System will be an internet based application which will be designed, developed and centrally hosted in .Net Framework in NIC's Data Centre. The users will be accessing the software application using popular latest browsers (Internet Explorer 8.0 and above, Mozilla firefox, Google Chrome).

Only designated user can login and performed the operations as per their predefined role and responsibilities.

The application software will not take care of the virus problems. Manual interfaces cannot be fully avoided. Although, the software will take care of all feasible criteria like uploading of scanned documents etc. On-line validation checks as far as possible will be provided in the application software to ensure clean data entry at source. The system will display error messages in case of wrong data.

4.3.2 Network, Hardware/Software Constraints

- The server resources may be a constraint in case of peak load, however, dashboard for server monitoring has been made available for regular monitoring and at time of such situation.

4.3.3 Data and Content Constraints

- The quality of data in terms of correct email address/mobile numbers and other such information may be constraints for notifications/alerts. Contact details may be captured in encrypted format.

4.3.4 General Exceptional Handling

The Following are the common exceptions that are to be handled in the various user interfaces:

- Any error – The database errors and application errors should not be displayed to the user but a customized user friendly error should be displayed.
- When the session time out – If the session is lapsed and the user is attempting to access any part of the application that requires authentication, the system should respond with the message "Session timed out. Please login again to continue".

- For all mandatory fields mentioned – If the mandatory field is left blank and the user attempts to save - the system should respond with the message “Please enter the {field name}”.
- For all Mobile no fields - Mobile no. is entered with characters other than [0-9] and the actor attempts to save. - The system responds with the message “Please enter only numbers [0-9] in mobile no. “

4.4 Business operation modes

During peak load, necessary resources will be augmented. However, in case of unavoidable circumstances, appropriate action may be taken by competent authority.

4.5 Business operational quality

The capability of the software product will provide functions which meet stated and implied needs when the software is used under specified conditions.

4.6 Business structure

4.6.1 Organising University Team

Various Committees have been formed by Chief Coordinator, IKGPTU Admissions 2020, vide its letter no IKGPTU/REG/53 dated ……..

Functions of the Core Committee:

1. Recommendations for finalization of
   - Process and procedure, contents development for website.
   - SRS approvals.
   - Testing of developed software
   - Acceptance of software
2. Verifying the sanctioned seat for allotment / approved institutions before publication
3. Finalization of training requirement / needs
4. Monitoring and coordinating the training
5. Inspecting the facilities of participating institutions regarding online counselling.
6. Coordinating with various concerned agencies related with counselling / admissions
7. Coordination with participating institutions, other Govt. departments / private agencies and various committees
8. All other jobs assigned by the Chief Coordinator and Vice Chancellor cum Chairman, IKGPTU.

4.6.2 NIC Team

1. Head of Group (e-Counselling)
2. 3 Sr. Technical Director
3. 1 Technical Director
4. 2 Scientist “C”
5. Scientist “B”
6. PMU Incharge

4.6.3 Payment Gateway Integrator Team

1. Designated Bank Officials
2. EPG Integration Team

5 User requirements

5.1 Public

Anyone may be able to view website/portal of IKGPTU-2020 e-Counselling. The website will have the information about IKGPTU, news & events, important links etc. Candidates can visit the home page, registered themselves by filling Registration Form and sign-in for registered candidates.

5.1.1 Visit Public Home Page

On entering the URL, the system will display the home page of the website. The home page provides the option to login using registration id and password, register as new candidate, important instructions, news & events etc. During this step, all the eligible candidates on the basis of JEEMAIN/ 10+2 Inter se merit are required to register through Internet from places of their convenience.

5.1.2 Pay Registration Fee

After successful registration, candidate has to login into system and required to pay the Registration Fee using ICICI BANK MOPS services. After successful payment, candidate will be allowed to fill the online choices.

5.1.2.1 Payment by Debit Card/ Credit Card/Net Banking:

Once candidate click “Pay Registration Fee”, then the system will automatically redirect to ICICI BANK MOPS page. Candidate can select any of the options like Debit Card/ Credit Card/Net banking as per his/her convenience and follow the online instructions to complete the payment process. After successful payment, ICICI BANK MOPS payment gateway will redirect to the candidate's home page that will show the status of fee payment. If status is “Success” then candidate can view the fee payment details.

5.1.3 View Registration Fee Payment Details

As candidate pay the registration fee, he/she can view the receipt of registration fee like transaction no, transaction date, payment mode etc.

5.1.4 Sign-in

For sign-in, candidate will enter Login Id and password created at the time of registration. If the candidate furnishes this information successfully, then system will redirect to the candidate’s Home Page.

5.1.5 Forget Password

Applicant can reset his/her password by using the following options.

5.1.5.1 Reset password using Security Question & Answer

Candidates are required to enter system generated Application Number, Security question and their Answer chosen during IKGPTU registration process. If above data entered by candidate matches with backend database, then system will prompt for resetting New Password.

