



National Informatics Centre Services Inc.

(A Government of India Enterprise Under NIC)

Ministry of Electronics and Information Technology
Hall No. 2 & 3, 6th Floor, NBCC Tower, 15 Bhikaji Cama Place, New Delhi-66
Tele: 011-22900533 Fax: 91-11-26105212 Email: pi@nicSI.nic.in

PROFORMA INVOICE

Invoice No.:	PPCPB210099	Ref. No.:	121066(PC)
Date:	21/05/2021	Ref. Date:	21/05/2021

PAC Project ID : 200028

To:	Name: I.K.GUJRAL PUNJAB TECHNICAL UNIVERSITY JALANDHAR Address: KAPURTHALA HIGHWAY, POST BAG NO 1, KAPURTHALA,Punjab GSTIN No.: 03AAAJP1130G2ZS Contact No.: Email: amolak.kalsi@nic.in
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S. No.	Details Of Services Required Under Various Heads	Basic Cost	CGST on (A)	SGST on (A)	IGST on (A)	Total Proposed Amount
		(A)	(B)	(C)	(D)	(E)
1	eCounselling and Admission Services for IKG Punjab Technical University for Session 2021	27,04,960.00	0% / 0.00	0% / 0.00	18% / 4,86,892.80	31,91,852.80
	Total(Rs.)	27,04,960.00	0.00	0.00	4,86,892.80	31,91,852.80

(i) Payment can be made through RTGS/NEFT in NICSIs account in ICICI BANK IFSC Code: ICIC0000104 A/C No.: NICSIPPCPB210099 Branch: ICICI BANK CMS OR through A/C Payee Demand Draft/ Cheque in favour of NICSIPPCPB210099 Payable at ICICI BANK, New Delhi	(1) Total Amount	27,04,960.00
OR	(2) CGST Payable (Applicable as per above)	0.00
(ii) Payment can be made through RTGS/NEFT in NICSIs account in Union Bank of India IFSC Code: UBIN0996335 A/C No.: NICSIPPCPB210099 Branch: Union Bank of India, CMS HUB, Bangalore OR through A/C Payee Demand Draft/ Cheque in favour of NICSIPPCPB210099 Payable at any branch of Union Bank of India	(3) SGST Payable (Applicable as per above)	0.00
(iii) Payment can be made through PFMS in NICSIs account in ICICI Bank ICICI Bank A/c No.: 032201002813 & IFSC Code.: ICIC0000322 GSTIN No.: 07AAACN2185J1ZE N No.: AAACN2185J	(4) IGST Payable (Applicable as per above)	4,86,892.80
	Gross Amount Payable (1+2+3+4)	31,91,853.00
	Rupees: Thirty One Lakh Ninety One Thousand Eight Hundred Fifty Three only	
	It is obligatory to share Proforma Invoice (PI) number and/or Project number while transferring the amount to NICSIs for seamless tracing of funds.	

Note: In Case of any query or clarification in the Proforma-Invoice(PI), the concerned Project Manager (**Mahendra Pal**) at **New Delhi (HQ)** shall be contacted. The Contact No. and email-id is **mpal@nic.in**

S.No.	Terms & Conditions
1	The above Prices are inclusive of NICSIs Operating Margin @ 7 % (NICSIs Operating Margin slabs are @7% for PI value up to 50 Cr., @5% for PI Value above 50 Cr.)
2	The items proposed to be procured by the user will be subject to availability of the same with NICSIs. The rates in the Purchase Order (PO) will be applicable as per prevailing rates on the date of issue of PO.
3	Any modification in the Item description is to be intimated to NICSIs and the respective rates may vary depending upon the change/modification request.
4	Procedure for the Selection of Vendor/Agency from the List of NICSIs Empanelled vendors/agencies for award/assignment of work: Case-I : (Name of vendor/agency selected directly) In case the client/User-Department clearly and specifically recommends in writing the name of a particular vendor/agency from the list of NICSIs Empanelled vendors/agencies, then NICSIs may assign the work to that vendor/agency. Case-II : (Name of vendor/agency selected through committee) I. In case the Client/User-Department does not indicate any particular vendor/agency from the list of NICSIs empanelled vendors/agencies, the work would be awarded as per the recommendations of a Committee to be set up by the client/user-department. The Committee would be headed by a Chairperson nominated from the client/user-department concerned and would include a representative of NICSIs as well. II. All the empanelled vendors/Agencies would be invited by the Committee to make their presentations regarding the proposed work/project under consideration. The presentations shall be evaluated objectively and on the recommendation of the Committee the most suitable vendor/agency shall be assigned the work by NICSIs. III. There should be full participation and involvement of the client/User-Department in the process of selection of


Dean (Academics)

I. K. Gujral Punjab Technical University

Jalandhar-Kapurthala Highway, Kapurthala

vendor/agency for award/assignment of work.	
4	Project progress would be monitored by user-department/client.
5	The penal interest and penalty as per GST Act against reversal of input tax credit for non-payment of vendor invoices within 180 days will be charged from user department under respective project, if funds are not available in the project due to non-payment by user department to NICS I.
6	In case TDS is being deducted on IT/GST, the TDS certificates should be provided along with the covering letter to NICS I indicating the amount of TDS deducted, otherwise the work-order would be issued within the funds received.
7	The project will be executed by the empanelled vendor/agency of NICS I subject to the terms & conditions defined therein in the empanelment / tender document / work order or any other subsequent / extension agreement / order. The user department shall not impose any other terms & conditions, not mention on the aforesaid documents, on the empanelled vendor/NICS I.
8	Only those penalties / damages, which are defined in the empanelment / tender document, may be imposed upon the empanelled agency by the NICS I for good and sufficient reasons after following the prescribed procedure of NICS I.
9	In case the user department finds that the empanelled vendor / agency has committed a substantial default and intends to impose a penalty and seek damages on it, other than those defined in the empanelment / tender document, then it may forward the relevant details, within three months of the date of closure of the POWO, to NICS I for examination and decision from NICS I end. The decision of NICS I shall be final and binding on parties.
10	Placement of work-order shall be after receiving 100% Advance Payment from user-department/client through RTGS/NEFT or Demand-Draft/Cheque, as per the details mentioned above. (Charges towards the Demand Draft is to be borne by the user/client). No interest will be paid on advances (Non Grant-In-Aid projects).
11	While placing the order to NICS I, the complete details of the user-department/client (including the location where the manpower is to be deployed) viz, name, address, contact numbers and e-mail address are to be mentioned. In addition to above, please also mention the Amount-Paid along with the DD/Cheque/UTR-number, Date, PI number & other Project information in the attached "Project-Execution Form" and send it to NICS I, New Delhi through concerned NICS I/NIC-Project Coordinator or through email in projects-nicsi@nic.in .
12	PI for the project, not approved through NIC PAC/PRISM approval process, is issued on the basis of the requirement/request received from the User Department. In such case it is assumed that NIC resources would not be required during the execution period of the project. If PAC/PRISM number is not mentioned, it is assumed that NIC resources would not be required during the execution period of the project.
13	User Department/Client should inform to NICS I within 7 days from the receipt of this Proforma Invoice or placing the Purchase/Work Order, whichever is earlier, about any tax (TDS, GST etc.) exemption or concessions availed by them. In case no such information is received from the User Department/Client within the stipulated time, it is assumed that no exemption/concession is availed by the User Department/Client and NICS I shall not be responsible/liable for any damage caused to them.
E & OE	
For prompt service, you may like to attach the copy of this Proforma-Invoice (PI) along with your Letter/ Purchase-order.	
Date: 21/05/2021	For National Informatics Centre Services Inc.
(Authorized Signatory)	
"For any query, please contact NICS I Helpdesk: 011-22900548, 22900533 pi@nicsi.nic.in"	

Digitally signed by VIVEK GUPTA
Date: Tue May 25 15:25:01 IST 2021


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I. K. Gujral Punjab Technical University
Jalandhar-Kapurthala Highway, Kapurthala

**Memorandum of Understanding
for
Support and Extensibility
of
IKGPTU-2021
for
e-Counselling and Admission Services**

Amongst

**Inder Kumar Gujral Punjab Technical University
Jalandhar**

With

**National Informatics Centre (NIC)
Ministry of Electronics & Information Technology
Government of India**

And

National Informatics Centre Services Incorporated (NICSI)

**(A Section 8 Company under the Companies Act, 2013) (Erstwhile Section 25 Company
under the Companies Act, 1956)- (a Government of India Enterprise under NIC)**

**Ministry of Electronics & Information Technology
Government of India**


Registrar
IKGPTU
I.K. Gujral Punjab Technical University
Jalandhar


Dean (Academics)
I. K. Gujral Punjab Technical University
Jalandhar-Kapurthala Highway, Kapurthala

NIC




Sunny Jain

सन्धी जीव / Sunny Jain
कंपनी सचिव / Company Secretary
नेशनल इन्फोमेटिक्स सेंटर सर्विसेस इन्कॉर्पोरेटेड
National Informatics Centre Services Incorporated
प्रथम तल, एन सी सी टॉवर / 1st Floor, NICSI Tower
15, Bhikaji Cama Place, New Delhi-110066
NICSI

Memorandum of Understanding (MoU)

amongst

Inder Kumar Gujral Punjab Technical University (IKGPTU),
National Informatics Centre (NIC) and
National Informatics Centre Services Inc. (NICS)
for the support and extensibility of
e-Counselling and Admission Services- IKGPTU-2021

This MoU has been made on July-2021

AMONGST

Inder Kumar Gujral Punjab Technical University (IKGPTU) represented by Dean (Academics) -cum- Chief Coordinator as Head of User Department, through Authorized Signatory Registrar, hereinafter referred to as "User Department" (which expression shall unless excluded by or repugnant to the context be deemed to include his/her successor in office or assignee) of the FIRST PART

WITH

NATIONAL INFORMATICS CENTRE, New Delhi, Ministry of Electronics & Information Technology, Government of India represented by Head of Group (Education) through concerned Head of Division as Authorized Signatory (hereinafter referred to as "NIC" which expression shall unless excluded by or repugnant to the context be deemed to include his/her successor in office or assignee) of the SECOND PART

AND

NATIONAL INFORMATICS CENTRE SERVICES INCORPORATED, New Delhi, a section 8 Company under the Companies Act, 2013 (erstwhile section 25 Company under the Companies Act, 1956) a Government of India enterprises under NIC, Ministry of Electronics and Information Technology represented by Managing Director through Company Secretary as Authorized Signatory, hereinafter referred to as "NICS" which expression shall unless excluded by or repugnant to the context be deemed to include his/her successor in office or assignee) of the THIRD PART


User Department, NIC and NICS shall hereby individually referred as "Party" and collectively referred as "Parties"

Inder Kumar Gujral Punjab Technical University (IKGPTU) 2021 hereby referred as "Project"

e-Counselling and Admission Services hereby referred as "Project Activities"

Whereas, User Department wants to entrust NIC and NICS to provide professional and technical expertise, consultancy and services relating to support and extensibility of Project for various Project Activities conducted by User Department and as mentioned in the scope of work.

It is hereby agreed and declared that the afore mentioned automation of Project and processes for the set duration of Project Activities, the following would be the scope, roles and responsibilities of all Parties.