5.1.5.2 Reset password using a verification code via SMS

Candidate has to enter their Roll No and Date of Birth. If above data entered by candidate matches with backend database then system will send verification code through SMS at the registered mobile no. Candidates are required to enter verification code, if verification code matches with database then system will prompt for resetting New Password.

5.1.5.3 Reset password using a reset link via Email

Candidate has to enter their Roll Number and Date of Birth. If data entered by candidate matches with backend database then system will send email at the registered email id. Candidates are required to see their inbox and follow the online instruction for resetting the New Password.

5.1.6 View Institute Profile

A list of participating institutes will be available on the website. It may contains institute code, institute name, address, contact details. Complete details of the institute can also be seen by clicking on the view button. It contains the details of the institute, contact details, fee structure, academic structure, faculty details, facilities, training and placement details etc.

5.1.7 View Seat Matrix

The seat matrix will be published in public domain and any one can view. The seat matrix will have the various options for filtering seat matrix so that candidates can find out the intakes easily. Candidate can view the seat matrix institute wise, department wise, program wise, category wise etc.

5.1.8 View Institute wise Seat Allotment Result

A report will be published in public domain to view the institute wise seat allotment result. This will be have course wise minimum rank and maximum rank. Candidate can filter this list by institute wise.

5.2 Signed-in Applicant

After successful sign-in, the system will automatically redirect to the candidate's Home Page.

5.2.1 Visit Candidate's Home Page

- Home page will show the current status of the candidate.
- Home page may also contain the View Fee Payment Details, Candidate Profile, Choice Available, Choice Filling and Locking and Change Password.
- Further as per the schedule the links will be added like Online Withdrawal.

5.2.2 View Candidate Profile

Candidate can view the details submitted during registration like GATE examination details, candidate's personal details, qualifying degree details, bank details and uploaded document.

5.2.3 View Choice Availability

As per candidate eligibility and business rules, all valid choices will be shown to the candidate in terms of institute name and program name. Registered Candidate can view the available choices.

5.2.3.1 Filter Choices based on Institute Type/Institute/Program

All the available choices can be filtered by Institute Type or/and Institute Name or/and Program. Candidate can filter the choices as per selected parameters.

5.2.4 Choice Filling and Saving

5.2.4.1 Filter Choices based on Institute Type/Institute Name/Program Name

All the available choices can be filtered by Institute Type or/and Institute Name or/and Program. Candidate can filter the choices as per selected parameters.

5.2.4.2 Choices Filling

All registered candidates can submit their choices of Institute and course in order of their preference.

- Candidates can fill in as many choices in the order of preference as they wish to from the list of available choices.
- Candidates are permitted, if they so desire, to change or re-order their choices, delete earlier choices and add new choices any number of times until they save their final choices.
- Choices should be positively saved before last date & time failing which last saved choices will be consider for seat allotment.
- Choices submitted in the 1st round of counselling will be processed in 1st round only. Fresh choices submission will be permitted in 2nd of counselling.
- Registered candidates who do not exercise any choices will not be considered for seat allotment.

5.2.4.2.1 Add Choice

Choice filling page is divided into two panes. The left pane shows the all available choices and the right pane shows the all submitted choices. Candidates can add as many choices in the order of preference as they wish to from the left pane (available choices). As they press the "Add" button of left pane to add a particular choices, that choice will be added to the right pane and removed from the left pane. The choices submitted and resides in right pane will be considered as submitted choices.

5.2.4.2.2 Delete Submitted Choice(s)

Candidate can delete any submitted choice by pressing "Delete" button of right pane (submitted choices). As they press the “Delete” button of right pane, that choice will be removed from the right pane and will be added in left pane (list of available choice).

5.2.4.2.3 Move-Up

Candidate can move up any submitted choice by pressing "Move Up" button. As candidate presses the “Move Up” button, the choice will be shifted one place above and the above choice will be shifted one place down. So by doing this, candidate can move up any choice in the list of submitted choices.

5.2.4.2.4 Move-Down

Candidate can move down any submitted choice by pressing "Move Down" button. As candidate presses the “Move Down” button, the choice will be shifted one place down and the below choice will be shifted one place up. So by doing this, candidate can move down any choice in the list of submitted choices.

5.2.4.3 Arrange Filled Choices

There is a separate interface to arrange the filled choices. Candidate can delete, move up and move down any filled choice on single page.

5.2.4.4 Interchange Filled Choices

Candidate can interchange/swap two submitted choice by this interface. Two drop down list will be available on this page. These lists will be populated by the filled choices. Candidate will choose the different choices in the lists and press the interchange button. As candidate press the button, both the choices will be interchanged.

5.2.4.5 Rearrange Choices

A separate page will be available to change/edit the preference order of multiple submitted choices. All the submitted choices will be listed as per their preference order on this page and the preference

number will be in editable mode. Candidate can edit any preference order with a valid number and submit the choices with new preference orders.

5.2.4.6 Multiple Deletion of Filled Choices

If any candidate wants to delete multiple submitted choices in a single go, then he/she will choose this interface. For each submitted choices, there is a checkbox to select the choice. Candidate will select the multiple choices and press the delete button to delete at a go.

5.2.5 Print Saved Choices

Candidate may take printout of the saved choices.

5.2.6 Change Password

After login, the change password facility will be available to signed-in applicants. This form may ask old password, new password, confirm new password, security question and its answer with verification code to change the password. If old password matches and new password is as per the password policy then the form will be submitted and the password will be changed successfully.

5.2.7 Seat Allotment Result for each round

As per the schedule, seat allotment result of each round will be published on website. Candidate can view seat allotment result by login with login Id and Password. After each round of allotment, individual allotment result, institute wise allotment result and maximum & minimum rank list will be published.

5.2.7.1 View Seat Allotment Result

Candidate can login with login Id and Password and see the result. If seat is allotted then seat allotment result will be displayed which includes candidate's basic details (Login Id, Candidate Name, Father Name, Mother Name, Date of Birth, Gender, Category, Sub Category, ESM Priority etc.), qualifying degree details (passing status, passing year, qualifying degree, discipline name, marks details), allotment details and reporting centre and schedule.

5.2.7.2 Download Provisional Seat Allotment Letter

This letter may have the candidate's basic detail (Login Id, Candidate Name, Father Name, Mother Name, Date of Birth, Gender, Category, Sub category, ESM Priority), qualifying degree details (passing status, passing year, qualifying degree, discipline name, marks details), allotment details and important instructions for taking admission.

5.3 Organising Institute Administrator (Board Admin)

5.3.1 User Management

5.3.1.1 Create Participating Institute User (PI User)

The Board Admin will create the PI User by filling the user creation form. The form will ask salutation, name, designation, email address, mobile number and password details. The user id will be auto generated. System will force the PI user to change the password on first time login.

5.3.1.2 View PI User List

The system displays the drill-down summary of PI users. The system displays list of users for a given role from User Summary. The list contains user-id, user name, email, designation, address, mobile

number, verified, active status. The Board Admin can change the active status of the users and also can edit the information like address and other details.

5.3.2 Manage Master Directories

5.3.2.1 View Master Directories

Board Admin can only view the master directories data like Gender, Categories, Nationality, Institutes, State, Institute Type, Qualifying Discipline, Course details, Institute Special Eligibilities. The interface will display the code and descriptions.

5.3.3 Seat Matrix

5.3.3.1 View seat Matrix

Board Admin can view the seat matrix. He/she will select the institute type, institute name, department, program name and group name. After selection of parameters, the seat matrix will be shown and may contain the category and subcategory wise total intakes.

5.3.3.2 View Seat Matrix at a glance

Board Admin can view the seat matrix at a glance. He/she will select the institute type only and the report will show the institute wise and category wise total intakes along with the freezing status.

5.3.3.3 View Mapping of Institute, & Courses

Board Admin can view the mapping of Courses, Qualifying Degree and Institute. For this, board admin will select the institute name, department, Course, Qualifying Degree will shown as per the selected parameters.

5.3.4 Manage Registration & Choice Filling

5.3.4.1 View Site Monitoring

The system will show the statistics related to the registration and choice filling & locking. It shows total registered candidates, total fee paid candidates, total candidates who filled choices, total filled choices, category wise details, gender wise details and last registration time.

5.3.4.2 View Date wise Registration and Fee Payment

The system will show the date wise no. of registered candidates and no of candidates who have paid the registration fee.

5.3.4.3 Registration Initialization

Board Admin will have the rights of registration initialization. If a candidate submits any wrong details during registration and wants to correct then he/she will approach to the board admin and board admin will perform registration initialization. For this, admin will enter the Login id, name and date of birth and submit. After validation of data, board admin will be allowed to initialize the registration and will ensure that the same candidate should get re-registered.

5.3.4.4 View List of Initialized Candidates

The system will show the list of those candidates whose registration have been initialized. It may be filter date wise and contain Login Id, Name, Initialization Date along with the registration status whether the candidate has re-registered or not.

5.3.4.5 Bank Summary (ICICI BANK)

The system will show the date wise and for particular candidate report. It may have Login id, customer id, candidate name, transaction id, transaction date, fee type and amount. Board Admin can also download this report in excel format.

5.3.4.6 View Range of Submitted Choices

The system will display a report, which will show number of candidates who have not submitted no choices (zero choice), total candidates who have submitted 1 to 10 choices, 11 to 50 choices, 51 to 100 choices, 101 to 200 choices, 201 and above choices.

5.3.4.7 Edit Candidate Mobile No/Email Id

Board Admin can edit candidate's mobile number or email address. For this, board admin will enter Login id and will submit the form. After submission, mobile number and email address will be shown in editable mode and can be edited.

5.3.4.8 View Candidate Choice Preferences: Institute Wise

The system will show the report which has the list of institutes along with the total number of candidates who have submitted as a choice of that respective institute.