Dean (Academics)
I. K. Gujral Punjab Technical University
Jalandhar-Kapurthala Highway, Kapurthala


Registrar
IKGPTU
Jalandhar


NIC


NICS

रानी जैन / Sunny Jain
कंपनी सचिव / Company Secretary
नेशनल इन्फोमेटिक्स सेंटर सर्विसेज इन्कॉर्पोरेटेड
National Informatics Centre Services Incorporated
प्रथम तल, एन.टी.सी.सी. टॉवर / 1st Floor, NBCC Tower
15 भिकराजी कामा प्लेस, नई दिल्ली-110056

NICS

I. **Scope of Work**

Support and extensibility services as per the Project Proposal (PP) finalized on mutual consultations by all the Parties. The services will have the broad functionalities defined as per the Project Proposal and approved Stakeholder Requirement Specification (StRS). Project Activities considered under the scope are as follows:

❖ **e-Counselling and Admission Services for**

- B.Tech 1st Year
- B.Pharmacy 1st Year
- B.Arch 1st Year
- Lateral Entry to B.Tech (Diploma and +3 Science Passout),
- Lateral Entry to B.Pharmacy
- MBA, MCA
- M.Tech.

Additional request for providing services for Project Activities apart from the ones listed in this MoU would be processed after discussions and mutual consent between all Parties. Separate Project Proposal may be proposed, for extension or for major changes required. Revised estimates would be provided as per scope of work for additional Project Activities.

II. **Validity, Duration and Extension of the MoU**

This MoU shall be applicable from the date of transfer of funds to NICS or MOU date, whichever is earlier. The validity of MoU will be for one year. If required, a decision to extend/re-validate the MoU would be taken jointly by mutual consent of Parties as may be considered mutually in the best interest of the project.

III. **Nodal Officers**

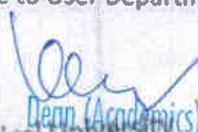
A. **User Department**

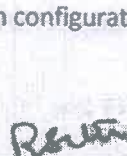
1. User Department will identify Nodal Officer to coordinate as a single point of contact for all project related activities.
2. Nodal Officer is to coordinate for training of officials at respective locations for smooth and trouble-free operations.
3. Nodal Officer will ensure presence of all key officials in the training and hands-on sessions, operationalization and functionality issues, overseeing the operations and for the entry of error-free data, authorization letters etc.
4. Nodal Officer will ensure availability of master data (as applicable) to NIC using secure online interfaces.

B. **NIC**

1. NIC Project Coordinator will act as a Nodal Officer.
2. Technical coordination, conducting gap analysis, finalisation of StRS and get necessary approval from User Department
3. Assistance to User Department application configuration as per StRS


Nodal Officer
IKGDTU
Jalandhar


Dean (Academics)
T. K. Gujral Punjab Technical University
Jalandhar-Kapurthala Highway, Kapurthala


Sunny Jain / Sunny Jain
Company Secretary
National Informatics Centre Services Incorporated
15, Bhikaji Cama Place, New Delhi - 110066

NICSI

4. Customization of Seat Allotment module, if required as per StRS.
5. Creation of test cases for seat allotment module as per the approved StRS and subsequent validation of all the listed test cases by project team before result publishing and UAT.
6. Ensure imparting the trainer's training organized by User Department at the designated place.

C. NICSI

1. NICSI's Project Coordinator will act as a Nodal Officer.
2. Coordinate project related activities including raising of PI, opening of project, issuance of UC/Tax Invoice etc.

IV. Roles & Responsibilities

A. User Department

1. User Department will constitute a Technical Core Committee (TCC) to manage all the project activities.
2. User Department will take over the day-to-day operations of the project from the go-live.
3. User Department may send emails and SMS for Project Activities on behalf of other stakeholders.

Requirement Gathering

4. User Department will associate required number of domain experts to assist NIC and NICSI team for the development and implementation of the project.
5. User Department will be responsible for timely provision of processes, rules, regulations, reservation policies, eligibility criteria, input validations etc. for finalizing the stakeholder's requirement specifications and its approval, catalyzing the smooth execution of configuration and customization of Project Activities.
6. Changes in critical specifications like process flow, eligibility criteria etc. need to be informed well in advance from deployment with enough time for making changes, testing the modifications and visualizing its implications effectively.
7. User Department will approve and accept the StRS/Change Request for configuration/customization of project activities.

Testing

8. User Department will approve all input/output formats to be generated online for candidates and other users through User Acceptance Test (UAT). NIC will not take any responsibility for any misspelling/mistakes in reporting or any interpretation made from context, application bugs after acceptance of implementation. User Department will indemnify NIC in all respects regarding the same.
9. User Department will approve/certify publishing of Admit Card, Answer Key Verification, Result/Score card Verification and other such critical documents to NIC before its publication, if applicable.
10. User Department will approve/certify publishing of Rank Generation, Seat Allotment Result, Admission Letter and other such critical documents to NIC before its publication, if applicable.

Registered
I.K.G.P.T.U.
Jalandhar
Signature
Dean (Academics)

I. K. Gujral Punjab Technical University
Inlandhar-Kapurthala Highway, Kapurthala

NIC
for

रानी जैन / Sunny Jain
राज्यीय निदेशक / Company Secretary
राष्ट्रीय सूचनात्मक केंद्र / National Informatics Centre
1st Floor, Sector 17, Chandigarh
NICSI

11. Due to changes in critical specifications, the User Department must repeat UAT for smooth and trouble-free operations to work perfectly in an integrated fashion. The untested and unaudited application may be prone to bugs/errors and vulnerabilities, resulting in major issues in the entire operations.
12. User Department may exercise restraint for incorporation of changes and shall provision enough time with due diligence to avoid malfunctioning.

Training

13. User Department will organize training/hands-on sessions for its users/stakeholders.
14. User Department will provide logistics and infrastructure for training of Nodal Officers including TA/DA for NIC and NICS I resources.

Execution

15. Authorized administrative users of User Department will manage all its users/stakeholder accounts/credentials.
16. For bulk messaging (SMS/Email etc.) and other such services, User Department will provide necessary technical and administrative infrastructure required at its own cost.
17. User Department would outsource or internally manage a helpdesk/Call Centre to address aspirants/stakeholder issues/queries and their resolution throughout project lifecycle.

Project Closure

18. User Department is required to provide the sign-off certificate statement to NIC for project activities for the session.

General

19. User Department will ensure availability of requisite accommodation, technical/functional feasibility for setting up of necessary ICT facilities and trained human resources for its users/stakeholders at its centers, institutes etc. with provisioning of adequate physical safety and operational safeguards etc., if required.
20. User Department will provide the complete consignee address to NIC and NICS I for delivery of hardware/software and take complete responsibility of the physical/fire security of these, if so desired and applicable.
21. Provide support for the installation of the hardware/software at the required locations, if so desired and applicable.
22. After expiry of the project period, User Department may enter into an Annual Maintenance Contract (AMC) for ICT hardware as well as systems software & applications software directly with the respective agencies, if so desired and applicable.
23. User Department shall coordinate NIC, NICS I, banking/financial institutions, and other agencies/stakeholders.
24. User Department will bear all other expenses directly out of their own funds essential for smooth execution of the Project which is outside the scope of the proposal
25. User Department will release funds to NICS I as per proforma invoice and revised estimates for the continuity of services.
26. User Department will abide by the IT Act and Aadhaar Act and complete all formalities to

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I.K. Gujral Punjab Technical University
Jalandhar

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Jalandhar-Kapurthala Highway, Kapurthala

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Company Secretary
National Informatics Centre Services Incorporated
15, Bhikaji Cama Place, New Delhi-110066
NICS I

become SUB- AUA of NIC, if necessary.

B. NIC

1. NIC will give utmost priority and put up dedicated teams for timely completion of tasks as per the timeframes envisaged, provided timely inputs are made available by User Department.
2. The role of NIC is limited to the technical aspect of the Project, up to the extent of configuration/ customization of the project, installation and operationalization of ICT infrastructure. NIC officials will not be involved in the day-to-day operations of the Project.
3. NIC will customize the solution to meet specific requirements of User Department, which cannot be addressed by configurable interfaces, if required.
4. NIC will help in registering of the Domain Name under ".gov.in/.nic.in" domain, providing VPN credentials, help in availing cloud facilities to the User Department.
5. After UAT, NIC shall carry out load, performance and quality assurance testing followed by security audit and will provide the services from its hosting environment.
6. NIC will train the specified user authorized by User Department over the data flows within the system and implement safeguards to mitigate risk and promote data integrity.
7. NIC will impart training and hands-on sessions to Nodal Officers.
8. NIC will host application and its data on its cloud servers physically located within Indian national boundaries.
9. NIC will deploy adequate resources in the technical helpdesk constituted at NIC HQ/State Centre for User Department officials to resolve technical and functional queries regarding configuration of Project Activities.
10. NIC will provide hand holding support for the configuration of Project Activities.
11. NIC will provide value-added messaging (SMS, Email, etc.) and others such services to meet specific requirements for the Project.
12. NIC Nodal Officer will provide technical support for seat allotment, if applicable.
13. NIC will provide appropriate technical artifacts of the project to User Department.
14. 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 and involved sensitivity. NIC will respect information propriety of the User Department and will provide all mutually agreed safeguards, which are feasible within the current ambit of technical feasibility and resource constraints.

C. NICS

1. NICS will open a project on receipt of funds from User Department for maintaining accounts under various proposed heads.
2. NICS will timely procure all required hardware, software and consumables through its empaneled vendors for the project in tune with timelines of execution.
3. NICS shall ensure that the associated vendors have demonstrated capacity to serve the interest of the project.

Registrar
I.K. GPTU
Jalandhar

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Jalandhar-Kapurthala High
NIC
Kapurthala

Sunny Jain / Sunny Jain
Company Secretary
National Informatics Centre Services Incorporated
1st Floor, 110006
NICSI

4. In the event of any damage/shortage/defect to the articles during supply process, NICSI will arrange for their replacements through the concerned vendor at the cost of the vendor.
5. NICSI will hire required skilled manpower resources through its empaneled vendors for the support and extensibility of application services. This team will be deployed at designated locations for the application support, extensibility and training under the supervision of NIC as per the requirement of the project.
6. NICSI will bear the applicable TA/DA, local conveyance, recurring expenses, procurement of stationary, consumables, refreshment bills etc. for the meetings and other activities as necessary for the project work from Project funds.
7. NICSI shall be entitled to get Operating Margin as applicable from time to time for the cost of total hardware, system software, manpower and other services including but not limited to manpower services as arranged to facilitate the IT outsourcing for Software Project implementation.
8. NICSI undertakes to pass on the price difference to User Department or levy additional charges if any in the event of prices undergoing changes between the time of submission of proposal and actual date of order with the vendor.
9. All applicable taxes/levies as per government/local bodies will be extra and as per actuals at the time of billing.
10. NICSI through NIC will submit annual statement of account/UC, if required for the services during last financial year for specific project requirement.
11. On completion of project, NICSI will raise bills regarding service/manpower/hardware requests in the name of User Department.


V. General Terms & Conditions

1. All Parties are instrumental in the smooth conduct of the Project under consideration of this MoU, User Department would be responsible for taking all policy decisions and NIC would be responsible for taking all decisions for the smooth development and operation of the software applications, and review of work for timely interventions.
2. The project is to be executed under the supervision of the Project Steering Committee (PSC) to be constituted by User Department under its chairmanship. The PSC should comprise officials from all Parties.
3. All Parties will ensure timely submission of MoU along with authorized signatures and stamps.
4. User Department is the owner of all the data and owns complete responsibility.
5. User department will ensure data integrity and information secrecy while sharing candidate data with third party firms and service providers engaged on the Project.
6. To prevent unauthorized access, maintain data security and ensuring the proper use of information, User Department and NIC will establish and implement appropriate physical, electronic and managerial procedures to safeguard and secure the information collected.
7. Data would be handled in compliance to cyber laws and cyber security guidelines and any subsequent regulations by GOI. De-identification and encryption methods may be used to maintain


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K. K.