5.3.4.9 View Candidate Choice Preferences: Course Wise

The system will show the report which has the list of Courses along with the total number of candidates who have submitted as a choice of that respective institute.

5.3.4.10 View Candidate Choice Preferences: Institute & Course Wise

The system will show the report which has the list of Institutes and Courses along with the total number of candidates who have submitted as a choice of that respective institute and program.

5.3.4.11 View Candidate Profile

Board Admin can view the history of a candidate. Board admin will enter the Login id and press the submit button. After submission, the report having the entire details of the candidate as per their stage. It may contain candidate's basic details, registration details, submitted choices, allotment details, fee details, document verification details, PI reporting details etc.

5.3.4.12 Audit Reports

The system will display the audit reports of all the users as well as for the candidates.

5.3.4.12.1 View Admin Login Session Summary

Board Admin will choose the official name from the list of all users. The system will display the login session summary of that user in ascending order of date and time. The report may contain user name, user id, ip address, activity and activity date and time.

5.3.4.12.2 View Candidate Login Session Summary

Board Admin will enter the Login id of the candidate. As admin will submit, the system will display the login session summary of that candidate in ascending order of date and time. The report may contain application number, activity, ip address and activity date and time.

5.3.5 Manage Online Reporting

5.3.5.1 View Allotment Dashboard

This is a dashboard related to the seat allotment for each round. It may contain registration details (total registered candidates, total registered and fee paid candidates, fee paid and submitted choices, total ineligible candidates, total candidates who have not filled any choice), seat allotment details (category wise total offered seats, allotted seats and balance seats), cancelled candidate status and reporting status.

5.3.5.2 View Institute Wise Allotment Status

Board Admin can view allotment & reporting status. This report contains the Institute Name, Total Allotments, Total Seat Confirmed and Total Seat cancelled. Total allotments, total seat confirmed and total seat cancelled will be clickable. After clicking on link Board Admin can view the details of candidates containing Login id, course, allotted seat type, candidate category, reporting date and reporting status whether the candidate is reported or not.

5.3.5.3 Date Wise Cancelled Seats

The system will generate a report contains the list of candidates whose seat has been cancelled during document verification. This report may have Login id, course, allotted seat type, candidate category, reporting date, changes occurred during the document verification.

5.4 Participating Institution Module (PI User)

5.4.1 Sign-in

For sign-in, PI User will enter the user id and password provided by the Board Admin. As PI User will login first time, the system will force him/her to change the password. After changing the password, system will show a customized home page specific to PI user.

5.4.2 Visit Home Page

After successful login, the system will automatically redirect to the home page. Home page will show the logged in user details, last login history and the available services for PI User.

5.4.3 View Master Directories

PI can only view the master directories data like Gender, Categories, Nationality, Institutes, State, Institute Type, Qualifying Discipline, course, Institute Special Eligibilities. The interface will display the code and descriptions.

5.4.3.1 View Dashboard

This is a dashboard related to the seat allotment for each round. It may contain seat allotment details like category wise total offered seats, allotted seats and balance seats. It may also have total fresh allotment, total candidates who have retained their last allotted seats and total upgraded candidates.

5.4.3.2 View Institute wise Seat Allotment Result for each round

PI User can see the list of allotted candidates of his/her institute in each round. This report will have the candidate's basic details (like Login id, candidate name, candidate's category, sub category, ESM priority, gender, dob), allotment details (allotted course, allotted seat type, allotted choice number, round number).

5.4.3.3 Physical Reporting

5.4.3.3.1 List of Eligible Candidates for PI Reporting

The system will show a list of eligible candidate for PI Reporting in PI Admin role. Every PI admin can have only his/her institutes list. This list may have basic details (like Login id, candidate name, candidate's category, sub category, ESM priority, gender, dob), allotment details (allotted course, allotted seat type, allotted choice number, round number The registration id will be clickable and after click on this, system will prompt an authentication form.

5.4.3.3.2 Authentication form for PI reporting

As PI admin click on the Login id, the authentication form will be shown. Login id will be pre-printed and text box for entering date of birth will be prompted. PI admin will enter the date and submit the form. After verify the inputs, system will show the candidate details page and will asked for confirming the PI reporting.

5.4.3.3.3 Confirm PI Reporting

The page will have the candidate's basic details, qualifying degree details, allotment details and all types of fee payment details. After confirmation, physical reporting participation slip will be generated.

5.4.3.3.4 Physical Reporting Participation Slip

Physical reporting participation slip will have the candidate's basic details, qualifying degree details, allotment details and all types of fee payment details. This slip will be signed by the PI admin and candidate.

5.4.3.3.5 Reprint PI Reporting Slip

For re-printing the PI Reporting Slip, PI admin will enter Login id and date of birth of the candidate. After successful verification, Physical Reporting Participation Slip will be generated.

5.5 Website Content Manager

Content Management System (CMS) is a software application that is used to manage digital information on the website through creating and maintaining content without prior knowledge of web programming. It is very easy to maintain the website through CMS. There will be separate user for website management. Website has the three sections to maintain the information available to public. Website Content Manager can perform the following tasks.

- Manage links of top menu bar.
- Manage the links of current event.
- Manage the links/link buttons in centre section.
- Create/update the news.
- Manage the important links.
- Publishing of any information.

6 Concept of Proposed System

6.1 Operational concepts

6.1.1 Operational policies and constraints

6.1.2 Description of the proposed system

6.1.3 Modes of system operation

6.1.4 User classes and other involved personnel

6.1.5 Support environment

The proposed system will be web based solution and it will be accessible using any popular browser. Only designated user can login and performed the operation as per their predefined role.

6.2 Operational scenarios

1. Candidate Login Process
   - Fill Login Form entering Login id, password, security verification code (captcha).
   - On successful login, the system displays candidate's home.
2. Registration Process
   - The candidate will fill the personal details; contact details and chooses password, security question and its answer.
3. Choice Filling and Locking
   - After successful registration, candidate can fill the choices and rearrange them as per their preferences.
4. Result Publication
   - After seat allotment, candidate will view the seat allotment result by logging into the system.
5. Physical Reporting
   For finalizing the admission, candidates are required to physically reported at allotted institute

7 Project constraints

The system is to be customised within limited time.

7.1 General and Design Constraints

- The Proposed Application system will be an internet based (except Offline Module) which will be designed, developed and centrally hosted in .Net Framework in NIC's Data Centre located at Delhi. The users will be accessing the software application using popular latest browsers (IE, Mozilla Firefox, and Google Chrome).
- Rank Generation and Seat Allocation module will be offline system and will be running at local system

8 Appendix

8.1 Acronyms and Abbreviations

Item	Description
Web based e-Counselling	Online Form Filling & Submission of Choices from any Internet point
Provisional Admissions at PI.	Verification of documents, fees and acknowledging provisional admission
Participating Institute (PI)	An Institute participating in counselling.
Help Center	An Institute providing help to the candidate for training, registration, choice selection, saving etc.
Course/stream	Stream like Engineering
Branch	Discipline under which candidate would be offered a seat
Counselees	Candidates Qualified for Counselling
Seat Allotment	Seat allotted on the basis of merit Number (Rank) provided by the IKGPTU
Bank	A bank designated by IKGPTU for collection of counselling fee
Registration fee	As per Appendix V
Open Category	Seat available for all
Reserved categories	SC/ST,BC,T-Sunami(TS), SP,FF, BA, BR, DF, RT, PM, DP-Blind, DP-Deaf, DP-Others
Seat matrix	A table showing the available seats and their bifurcation among different categories as per the reservation policy of the state. The seat matrices are institute, course/ branch and categories wise
MERIT NUMBER(RANK)	Unique Position of the counselees as defined and provided by IKGPTU
Intake	Sanctioned Intake as per AICTE (seats in a discipline)
StRS	Stakeholder Requirement Specification

8.2 Master Directories

8.2.1 Engineering Four Years Degree programmes

Course Code	Course Name	Short Name
1	APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING	AEIE
2	AUTOMOBILE ENGINEERING	AE
3	BIO MEDICAL ENGINEERING	BME
4	BIO TECHNOLOGY	BT
5	CHEMICAL ENGINEERING	CHE
6	CIVIL ENGINEERING	CIVIL
7	COMPUTER ENGINEERING	CE

8	COMPUTER SCIENCE & ENGINEERING	CSE
9	ELECTRICAL ENGINEERING	EE
10	ELECTRICAL AND ELECTRONICS ENGINEERING	EEE
11	ELECTRONICS & COMMUNICATION ENGINEERING	ECE
12	ELECTRONICS AND ELECTRICAL COMMUNICATION ENGINEERING	EECE
13	ELECTRONICS AND INSTRUMENTATION ENGINEERING	EIE
14	FOOD TECHNOLOGY	FT
15	INDUSTRIAL ENGINEERING	IE
16	INFORMATION TECHNOLOGY	IT
17	INSTRUMENTATION AND CONTROL ENGINEERING	ICE
18	MECHANICAL ENGINEERING	ME
19	PRODUCTION ENGINEERING	PE
20	TEXTILE CHEMISTRY	TXC
21	TEXTILE ENGINEERING	TXE
22	AGRICULTURAL ENGINEERING	AGR

B. Pharmacy 4 year Degree Course & Fee Waiver Course

B. Architecture 4 years Degree Course

Engineering Master Degree Courses (M.Tech):