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NIC



Sunny Jain / Sunny Jain
National Informatics Centre Services (Government of India)
NICSI
New Delhi-110006
Page 7 of 10

integrity of sensitive personal data.

8. Personal data may be processed on the basis of the consent of the data principal i.e. the candidate, given no later than at the commencement of the processing.
9. Personal data may be processed, if such processing is necessary for any function of State Legislature, explicitly mandated under any law and for compliance with any order or judgment of any Court or Tribunal in India.
10. User Department and NIC will not publish any sensitive information in the public domain.
11. All deliverables created or developed specifically for the Project by NIC, together with any associated copyright and other intellectual property rights, shall be the sole and exclusive property of NIC.
12. User Department will not engage in reverse compilation or in any other way arrive at or attempt to arrive at the source code of the NIC's IP from the deliverable in which they are incorporated for creating a standalone product for marketing to others.
13. In performing services, NIC may use its proprietary materials including without limitation any software (or any part or component thereof), tools, methodology, processes, ideas, know-how and technology that are or were developed or owned by NIC prior to or independent of the services performed hereunder or any improvements, enhancements, modifications or customization made thereto as part of or during performing the services hereunder.
14. Deliverables shared with User Department do not include right to sublicense through multiple tiers, to use, copy, install, perform, display, modify and create derivative works of any such deliverable or as part of the deliverables in which they are incorporated or embedded
15. All design aspects, data, including technical information shall be made available in English language only.
16. NIC and NICS shall not be held responsible for any error at any stage in the outputs generated as these have to be thoroughly tested and approved by User Department before its rollout. Further, it would also not be responsible for wrong entry of information by either candidates or User Department in any of the data tables, service modules and its consequences thereon.
17. The cost estimates for the projects are worked out based on the scope of work finalized in consultation with User Department. These rates quoted in the NICS Proforma invoice are budgetary estimates and are as per the current empaneled rates for hiring external technical manpower resources, facilities as per the effort assessed for execution of the tasks identified and for the hiring/purchase of necessary cloud servers, computer hardware, system software packages, tools etc. These estimates could change due to change in either of these factors i.e. the scope, the rates or the policies governing the respective empanelment.
18. NIC and NICS will not be directly responsible for answering RTI related queries or legal representation and cannot be asked to be present before the Information Commission Courts either at State/National levels.

VI. Disclosure of Information

No Party shall disclose any proprietary or confidential information relating to the services without the prior written mutual consent of all Parties

Registrar
I.K.G.P.T.U. Punjab Technical University
Jalandhar

I. K. Gujral Punjab Technical University
Jalandhar - Kapurthala Highway, Jalandhar

NIC


सन्नी जैन / Sunny Jain
राजस्थान इन्फोमेटिक्स सेंटर सचिव / Company Secretary
National Informatics Centre Service Centre
New Delhi-110055
NICSI
Page 8 of 10

VII. Terms of Usage

NIC and NICS I would be indemnified from all aspects of software piracy; consequential usage of NIC's designed solution for the Project as per the approved StRS/Change request for each listed Project Activities and Project Proposal (PP), system resources and utilization of NICNET for any eventual usage for any illegal / anti-national / subversive purposes / activities covered by Indian Cyber Laws and Indian Penal Code.

VIII. Non-Suability

No Party can be sued in any court of law in India or abroad by the other Party, for the events if any Party is not able to perform as per any of the stipulations of this MoU, due to circumstances beyond the control of it. NIC and NICS I cannot be sued in any Court of Law for being unable to provide any IT related support and NICNET failure, due to force majeure condition beyond control of NIC and NICS I.

IX. Severance

If any term or provision in this MoU is held to be illegal, in whole or in part, such term or provision or part shall to that extent be deemed not to form part of this MoU. Further this will not affect the validity and enforceability of the remainder of the MoU.

X. Exit Clause

This being a public sensitive application, in the event of discontinuance of this MoU and withdrawal of IT services for this project, all the Parties being co-signatory to this MoU should give a written notice of one month to either Party for the desired discontinuance/withdrawal of the IT services due to non-receipt of full project funds in time, non-feasible technical conditions, which shall be implemented as per schedule mutually agreed to by co-signatory Parties of this MoU. In case of exit, NIC / NICS I will be liable for repayment of un-utilized fund only out of total fund received.

XI. Force Majeure

No Party shall be responsible for any failure to perform due to unforeseen circumstances or to causes beyond their reasonable control, including but not limited to acts of God, war, riot, embargoes, acts of civil or military authorities, fire, floods, Pandemic, accidents, terrorist activities, strikes or shortages of transportation, facilities, fuel, energy, labor or materials. In the event of any such aspect being beyond the control of participating agencies, appropriate strategies would be worked out to compensate the project activities/ schedules accordingly.

XII. Arbitration Clause

Any dispute or difference arising in connection with this MoU shall be settled by mutual discussions between all Parties. If any disputes persist, these would be referred to a committee of Head of User Department, Head of Group, NIC and Managing Director, NICS I under the chairmanship of Director General NIC/User Department. The resolution of the committee would be final and binding on all the Parties. Except otherwise provided in clause of this MoU, nothing in this MoU limits or restricts either Party to take recourse of any alternate dispute resolution machinery under the Arbitration and Conciliation Act, 1996 in consultation of the Department of Legal Affairs.

Registrar
I.K. Gujral Punjab Technical University
IKGPTU
[Signature]

[Signature]
Dean (Academics)
I.K. Gujral Punjab Technical University
Jalandhar-Kapurthala Highway, Kapurthala
NIC
[Signature]

राजनी जैन / Sunny Jain
अधी सचिव / Company Secretary
राजनी जैन / Sunny Jain
National Informatics Centre Services Incorporated
कक्षा सं. एन.सी.सी. टॉवर / 1st Floor, NIC Tower
एन.सी.सी. १६ मील/बी.काना रोड, नई दिल्ली-११००६६
एन.सी.सी. बिल्डिंग, १६ मील/बी.काना रोड, नई दिल्ली-११००६६
NICS I
Page 9 of 10

IN WITNESS WHEREOF the Parties have executed in triplicate on the day and year, hereinafter indicated.

Authorized Signatory on behalf of
User Department

Authorized Signatory on behalf of
NIC

Authorized Signatory on behalf of
NICS


Signature

Name Sandeep Kumar

Designation Kazal Registrar

Date 22-07-2021

Place IKGPTU
Registrar
I.K. Gujral Punjab Technical University
Jalandhar

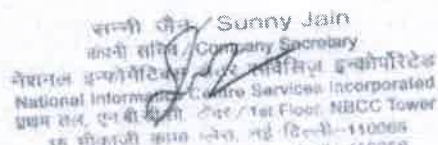

Signature

Name Rajender Sethi

Designation DDC

Date 08/9/2021

Place New Delhi


Sunny Jain
Company Secretary
National Information Centre Services Incorporated
15 Bhikaiji Cama Place, New Delhi-110065

Signature

Name

Designation

Date 10/09/2021

Place

Countersigned by Nodal Officer
User Department

Countersigned by Nodal Officer
NIC

Countersigned by Nodal Officer
NICS


Signature

Name Rajinder Dogra

Designation DR (Acad)

Date 22-07-2021

Place Kapurthala


Signature

Name Anil Singh Kalsi

Designation Scientist F

Date 20-08-2021

Place Kapurthala


Signature

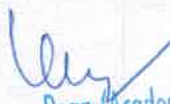
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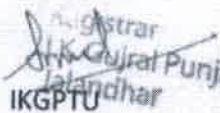
Name Nodal Officer

Designation

Date

Place


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I. K. Gujral Punjab Technical University
Jalandhar-Kapurthala Highway, Kapurthala


Registrar
I.K. Gujral Punjab Technical University
Jalandhar

NIC


NICS

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

Stakeholder Requirement Specifications

NIC-Cas-StRS-0.6

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

Courses: B.Tech. 1st year (JEE Main Basis & 10+2 Basis)

Session: 2021-22

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 2021. It contains the scope of application, business environment, goals, operational requirements and user requirements etc.	
0.2	01/07/2020	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 IKGPTU/PAU findings	All Sections were vetted and amended suitably.
0.4	13/08/2020	Incorporation of Application Business rules and revised Process Flow	All Sections were vetted and amended suitably.
0.5	21/08/2020	Incorporation of changed rank preparation criteria, schedule, notification, office orders, observations of IKGPTU team	All Sections were vetted and amended suitably.
0.6	07/09/2021	Incorporation of changed rank preparation criteria, schedule, notification, office orders, observations of IKGPTU team	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 2021-21, the University has affiliated 68 Engg. Colleges, 103 Management and Computer Application courses, 37 institutions imparting Pharmacy education, 05 colleges imparting hotel management education and 06 colleges are providing Architecture Education. 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 (JEE Main Basis) and B. Tech (10+2 Inter se Merit Basis) programmes, based on their NTA Percentile Score / 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 (JEE Main Basis) and B. Tech (10+2 Inter se Merit Basis) 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-2021) 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-2021.
2. Customise/configure online eCounselling system as per the **Business Rules** finalized by Technical Committee of IKGPTU-2021.
3. Conduct training and handholding sessions to officials of organizing University and participating institutes at a central location.




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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 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 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, which is not mentioned, under the above Scope of Work.

1.2.2 Assumptions and Dependencies

1.2.2.1 Prerequisite

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.

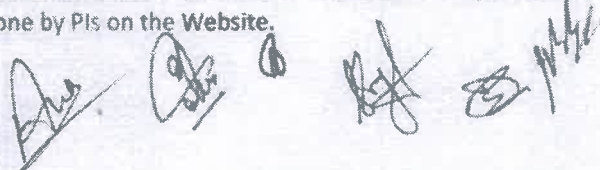
All above websites links shall perform following functions:

- 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, Persons with Disability) 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, whenever 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.


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CAS (IKGPTU) – Stakeholder Requirements Specifications

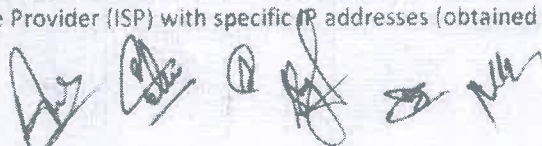
- The system shall provide required online query/Reports.
- After completion of admission period for counselling, the leftover/unfilled seats shall be transferred for consequent counselling.
- Online Withdrawal facility will be managed by IKGPTU Administration. Candidates, who are willing to withdraw 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, MRSPTU and PAU 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.
 - 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, Persons with Disability)
 - 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

- The Counselling would be based on IKGPTU Rank for B.Tech 10+2 inter se merit.
- 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


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CAS (IKGPTU) – Stakeholder Requirements Specifications

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

- Data updation from Pls 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 (Pls) will follow the same Seat Matrix structure.
 - All Pls 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


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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 2021-21 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
- Punjab Agricultural University, College of Agricultural Engineering, Ludhiana for Engineering Courses

1.3.1.3 Reporting Centre

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. (NICS)

NICS 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.