Course Code	Course Name	Short Name
1.	Bio Technology	
2.	Chemical Engineering	
3.	Civil Engineering (Construction Technology & Management)	
4.	Geo Technical Engineering	
5.	Soil Mechanics & Foundation Engineering	
6.	Structural Engineering	
7.	Computer Science & Engineering	
8.	Information Technology	
9.	CAD / CAM	
10.	Mechanical Engineering (Machine Design)	
11.	Mechanical Engineering (Production Engineering)	
12.	Mechanical Engineering (Thermal Engineering)	
13.	Electronics Product Design	
14.	Electronics & Communication Engineering	
15.	Micro Electronics	
16.	Electrical Engineering	
17.	Power Engineering	
18.	Energy Engineering	
19.	Environmental Science & Engineering	

20.	Industrial Engineering	
21.	Textile Engineering	
22.	VLSI Design	
23.	E Security	
24.	Robotics and Mechatronics	
25.	Instrumentation & Control Engineering	
26.	Nano Technology / Nano Science Technology	
27.	Embedded System	

Pharmacy Master Degree Courses:

1	M. Pharmacy Pharmaceutics	
2	M. Pharmacy Pharmacognosy	
3	M. Pharmacy Pharmacology	
4	M. Pharmacy Pharmaceutical Analysis	
5	M. Pharmacy Pharmaceutical Chemistry	

Note: NIC shall provide the complete database of all the candidates, applied and registered on line to IKGPTU. IKGPTU will process the data as per admission rules and criteria and prepare the merit list of all eligible candidates along with reserved category candidates. IKGPTU will provide the same database to NIC after inserting merit rank of eligible candidates**.**

8.2.2 M.Tech – Course wise Eligibility

Sr No	Courses	Eligibility
1.	Bio Technology	B. Tech. Bio Technology/ B. Pharmacy/ M.Sc. Life Sciences
2.	Chemical Engineering	B.E. / B. Tech. in Chemical Engineering
3.	Civil Engineering (Construction Technology & Management)	B.E. / B. Tech. in Civil Engineering
4.	Geo Technical Engineering	
5.	Soil Mechanics & Foundation Engineering	
6.	Structural Engineering	
7.	Computer Science & Engineering	B.E. / B. Tech. in Computer Science Engineering / IT
8.	Information Technology	
9.	CAD / CAM	B.E. / B. Tech. in Mechanical / Industrial / Production / Manufacturing / Welding / Material Science / Metallurgy Engineering
10.	Mechanical Engineering (Machine Design)	
11.	Mechanical Engineering (Production Engineering)	
12.	Mechanical Engineering (Thermal Engineering)	
13.	Electronics Product Design	B.E. / B. Tech. in Electronics & Communication / Electronics & Instrumentation / Applied Electronics / Instrumentation & Control / Electrical & Electronics Engineering M Sc in Physics (with specialization in Electronics)
14.	Electronics & Communication Engineering	
15.	Micro Electronics	

16.	Electrical Engineering	B.E. / B. Tech. in Electrical / Electronics & Instrumentation /Applied Electronics / Instrumentations & Control / Electrical & Electronics Engineering
17.	Power Engineering	
18.	Energy Engineering	B.E. / B. Tech. in any Branch of Engineering
19.	Environmental Science & Engineering	
20.	Industrial Engineering	
21.	Textile Engineering	B.E. / B. Tech. in Textile Engineering
22.	VLSI Design	B.E. / B. Tech. in Electronics & Communication / Electrical Engineering / Electronics & Instrumentation / Electrical & Electronics / CSE / IT / Control / Micro Electronics Engineering
23.	E Security	B. Tech. CSE/IT/ECE/EIE
24.	Robotics and Mechatronics	B.E. / B. Tech. in Electronics & Communication / Electrical Engineering /Mechanical Engg. & Industrial Engg..
25.	Instrumentation & Control Engineering	B. E./ B. Tech. in Electronics and Communication / Electronics and Instrumentation/ Applied Electronics / Instrumentation & Control / Electrical and Electronics Engineering / Electrical Engg. / M Sc in Physics (with specialization in Electronics)
26.	Nano Technology / Nano Science Technology	B.E. / B. Tech. (All branches), M.Sc. Zoology / Life Sciences / Physics/ Chemsitry / Bio-technology
27.	Embedded System	B.E. / B. Tech. in Electronics & Communication / Electronics & Instrumentation / Applied Electronics / Instrumentation & Control / Electrical & Electronics Engineering / M. Sc. in Physics (with specialization in Electronics)

8.2.3 Statistics summary

No. of Participating Institutes	44
No. of Departments	75
No. of ME Programs	274
No. of Qualifying Discipline	394
Total No. of Seats	9911

8.2.4 Institutes

Institute Name	Institute Type	Controlling University
Giani Zail Singh Campus College of Engg. & Tech., MRSPTU, Bathinda, PIN-151001	G	MRSPTU
Shaheed Bhagat Singh State Technical Campus, Moga Raod, NH-95, Ferozepur-152004 (Govt Promoted and UGC Autonomous college)	G	IKGPTU

Beant College of Engg. and Tech., Village Bariar, Amritsar – Pathankot G.T. Road, Gurdaspur- 143 521 (Govt Promoted and UGC Autonomus College)	G	IKGPTU
Malout Institute of Mangement and Information Technology, Green Field Enclave, Near New Grain Market, Malout-142107 . (Govt Promoted college)	G	IKGPTU
Baba Hira Singh Bhattal Institute of Engineering & Technology, Sunam Jakhal Road, Lehragaga, Sangrur 148031	G	IKGPTU
Guru Nanak Dev Engineering College, Ludhiana - 141 006, Punjab (Govt Aided and UGC Autonomous College)	A	IKGPTU
Aklia Education and Research Society Group of Institutions, Bathinda	P	MRSPTU
Aman Bhalla Institute of Engineering & Technology, Jammu Amristar Highway, Canal Side, Kotli PO Jhakolari, Pathankot	P	IKGPTU
Amritsar College of Engg. and Tech., G.T. Road near Manawala, Amritsar - 143001 (UGC Autonomus Colllege)	P	IKGPTU
Anand College of Engineering & Management, Opposite Rail Coach Factory, Sultanpur, Distt Kapurthala	P	IKGPTU
Apeejay Institute of Management & Engineering Technical Campus, Rama Mandi, Jalandhar, 144007	P	IKGPTU
Aryabhatta Group of Institutions, Barnala. PIN-148101	P	MRSPTU
Asra College of Engineering & Technology, Patiala-Sangrur Highway, Village Rajpura, Tehsil Bhawanigarh,District Sangrur. PIN 148026.	P	MRSPTU
Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib-140407	A	IKGPTU
Baba Farid College of Engineering & Technology, Village Deon, Muktsar Road, Bathinda. PIN-151001	P	MRSPTU
Baba Kuma Singh Ji Engineering College, Gurdwara Guru Sar Satlani Sahib, VPO Hushiar Nagar Tehsil & Distt. Amritsar	P	IKGPTU
Bahra Group of Institutes, Village Bhedpur, District Patiala. PIN-147001	P	MRSPTU
Bhai Gurdas Institute of Engineering and Technology, Main Patiala-Sangrur Road, Sangrur -148001	P	IKGPTU
Bharat Group of Colleges, Village KheraKhurad, Delhi Road, Sardulgarh, District Mansa. PIN-151507	P	MRSPTU
Bhutta College of Engineering & Technology. , Ludhiana	P	IKGPTU
CGC College of Engineering, Landran, Mohali	P	IKGPTU
CGC College of Engineering, Landran, Mohali (Evening Shift)	P	IKGPTU
CGC Technical Campus (Engineering), Jhanjeri, Mohali	P	IKGPTU
CGC Technical Campus (Engineering), Jhanjeri, Mohali (Evening Shift)	P	IKGPTU
Chandigarh Engineering College, Landran, Mohali	P	IKGPTU
Chandigarh Engineering College, Landran, Mohali (Evening Shift)	P	IKGPTU
CT Institute of Engineering, Management & Technology, Shahpur, Jalandhar	P	IKGPTU
CT Institute of Technology & Research, Greater Kailash, Maqsudan, Jalandhar	P	IKGPTU
CT Institute of Technology, Vill Shahpur P. O. Udopur, Teh. & Distt. Jalandhar	P	IKGPTU
D A V Institute of Engineering and Technology, Kabir Nagar, Jalandhar	P	IKGPTU