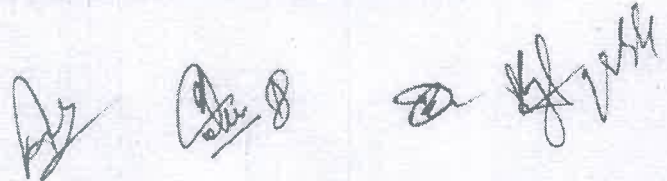
1.3.3 Interrelationships

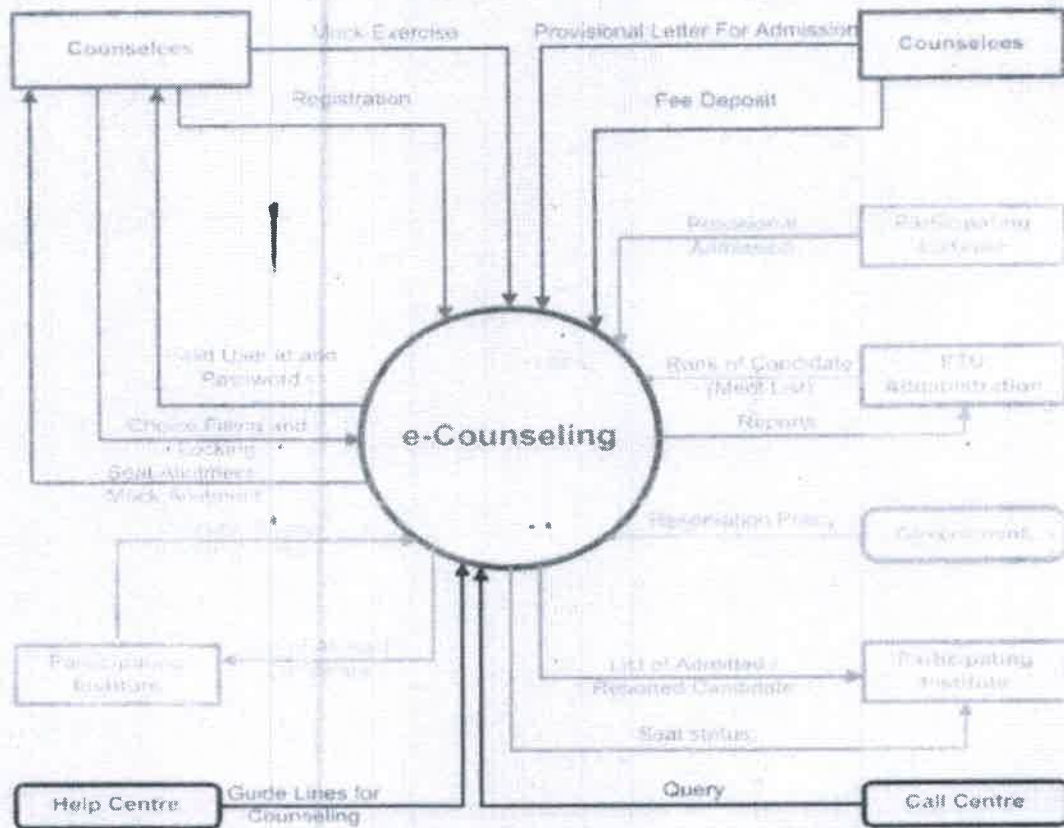
The following diagram describes how all the entities are interrelated.

- IKGPTU would be the organising university for conducting eCounselling 2021.
- 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.
- NICS will take care of all the financial matters. NICS will receive the funds as per the Proforma Invoice submitted to IKGPTU, procure all required hardware, software and consumables. NICS will submit the utilization certificate/statement of accounts as per the requirements of IKGPTU.


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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 IKGPTU 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

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(Handwritten signatures and initials)

CAS (IKGPTU) – Stakeholder Requirements Specifications

- 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
PH	Persons with Disabilities
RURAL	RURAL
URBAN	Urban
SM	Sikh Minority
WD	Widows/ Divorced Women
SGC	Single Girl Child

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

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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(Gallantry 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

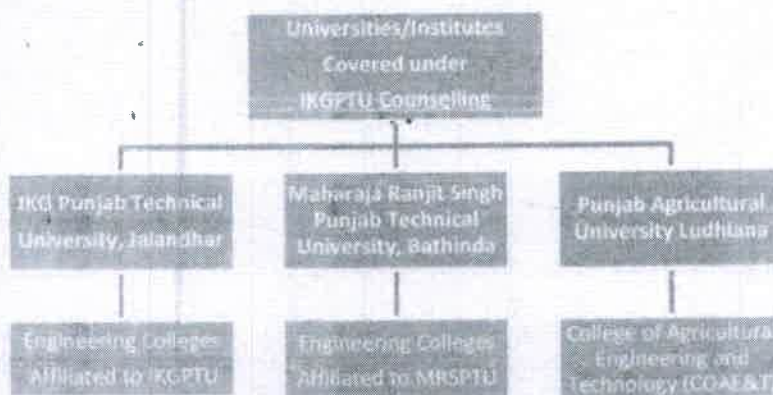
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8	Silver Medal – 17 Years
9	Bronze Medal – Senior
10	Bronze Medal – Junior
11	Bronze Medal – 19 Years
12	Bronze Medal – 17 Years
13	Gradation, No medal (only participation)

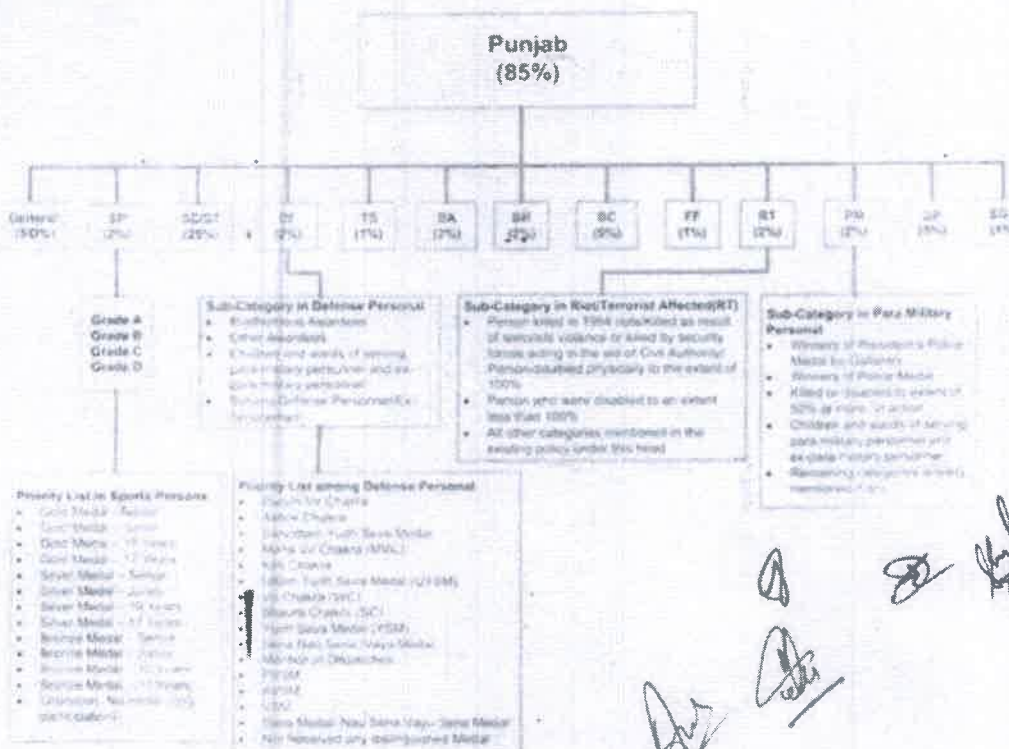
1.4.4 Seat Categories

The total intake for B.Tech 10+2 inter se 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.



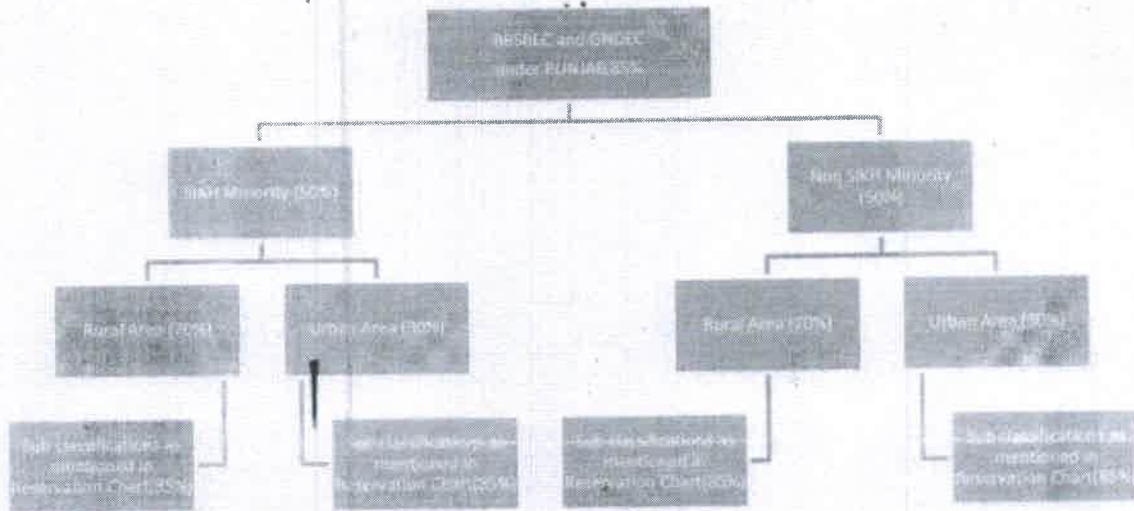
Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU/PAU

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



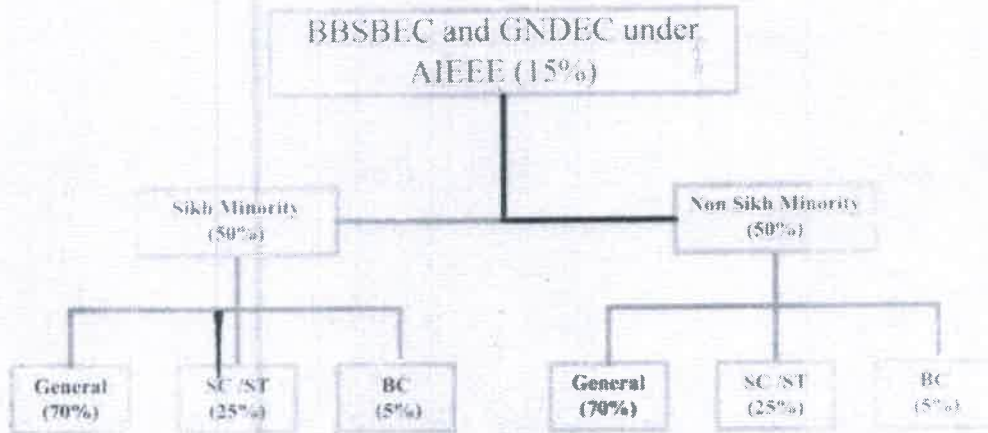
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Sikh Minority and Rural Seats in Punjab (85%)



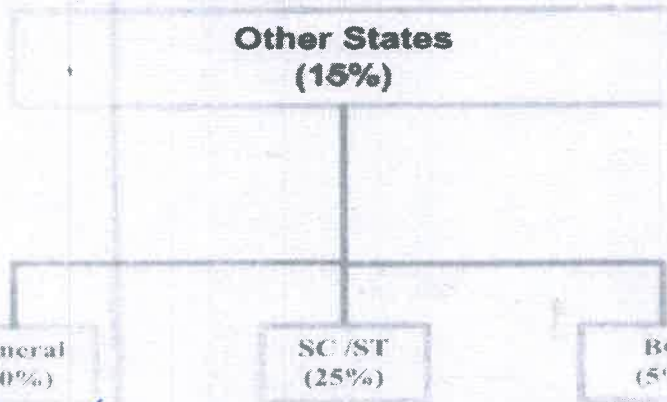
Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU (2)

Reservation Chart for 15 % Other State Quota based on IKGPTU Ranking/ 10+2 Inter Se Merit
(Bifurcated into Sikh Minority & Non Sikh Minority)



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

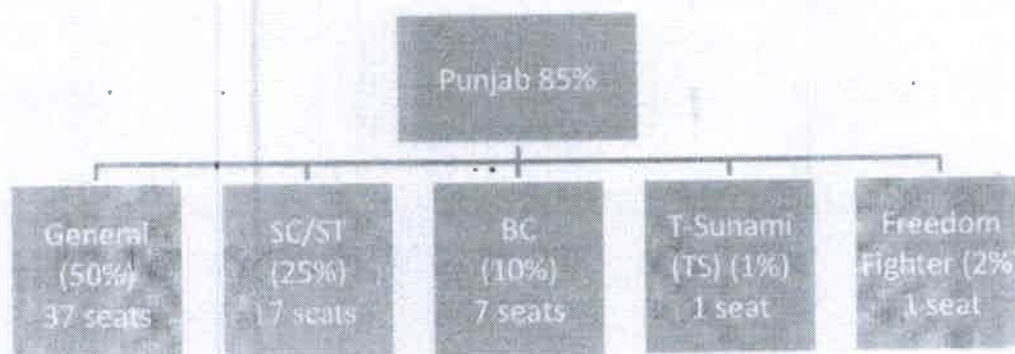
Other State 15 % based on IKGPTU Ranking



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

Punjab 85% based on IKGPTU 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”.

1.5 Stakeholders

- Organizing University (IKGPTU)
- Participating Institutes under different Universities
- National Informatics Centre
- National Informatics Centre Services Inc.
- Payment Gateway Integrator
- Applicants

2 References

- IKGPTU website (<https://ptuadmissions.nic.in>)
- Business Rules finalized by IKGPTU Technical Committee for the session 2021-21
- 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

(Handwritten signatures and initials)

- 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

1. 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 be developed 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 would be signed between IKGPTU, NIC and NICS I for successful implementation of the project.

3.3.6 Payment Terms

IKGPTU will have to make 100% advance payment to NICS I, so as to initiate the project. The advance payment will be settled as a consolidated UC submitted by NICS I 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 IKGPTU and Banks

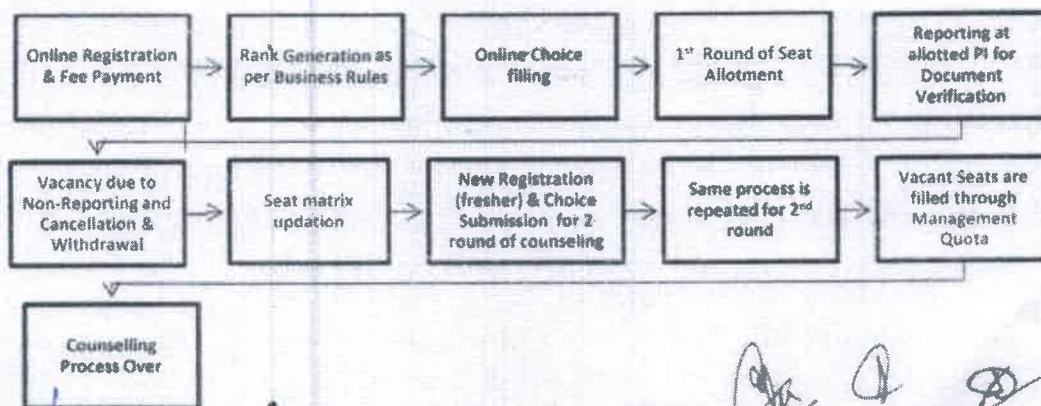
4 Business Operational Requirements

4.1 Business Processes

The following process and support services will be accomplished in different phases:

4.1.1 Process Overview

The following online support services will be accomplished in different phases:



CAS (IKGPTU) – Stakeholder Requirements Specifications

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 New Candidates

The candidate is required to enter Name, Father's Name, Mother's Name, DOB and Gender and choose a password for subsequent logins. After successful registration, system will provide an application number to the candidate. Candidate will login by using system generated application number and password to complete the remaining activities.

4.1.2.2 Sign-in

Candidate will use the Application Number and chosen password during registration for subsequent logins. After successful login, system will redirect candidate to the home page to perform the remaining activities like Application form submission, upload images and documents, registration fee payment and choice filling etc.

4.1.2.3 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.

4.1.2.4 Uploading of Documents

Candidate need to upload the scanned images/Documents mandatory documents as per the predefined size and format

4.1.2.5 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.

4.1.2.6 Email and Mobile Number Verification

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.

4.1.2.7 Online Document Verification

Online/Offline document verification, for registered candidates, who had uploaded documents and paid registration fee, will be carried out by Participating Universities/Institutes within the scheduled dates.

4.1.2.8 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.

4.1.3 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 counseling

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.

AD
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z

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

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	<input checked="" type="checkbox"/>	IKGPTU General + MRSPTU General + PAU General
2	SC /ST	<input checked="" type="checkbox"/>	IKGPTU General, SC + MRSPTU General, SC + PAU General, SC
3	BC	<input checked="" type="checkbox"/>	IKGPTU General, BC + MRSPTU General, BC + PAU General BC
4	T-Sunami	<input checked="" type="checkbox"/>	IKGPTU General, TS + MRSPTU General, TS + PAU General, TS
5	Freedom Fighter	<input checked="" type="checkbox"/>	IKGPTU General, FF + MRSPTU General, FF + PAU General, FF
6	Backward Area	<input checked="" type="checkbox"/>	IKGPTU General, BA + MRSPTU General, BA + PAU General
7	Defence Personnel	<input checked="" type="checkbox"/>	IKGPTU General, DF + MRSPTU General, DF + PAU General
8	Terrorist / Riots Victims (RT)	<input checked="" type="checkbox"/>	IKGPTU General, RT + MRSPTU General, RT + PAU General
9	Para Military forces (WPP)	<input checked="" type="checkbox"/>	(IKGPTU General, WPP + MRSPTU General, WPP + PAU General)
10	Persons with Disabilities (PH)	<input checked="" type="checkbox"/>	(IKGPTU General, PH + MRSPTU General, PH + PAU General)
11	Widows / Divorced Women	<input checked="" type="checkbox"/>	(IKGPTU General + MRSPTU General, DW + PAU General) No male candidate will fall under this category and these seats are exclusively for Female candidates

❖ Seats of PAU will be shown to the candidates as per their %age of marks in 10+2 stream (General Category – >=50%, SC Category >= 33%, Other Reserve Category >= 45%)

Rural Area Category/Status

University	General	Rural Status opted	Seats to be shown
PAU Ludhiana	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	General

Sports Category

University	General	Sports Category	Seats to be shown
PAU Ludhiana	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	General seats
IKGPTU	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	General + sports category seats
MRSPTU	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	General + sports category seats

Border Area Seats

University	General	Border Area Category	Seats to be shown
PAU Ludhiana	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	General
IKGPTU	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	General + Border Area category seats
MRSPTU	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	General + Border Area category seats

Special Case for Fee Waiver Category Seats under IKGPTU/MRSPTU

For incorporating seats under Fee Waiver 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.

[Signature]
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 Jalandhar-Kapurthala Highway, Kapurthala

[Signatures]

Category	Eligibility for IKGPTU & MRSPTU opted by the Candidate	Seats to be shown
Fee Waiver	<input checked="" type="checkbox"/>	(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	<input checked="" type="checkbox"/>								1+3+5+7
		<input checked="" type="checkbox"/>							1+2+3+4+5+6+7+8
			<input checked="" type="checkbox"/>						3+7
				<input checked="" type="checkbox"/>					3+4+7+8
					<input checked="" type="checkbox"/>				5+7
						<input checked="" type="checkbox"/>			5+6+7+8
							<input checked="" type="checkbox"/>		7
								<input checked="" type="checkbox"/>	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% quota

Sr.No.	Category	Opted by the Candidate	Total Number of Seats to be shown
1.	General	<input checked="" type="checkbox"/>	IKGPTU General + MRSPTU General + PAU General
2.	SC /ST	<input checked="" type="checkbox"/>	IKGPTU General, SC + MRSPTU General, SC + PAU General, SC
3.	BC	<input checked="" type="checkbox"/>	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	<input checked="" type="checkbox"/>				1+3
		<input checked="" type="checkbox"/>			1+2+3+4
			<input checked="" type="checkbox"/>		3
				<input checked="" type="checkbox"/>	3+4

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 as many choices in the order of preference from the list of available choices. The candidates may opt same course for fee waiving scheme and as well as for Non fee waiving 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.

4.1.4 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.

4.1.5 Rank Generation Process (For 10+2 Inter Se Merit Candidates)

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.

4.1.6 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.

4.1.7 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.

4.1.8 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.

4.1.9 Online Payment of Seat Acceptance Fee

All those candidates, who got the seat first time in any round, will pay Seat Acceptance fee online directly in Institute's Bank account for confirming their admission.

4.1.10 Online Willingness (Optional)

Candidate can submit his/her willingness for subsequent round of counselling. There are two types willingness FLOAT (YES-Upgradation) and FREEZE (No-Upgradation).

4.1.11 Withdrawal from the Counselling

A candidate, who has deposited fee in Allotted Institute and taken admission, 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.

4.1.12 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.

4.1.13 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.

If all the parameters inputted by candidate 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 can proceed further. 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."

4.1.14 Physical Reporting at PI

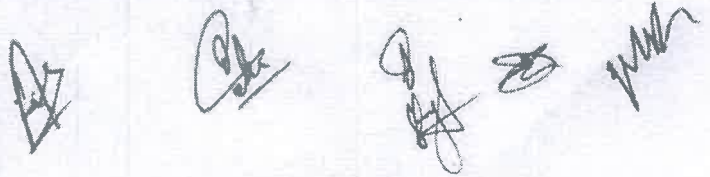
General Assumptions

- 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:


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- 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.

4.1.15 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://ptuadmissions.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

4.1.16 Participation Institute Process

4.1.16.1 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.

4.1.16.2 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.

4.1.16.3 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.

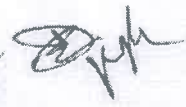
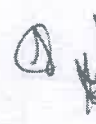
4.1.17 PI Admin Process

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.


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.18 PI user Process

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.

4.1.19 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 based on Qualifying Degree

Eligibility Criteria (Educational Qualifications and Resident Status) for admission to Engineering & Technology Courses

- For admission to the Engineering Courses, 85% seats shall be open for the candidates from within the State and 15% will be open for the candidates from outside the State.
- Admission shall be made on the basis of inter-se-merit in the qualifying examination for both 85% quota for residents of Punjab and 15% quota for outside Punjab.