Desh Bhagat Foundation Group of Institutions, Ferozepur Road, Moga. PIN-142001	P	MRSPTU
Doaba Institute of Engineering & Technology (DIET), Village Ghataur PO Allapur Tehsil Kharar Distt. SAS Nagar Mohali	P	IKGPTU
Doaba Khalsa Trust Group of Institutions, Village Chhokran, PO Rahon, Tehsil & Distt. Nawansharhr 1. Faculty of Engineering	P	IKGPTU
Ferozepur College of Engineering & Technology, Village Ferozeshah, District Ferozepur. PIN-142052	P	MRSPTU
GGS College of Modern Technology, Kharar, Mohali	P	IKGPTU
Global College of Engineering & Technology, Kahnpur Khui, Anandpur Sahib – Garhsankar Road, Distt. Ropar	P	IKGPTU
Global Institute of Management and Emerging Technologies, Village Sohian Khurd, Amrtisar - Batala Road, Amritsar	P	IKGPTU
Golden College of Engineering & Technology, Prem Nagar, Gurdaspur	P	IKGPTU
College of Agricultural Engineering and Technology, Punjab Agricultural University	G	PAU
Gulzar College of Engineering, Village Libra, Tehsil Khanna, Distt. Ludhiana	P	IKGPTU
Gulzar Educational & Charitable Trust Group of Institutes, Ludhiana	P	IKGPTU
Guru Nanak Institute of Engineering & Management, Village Naushehra (Dalewal) PO Hariana Tehsil & Distt. Hoshiarpur	P	IKGPTU
Guru Ram Dass Institute of Engineering & Technology, 19 Km Mile Stone, Bathinda Barnala Highway,Village Lehra Bega, Tehsil Nathana, District Bathinda. PIN-151311	P	MRSPTU
Guru Teg Bahadur Khalsa Institute of Engineering & Technology, VPO Chhapianwali, Tehsil Malout, Distt. Sri Muktsar Sahib	P	IKGPTU
Indo Global College of Engineering, Village Abhipur, Tehsil Kharar, Distt. Mohali	P	IKGPTU
Institute of Engineering & Technology, Bhaddal (Ropar), Technical Campus P. O. Mianpur,Distt Ropar	P	IKGPTU
KCT College of Engineering & Technology, Village Fatehgarh, Tehsil Sunam, Distt. Sangrur	P	MRSPTU
Khalsa College of Engineering & Technology, Amritsar	P	IKGPTU
Lala Lajpat Rai Institute of Engineering & Technology, Moga-Ferozepur G.T. Road, Moga. PIN-142001	P	MRSPTU
Ludhiana College of Engineering & Technology, Katani Kalan, Ludhiana	P	IKGPTU
Ludhiana Group of Colleges, Chowk Chowkimann, Village Mann, Ferozepur Highway, Ludhiana	P	IKGPTU
Lyallpur Khalsa College of Engineering, Cantt Road, Jalandhar	P	IKGPTU
M. K. Education Societies Group of Institutions, Amritsar, Distt. Amritsar	P	IKGPTU
Modern Group of Colleges (Engineering), Mukerian	P	IKGPTU
Patiala Institute of Engineering & Technology, Sirhind Road, Village NandpurKesho, District Patiala. PIN-147004	P	MRSPTU
PCTE Institute of Engineering & Technology, PCTE Campus, Jhande, Ludhiana	P	IKGPTU
Punjab College of Engineering & Technology, Lalru Mandi, Mohali	P	IKGPTU
Quest Infosys Foundation Group of Institutions, Village Jhanjeri, Tehsil, Kharar, Distt. Mohali	P	IKGPTU

Radical Technical Institute, VPO Thande, Khaperkheri, Distt. Amritsar	P	IKGPTU
Ram Devi Jindal Educational Charitable Society Group of Institutions, Village Basoli, P. O Lalru, Tehsil Derabassi, Distt. Mohali 1. Faculty of Engineering	P	IKGPTU
Guru Nanak Dev Engineering College, Ludhiana - 141 006, Punjab (Evening Shift) - Govt Aided and UGC Autonomous college	A	IKGPTU
Ramgarhia Institute of Engineering & Technology, Phagwara,	P	IKGPTU
Rayat Group of Institutions, Vill. Railmajra, Distt. Saheed Bhagat Singh Nagar (Nawanshahr)	P	IKGPTU
Rayat-Bahra Institute of Engineering & Nano Technology, Hoshiarpur	P	IKGPTU
S. Sukhjinder Singh Engineering & Technology College, Gurdaspur	P	IKGPTU
Satyam Institute of Engineering & Technology, Village Kotla Doom, Ram Tirath, Amritsar	P	IKGPTU
Shaheed Udham Singh College of Engineering & Technology, Tangori, Distt. SAS Nagar Mohali	P	IKGPTU
Shivshankar Institute of Engineering & Technology, Patti, Tarn Taran	P	IKGPTU
Sri Sai College of Engineering & Technology, VPO Badhani, Distt. Pathankot	P	IKGPTU
Sri Sai College of Engineering & Technology, VPO Badhani, Distt. Pathankot (Evening Shift)	P	IKGPTU
Sri Sukhmani Institute of Engineering & Technology, Derabassi, Mohali	P	IKGPTU
St. Soldier Group of Institutions, Jalandhar-Amritsar Bye Pass, Jalandhar	P	IKGPTU
Sukhjinder Technical Campus (Engineering Wing), VPO Dunera, Tehsil Dhar Kalan, District Pathankot	P	IKGPTU
SUS Engineering College, Village Tangori, PO Motemajra, Tehsil & Distt. SAS Mohali	P	IKGPTU
Swami Parmanand College of Engineering & Technology, Vill. Jaulan Kalan, Lalru, Tehsil Derabassi, Distt. SAS Nagar Mohali	P	IKGPTU
Swami Sarvanand Institute of Engineering & Technology, Near Dayanand Math, G. T. Road, Dinanagar, District Gurdaspur	P	IKGPTU
I.K. Gujral Punjab Technical University, Main Campus, Kapurthala	G	IKGPTU
I.K. Gujral Punjab Technical University, Campus, Amritsar	G	IKGPTU
I.K. Gujral Punjab Technical University Campus, Mohali - I	G	IKGPTU
Tawi Engineering College, Shahpur Kandi, Tehsil Dhar Kalan, Distt. Pathankot	P	IKGPTU
I K Gujral Punjab Technical Univerity Campus, Hoshiarpur	G	IKGPTU
Universal Group of Institutions, PO Lalru, Tehsil Derabassi, Distt. Mohali	P	IKGPTU