Course	Category	Eligibility	Basis of Admission	%age Criteria for Admission		
				IKGPTU	MRSPTU	PAU
1st year of B.Tech. & B.Tech. Fee Waiver For 10+2 Basis and JEE Basis	General	All those candidates who have passed the 10+2 examination from a board recognized or established by central/state government through a legislation and a member of Council of Boards of School Education (COBSE), New Delhi with Physics / Mathematics / Chemistry / Computer Science / Electronics / Information Technology / Biology / Informatics Practices / Biotechnology / Technical Vocational subject / Agriculture / Engineering Graphics / Business Studies /	Two Rounds on the Basis of Total Score (Percentile Score of JEE Main – 2021)	45%	45%	50%
	Reserved	Entrepreneurship (any of three) Obtained atleast 45% marks (40% in case of candidates belonging to reserved category) in the above subjects taken together. 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 with atleast 45% marks (40% in case of candidates belonging to reserved category) (The Universities will offer suitable bridge courses such as Mathematics.	Vacant Seats (after exhausting JEE Main Seats) will be filled on the basis of 10+2 Merit For PAU the admission to B.Tech. 1 st year course shall be made on the Basis of JEE Main only.	For 3 Subjects Mentioned in eligibility For remaining 2 subjects Percentage 33% subject wise 40% For 3 Subjects Mentioned in eligibility For remaining 2 subjects Percentage 33% subject wise	For 3 Subjects Mentioned in eligibility Overall Percentage 33% 40% For 3 Subjects Mentioned in eligibility Overall Percentage 33%	For ALL Subjects i.e 5 Subjects 45% for Reserve Category and Pass (33%) for SC/ST Category For ALL Subjects i.e 5 Subjects

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CAS (IKGPTU) – Stakeholder Requirements Specifications

Course	Category	Eligibility	Basis of Admission	%age Criteria for Admission		
				IKGPTU	MRSPTU	PAU
		Physics, Engineering Drawing, etc., for the students coming from diverse backgrounds to achieve desired learning outcomes of the programme OR The candidates who have passed two years certificate course from Sant Longowal Institute of Engineering and Technology, Longowal (SIET) shall be eligible. Eligibility for PAU In addition to the conditions enumerated above for admission to Engineering courses run by Punjab Agricultural University, Ludhiana, the eligibility criteria of the concerned University, shall be applicable.				

4.2.1.2 Academic Business Rule based on IKGPTU generated Rank

Academic Business Rule For B.Tech Courses (with Illustration)					
Condition 1	Candidate must have passed 10+2 or qualifying examination				
Board	Subject Name	MM	MO	%age	
Subject 1	Physics / Mathematics / Chemistry / Computer Science / Electronics / Information Technology / Biology / Informatics	100	50	50	
Subject 2	Practices / Biotechnology / Technical Vocational subject / Agriculture / Engineering Graphics / Business Studies / Entrepreneurship (any of three)	100	90	90	
Subject 3		100	95	95	
Subject 4	Optional Subject 1	100	85	85	
Subject 5	Optional Subject 2	100	85	85	
Rank Preparation -	on total %age of marks obtained	500	405	81	
Apply Tie Break rules to be applied if required					
Choice Filling	Eligibility for IKGPTU/MRSPTU*	Subject 1 to 3	Subject 1 to 3	Subject 1 to 3	
	General >=45%, SC/ST >=40%, Other Reserve Categories >=40%				
Choice Filling	Eligibility for PAU	Subject 1 to 5	Subject 3	Subject 4 ** Only Chemistry	
	General >=45%, SC/ST >=40%, Other Reserve Categories >=40%				

4.2.1.3 Special Eligibility conditions for Sikh Minority/Rural area claim/Sports/Defense/ Terrorist Victim etc. categories

If the candidate opts for categories/sub categories in Sikh Minority / Rural Area / Sports / Defense 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:

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- 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 (marks and %age).
- 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 Rank Generation

After completion of registration period in 1st round, 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.

Rank Preparation Procedure

Sr.No.	Course Name	Criteria for the preparation of Merit and Tie Breaking
1.	B.Tech. 1 st Year (JEE Main Basis)	<p>The merit shall be prepared on the basis of Total Score (Percentile Score) obtained in JEE Main 2021. The candidate obtained higher Percentile Score in JEE Main 2021 shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <ol style="list-style-type: none"> The candidate obtained higher percentile score in Mathematics in JEE Main 2021 shall Rank higher in the order of Merit. In case of Tie in (a) above, the candidates obtained higher percentile score in Physics in JEE Main 2021 shall Rank higher in the order of Merit. In case of Tie in (b) above, the candidates obtained higher percentile score in Chemistry in JEE Main 2021 shall Rank higher in the order of Merit. In case of Tie in (c) above, the candidate obtained higher marks in qualifying exam (10+2) shall Rank higher in the order of Merit. In case of Tie in (d) above, the candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit. In case of Tie in (e) above, the candidate senior in age shall Rank higher in the order of Merit.
2.	B.Tech. 1 st Year (10+2 Basis)	<ol style="list-style-type: none"> In case of candidate participating on the basis of 10+2 examination, the marks of all 05 subjects (includes any 3 compulsory subjects as per Punjab Govt. Notification and 2 optional subjects) of 10+2 examination will be captured in the counselling registration form from participating candidates. The Rank of the candidates in the merit list will be prepared on the basis of

Sr.No.	Course Name	Criteria for the preparation of Merit and Tie Breaking
		<p>aggregate marks of 10+2 examination.</p> <p>(ii) In case of candidate participating on the basis of Diploma in any Engineering Trade from PSBTE, SLIET or any other recognized State Board of Technical Education then the Rank of the candidates in the merit list will be prepared on the basis of total aggregate percentage marks obtained in Diploma as per respective Board.</p> <p>(iii) In case of candidate participating on the basis of 2 years Certificate from SLIET then the Rank of the candidates in the merit list will be prepared on the basis of total aggregate percentage marks obtained in qualifying exam.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>

Note:

The rank will be prepared on the basis of credentials filled by the candidate, on the basis of admission notification issued by Punjab Govt. vide No. TECH-TE-2013/4/2021-4TE2/I/229119/2021 dated 13/08/2021. Seat allotted on the basis of wrong credentials filled by the candidate will be cancelled by the respective College/University at the time of online reporting.

4.2.2.4 Choice Filling & Seating

- In Choice filling section, the choices will be shown to participating candidates as per Punjab Govt. admission notification vide No. TECH-TE-2013/4/2021-4TE2/I/229119/2021 dated 13/08/2021, on the basis of eligibility criteria finalized by respective Participating University(s) mentioned above in section 4.2.1.1.
- During Choice filling period, students can fill up as many choices, as he/she wishes. The choices shown to him / her will be based on his/her eligibility and Counselling guidelines.
- 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 locked by Administrator after completion of choice filling.

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.
- Candidate, who is allotted a fresh seat 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 taking admission in fee waiver seats, candidate, whose family gross annual income is less than Rs. 8.0 Lakhs, shall be eligible.

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4.2.3.2 IKGPTU Rank wise Seat Allotment procedure for First and subsequent counselling for candidates of Punjab 85% and Other State 15%

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:

- i. Candidate has to register himself and fill choices. If candidate does not fill any choices, he will not be eligible for counselling.
- ii. Seat Matrix is to be uploaded fresh before the start of counselling.
- iii. Unique Rank will be allotted to each candidate i.e. no two candidates will have same rank in general merit list. The general merit list will include candidates of all categories.
- iv. Candidates from Punjab residents will be considered under Punjab 85%.
- v. Candidates from Chandigarh UT are only eligible to participate in online counselling through 15% Other State quota. However only in case of PAU, PUNJAB and Chandigarh are considered as One State. For 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 | ➤ Widow / Divorced Women |
| ➤ SC/ST | ➤ Terrorists/Riots victims (RT) |
| ➤ Backward Class (BC) | ➤ Children/Widows of Para military forces (PM) |
| ➤ T-Sunami(TS) | ➤ Freedom Fighter (FF) |
| ➤ Border Area(BR) | ➤ Persons with Disabilities (PH) |
| ➤ Backward Area (BA) | ➤ Single Girl Child (SGC) |
| ➤ Sports Person (SP) | |
| ➤ Widows of Defense Personnel (DF) | |

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Seat Allocation sequence for 85% Punjab Quota

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

In case of IKGPTU/ MRSPTU, 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 IKGPTU 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 IKGPTU/MRSPTU 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 IKGPTU 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 then allocation is done on the basis of subcategory and eligibility criteria of the participating universities.
- ✓ If candidate is PH, then allocation is done on the basis of respective category.

Fee Waiver	General	Category (SC/ST, BC, T-Sunami (TS) / DF / BA / BR / FF / RT / PM / PH)	Sequence of Allotment
<input checked="" type="checkbox"/>			Fee Waiver
	<input checked="" type="checkbox"/>		General (Open)
		<input checked="" type="checkbox"/>	General (Open), (SC/ST,BC, T-Sunami (TS))/ DF/BA/BR/FF/SP / RT/ PM / PH / 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, PH, WD) IKGPTU Rank is the allotment criteria.

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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)

4.2.3.4 Rural Area Seats Allocation under IKGPTU & MRSPTU

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	General Category, Urban
Case 2	General Category, Rural	General Category, Urban General Category, Rural
Case 3	Specific Category, Urban	General Category, Urban Specific Category, Urban
Case 4	Specific Category, Rural	General Category, Urban General Category, Rural Specific Category, Urban 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	SM General Category, Urban NSM General Category Urban
Case 2	Sikh Minority General Category, Rural	SM General Category, Urban NSM General Category, Urban SM General Category, Rural NSM General Category, Rural
Case 3	Sikh Minority Specific Category, Urban	SM General Category, Urban NSM General Category, Urban SM Specific Category, Urban NSM Specific Category, Urban
Case 4	Sikh Minority Specific Category, Rural	SM Urban General NSM Urban General SM Rural General NSM Rural General SM Urban Category Specific NSM Urban Category Specific SM Rural Category Specific NSM Rural Category Specific

SM – Sikh Minority, NSM – Non Sikh Minority

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Dean (Academics)

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4.2.3.5 Algorithm for Seat Allocation Procedure for 15% 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.

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.

4.2.3.6 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 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 can not change his category without the permission of Chief Coordinator(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.

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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.

4.2.4 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/MRSPTU/PAU 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 List of Documents to be uploaded

Documents required by IKGPTU/MRSPTU/PAU at the time of Online/offline Counselling for verification

1. Due to COVID-19 pandemic, the participating Candidates will upload their requisite documents (details of documents attached at Appendix 8.2.3 and 8.2.4) at the time of online reporting for verification by the respective allotted institute for provisionally confirmation of seat. Candidate will also deposit the Semester Fee in the Bank Account of concerned allotted College/Institute through Online Mode at the time of Online Reporting. For this NIC will make provision in the PI Module to capture Bank details from the Participating Institutes (PI) and print the same in the allotment letter of Candidate for their information and deposition of semester fee through online mode. Verification of uploaded documents, Collection of Semester Fee and Confirmation of provisionally allotted Seat will also be done online by the concerned College/Institute.
2. In case of PAU, the concerned candidate may be called for verification of original documents and medical examinations as per procedure laid/ followed by PAU for other UG programme being run by PAU, Ludhiana.
3. In addition to these documents, photograph and signature of candidates to be uploaded.

4.2.7 Other Policies/Rules

4.2.7.1 Password Policy

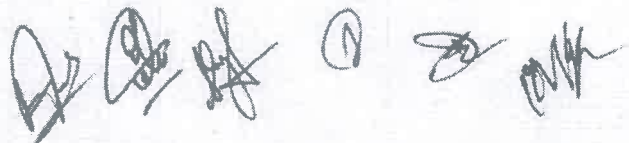
- Password must be 8 to 13 characters long.
- Password must have at least one Upper case, one lower case alphabet and one numeric value and at least one special characters!@#\$%^&*.
- New Password cannot be identical to any of the previous three passwords.

4.2.7.2 Mobile Number and Email Id

- Mobile number and Email Id should be unique and will be verified through OTP.


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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 2021, vide its letter no IKGPTU/REG/OO/967 dated 11-08-2021. (revised). Attached at Appendix 8.

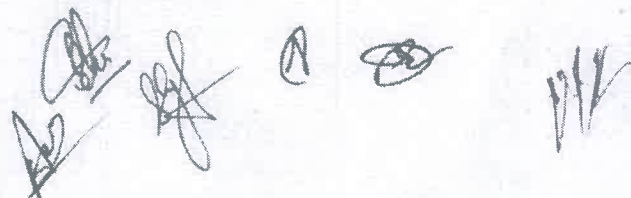
Functions of the Core Committee:

1. Recommendations for finalization of


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CAS (IKGPTU) – Stakeholder Requirements Specifications

- 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-2021 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 IKGPTU/ 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 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 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 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.

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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 10+2 Inter se merit 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 IKGPTU roll no, IKGPTU Rank, name, date of birth (in case of IKGPTU 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 IKGPTU 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 (IKGPTU 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.


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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.

5.2.4 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.


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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 Choice

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.


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I. K. Gujral Punjab Technical University
Jalandhar-Kapurthala Highway, Kapurthala

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 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 (ICAT)

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.


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Jalandhar-Kapurthala Highway, Kapurthala

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).


Dean (Academics)
I. K. Gujral Punjab Technical University
Jalandhar-Kapurthala Highway, Kapurthala

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.

6 Concept of Proposed System

- Publishing of any information.

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, Persons with Disability

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




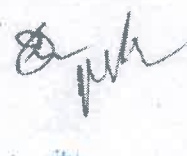
Note: NIC shall provide the complete database to IKGPTU. NIC will process the data of all the candidates, applied and registered on line as per admission rules, notification and criteria laid by IKGPTU Counselling Board and prepare the merit list of all eligible candidates along with reserved category candidates. IKGPTU will verify the merit list so prepared and provide the same database to NIC for uploading onto the Counselling website .

8.2.2 Institutes

Institute Name	Institute Type	Controlling University
I K Gujral Punjab Technical University Campus, Hoshiarpur	G	IKGPTU
I.K. Gujral Punjab Technical University Campus, Mohali - I	G	IKGPTU
I.K. Gujral Punjab Technical University, Campus, Amritsar	G	IKGPTU
I.K. Gujral Punjab Technical University, Main Campus, Kapurthala	G	IKGPTU
Giani Zail Singh Campus College of Engg. & Tech., MRSPTU, Bathinda	G	MRSPTU
Malout Institute of Management and Information Technology, Green Field Enclave, Near New Grain Market, Malout-142107. (Govt Promoted college)	G	IKGPTU
Guru Nanak Dev Engineering College, Ludhiana - 141 006, Punjab (Govt Aided and UGC Autonomous College)	A	IKGPTU

Institute Name	Institute Type	Controlling University
Aklia Education and Research Society Group of Institutions, Bathinda	P	MRSPTU
Aman Bhalla Institute of Engineering & Technology, Jammu Amritsar Highway, Canal Side, Kotli PO Jhakolari, Pathankot	P	IKGPTU
Amritsar Group of Colleges Amritsar - 143001 (UGC Autonomous College)	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, Muksar 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 Technical Campus (Engineering), Jhanjeri, Mohali	P	IKGPTU
Chandigarh Engineering College, Landran, Mohali	P	IKGPTU
College of Agricultural Engineering and Technology, Punjab Agricultural University	G	PAU
CT Institute of Engineering, Management & Technology, Shahpur, Jalandhar	P	IKGPTU
CT Institute of Technology & Research, Greater Kallash, Maqsudana, 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.	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. Nawanshahr 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, Amritsar - Batala Road, Amritsar	P	IKGPTU
Golden College of Engineering & Technology, Prem Nagar, Gurdaspur	P	IKGPTU
Gulzar College of Engineering, Village Libra, Tehsil Kharina, Distt. Ludhiana	P	IKGPTU
Gulzar 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.	P	MRSPTU

Institute Name	Institute Type	Controlling University
Guru Teg Bahadur Khalsa Institute of Engineering & Technology, VPO Chhapanwali, 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-Ferozpur 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, Ferozpur 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 Nandpur Kesho, 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
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 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 Sarvanand Institute of Engineering & Technology, Near Dayanand Math, G. T. Road, Dinanagar, District Gurdaspur	P	IKGPTU
Tawi Engineering College, Shahpur Kandi, Tehsil Dhar Kalan, Distt. Pathankot	P	IKGPTU
Universal Group of Institutions, PO Lalru, Tehsil Derabassi, Distt. Mohali	P	IKGPTU

 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar-Kapurthala Highway, Kapurthala

8.2.3 Documents required for uploading on Online Counselling Portal for Verification by Campuses Colleges of IKGPTU & MRSPTU

Sr. No.	Course	Documents Required for uploading on Online Counselling Portal for Verification by Colleges
1.	Common for All Courses	1. Online Counselling Registration Form (containing Personal, Academic, Counselling Fee & other details of participating candidate) 2. Provisional Allotment Letter 3. 10 th DMC 4. Residential Certificate (Domicile or another valid Address Proof) 5. Reserved Category Certificate (as Applicable) 6. Passport Size Photograph 7. Migration Certificate of Qualifying Exam (Optional)
2.	B.Tech. 1 st year	1. Sikh Religion Exam Score Card (If Qualified) 2. DMCs of 10+2 / Diploma 3. Income Affidavit/Certificate (if admitted under Tuition Fee Waiver Scheme)

8.2.4 Documents required by PAU at the time of Online Counselling for verification

1. JEE main Score card (if applicable).
2. Seat allotment letter from PTU.
3. Residence Certificate of Punjab or Union Territory of Chandigarh for 85% seats.
4. 10th DMC showing Mother Father's Name and Date of Birth.
5. DMC of 10+2 with min aggregate 50% marks (in non-medical).
6. Character Certificate after 10+2 from school/college last attended.
7. Reserved Category Certificate (as applicable).
8. Income Certificate from only those Scheduled Caste students whose parents income is less than Rs. 2,50,000 p.a. and students who are under post-matric scholarship scheme.
9. Sample Performa for Income Certificate for SC category under Post Matric Scholarship Scheme.

Income Certificate
(for SC Category under Post Matric Scholarship Scheme)

No.....

Date.....

It is certified that according to the regional establishment, the annual income of the whole family of

Shri/Smt. _____ Father / Mother of Mr. / Ms. _____ resident of _____

_____ (Punjab) is not more than ₹ 2,50,000/- (Rupees two lakhs fifty thousand only) per annum from all sources.

TEHSILDAR
(With seal of office)

Place: _____

Date: _____

Note: Employed parents / guardians are required to obtain income certificate from their employee alongwith an affidavit on non-judicial stamp paper at the time of admission of their wards.


 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar-Kapurthala Highway, Kapurthala

8.3 Counselling Schedule

Centralized Online Counselling Schedule for the Session 2021-22						
B.Tech. 1st Year (Alongwith Fee Waiver)						
Course	JEE Main Basis (1st Round)		JEE Main Basis (2nd Round)		10+2 Basis	
Activity	Start Date	End Date	Start Date	End Date	Start Date	End Date
Registration & Counselling Fee Deposition	10-09-2021 11:00 AM Friday	13-09-2021 11:59 PM Monday	27-09-2021 11:00 AM Monday	29-09-2021 11:59 PM Wednesday	10-09-2021 11:00 AM Friday	29-09-2021 11:59 PM Wednesday
Rank Preparation & Updation	17-09-2021 Friday		03-10-2021 Sunday		03-10-2021 Sunday	
Choice Filling	17-09-2021 11:00 AM Friday	19-09-2021 11:59 PM Sunday	03-10-2021 10:00 AM Sunday	05-10-2021 11:59 PM Tuesday	03-10-2021 10:00 AM Sunday	05-10-2021 11:59 PM Tuesday
Declaration of Counselling Result	21-09-2021 02:00 PM Tuesday		07-10-2021 02:00 PM Thursday		08-10-2021 11:00 AM Friday	
Reporting in Allotted Institution (Online Reporting)	21-09-2021 02:00 PM Tuesday	24-09-2021 06:00 PM Friday	07-10-2021 02:00 PM Thursday	11-10-2021 06:00 PM Monday	08-10-2021 11:00 AM Friday	11-10-2021 06:00 PM Monday

Note 1 : The Counselling Schedule of B.Tech. 1st Year (JEE Main Basis) Course is applicable for the Colleges/Campuses of IKGPTU, MRSPTU & PAU.

Note 2 : The Counselling Schedule of B.Tech. 1st Year (10+2 Basis) Course is applicable for the Colleges/Campuses of IKGPTU & MRSPTU only.

Note 3 : Tuition Fee Waiver Scheme applicable for IKGPTU & MRSPTU only. (NOT in PAU)

Note 4 : Punjab Agricultural University, Ludhiana is participating in Centralized Online Counselling for admission to B.Tech. (Agricultural Engineering) course only (For Punjab Candidates Only).

Note 5 : Punjab Agricultural University will remain closed on Saturday & Sunday.

Note 6 : In case of PAU, the concerned candidate may be called by PAU for verification of original documents and medical examinations as per procedure laid/ followed by PAU, Ludhiana for other UG programme being run by PAU, Ludhiana.

Note 7 : Confirmed Seat can be withdrawn within 7 days from the last date of reporting of last round of counselling for the respective course.

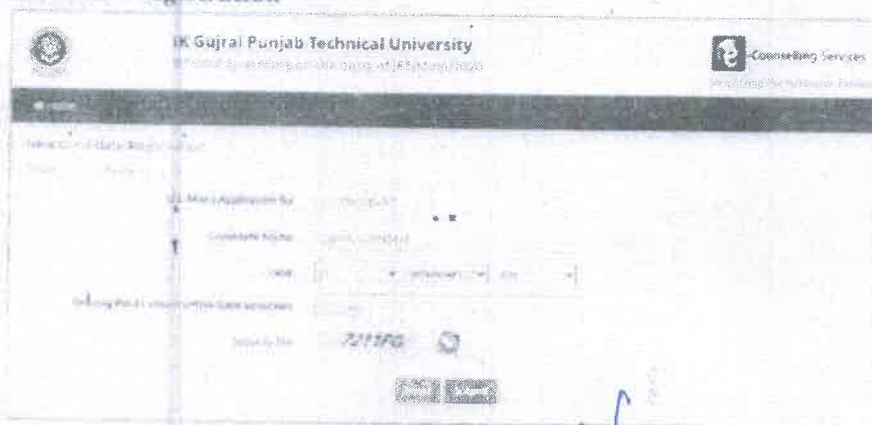
Note 8 : There will be only one round of Counselling on the Basis of inter-se-merit of 10+2 Exam (for the Campuses / Colleges of IKGPTU & MRSPTU only). Vacant Seats, after exhausting JEE Main Seats, will be allocated on 10+2 Basis Merit. (Preference shall be given to JEE Main 2021 candidates)

Note 9 : All the counselling rounds for PAU will be held on JEE Main Basis only.

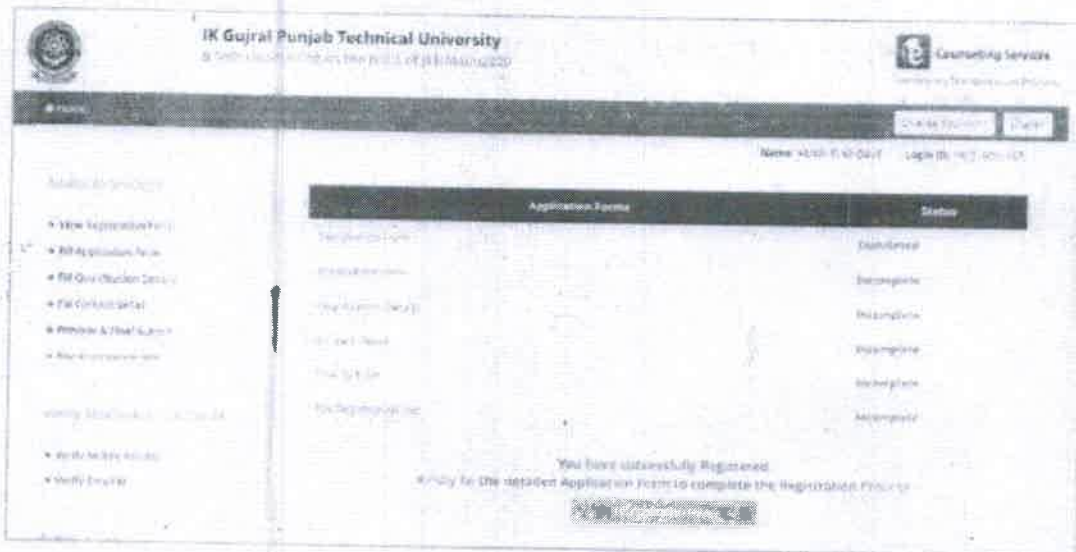
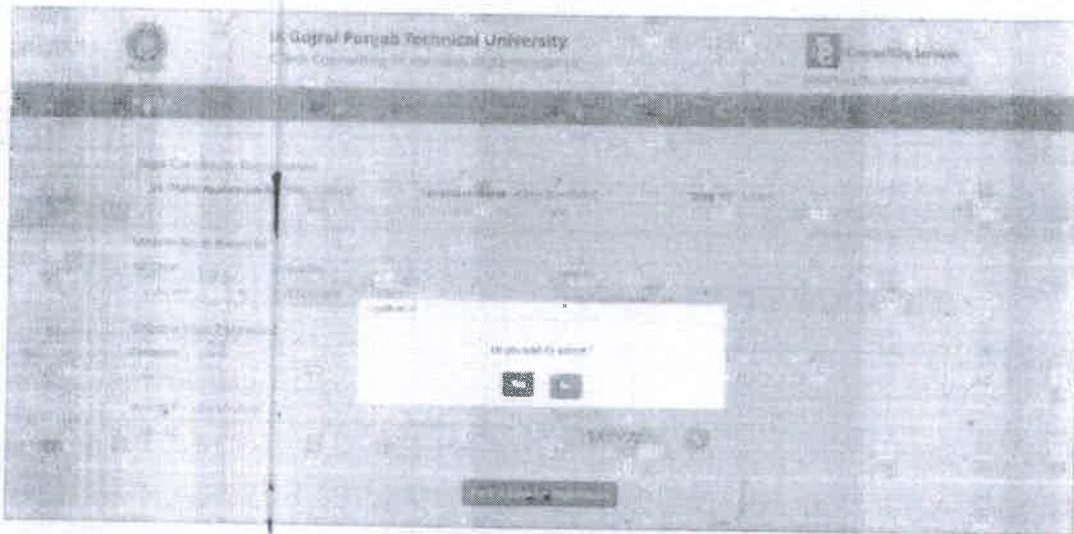
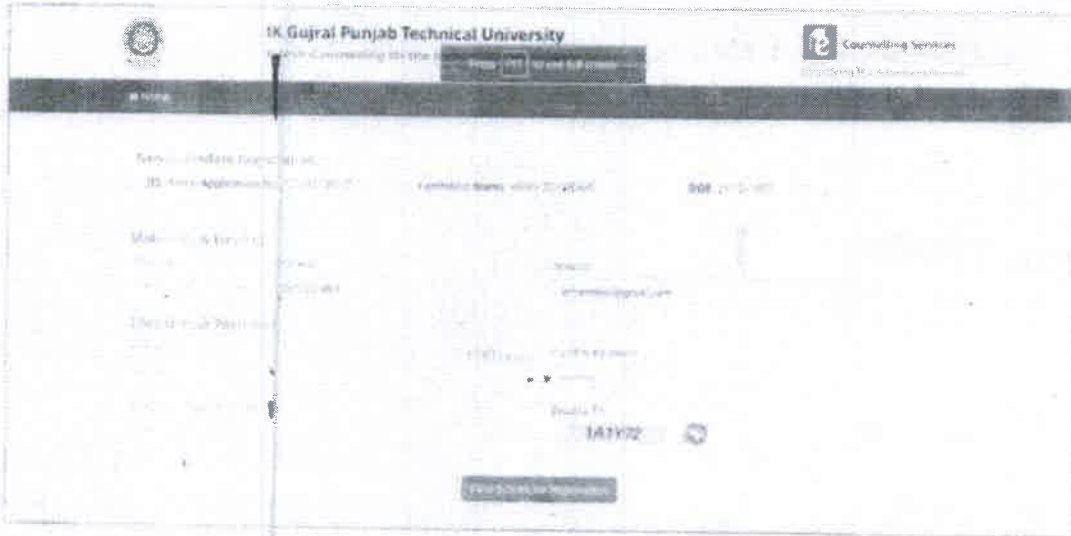
Note 10 : Online Reporting at PAU for the 2nd Round of B.Tech. 1st Year (JEE Main Basis) will not be on 09-10-2021 & 10-10-2021.

8.4 Snapshots of Counselling Process

8.3.1 New Candidate Registration



[Handwritten Signature]
 Dear (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar-Kaunthala Highway, Kaunthala



[Handwritten signatures]

Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar-Kapurthala Highway, Kapurthala

The image displays three sequential screenshots of the IKGPTU web portal's application form. Each screenshot shows the university's header with the logo and name, and a navigation menu. The main content area is divided into three columns:

- Left Column:** A sidebar menu with options like 'Home', 'About Us', 'Admission', 'Academics', 'Research', 'Sports & Recreation', 'Library', 'Contact Us', and 'Feedback'. A 'New Registration Form' link is highlighted in red.
- Middle Column:** A form titled 'Personal Details' with fields for 'Name', 'Date of Birth', 'Gender', 'Nationality', 'Religion', 'Marital Status', 'Address', 'Phone Number', and 'Email Address'. A 'Save & Continue' button is at the bottom.
- Right Column:** A form titled 'Application Details' with fields for 'Application Type', 'Year', 'Semester', 'Department', 'Course', 'Branch', 'Section', 'Batch', and 'Seat No.'. A 'Save & Continue' button is at the bottom.

The three screenshots show the user navigating through the form, with the 'New Registration Form' link being highlighted in red in each. The first screenshot shows the 'Personal Details' form, the second shows the 'Application Details' form, and the third shows the 'Application Details' form with the 'Save & Continue' button highlighted in red.

[Handwritten Signature]
 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar - Punjhal Highway, Kanurhala

Home | My Account | Logout

Application Form

Name: [Redacted]

Category: [Redacted]

Field of Study: [Redacted]

Level of Study: [Redacted]

Specialization: [Redacted]

Grade: [Redacted]

Registration Fee: [Redacted]

Application Fee: [Redacted]

Submit

Home | My Account | Logout

Application Form

Name: [Redacted]

Category: [Redacted]

Field of Study: [Redacted]

Level of Study: [Redacted]

Specialization: [Redacted]

Grade: [Redacted]

Registration Fee: [Redacted]

Application Fee: [Redacted]

Submit

Home | My Account | Logout

Application Form

Name: [Redacted]

Category: [Redacted]

Field of Study: [Redacted]

Level of Study: [Redacted]

Specialization: [Redacted]

Grade: [Redacted]

Registration Fee: [Redacted]

Application Fee: [Redacted]

Submit

Dean (Academics) [Signature]

K. Gujral Punjab Technical University

Har, Kapurthala Highway, Kapurthala

[Signature]

IK Gujral Punjab Technical University
 170001-170002 (Engineering) on the basis of JEE (Main) 2020

Consulting Services
 Helping You Achieve Your Dreams

Name: ANIL SINGH Login ID: ANS00127

Registration Details

Registration Details

Registration No.	Registration Fee	Registration Status
170001-170002	2000	Completed

Buttons: [Cancel] [Save & Add]

IK Gujral Punjab Technical University
 170001-170002 (Engineering) on the basis of JEE (Main) 2020

Consulting Services
 Helping You Achieve Your Dreams

Name: ANIL SINGH Login ID: ANS00127

Registration Details

Registration Details

Registration No.	Registration Fee	Registration Status
170001-170002	2000	Completed

Buttons: [Cancel] [Save & Add]

IK Gujral Punjab Technical University
 170001-170002 (Engineering) on the basis of JEE (Main) 2020

Consulting Services
 Helping You Achieve Your Dreams

Name: ANIL SINGH Login ID: ANS00127

Registration Details

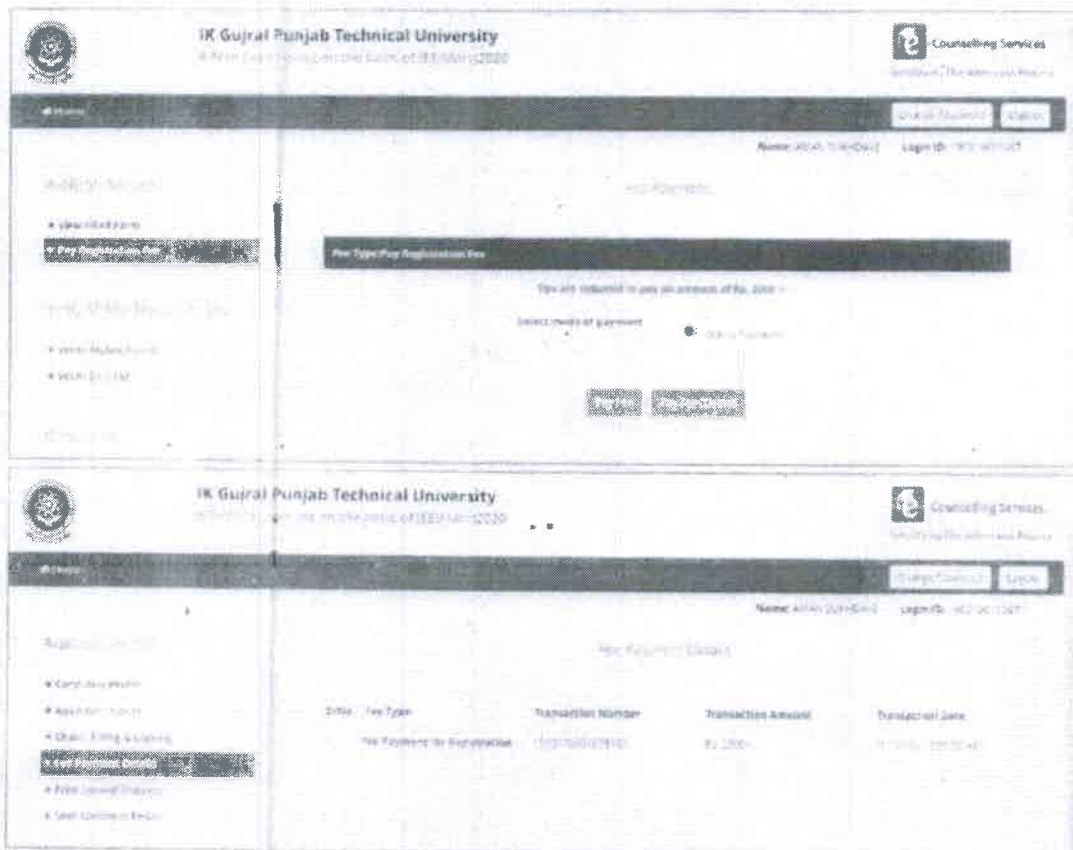
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Registration No.	Registration Fee	Registration Status
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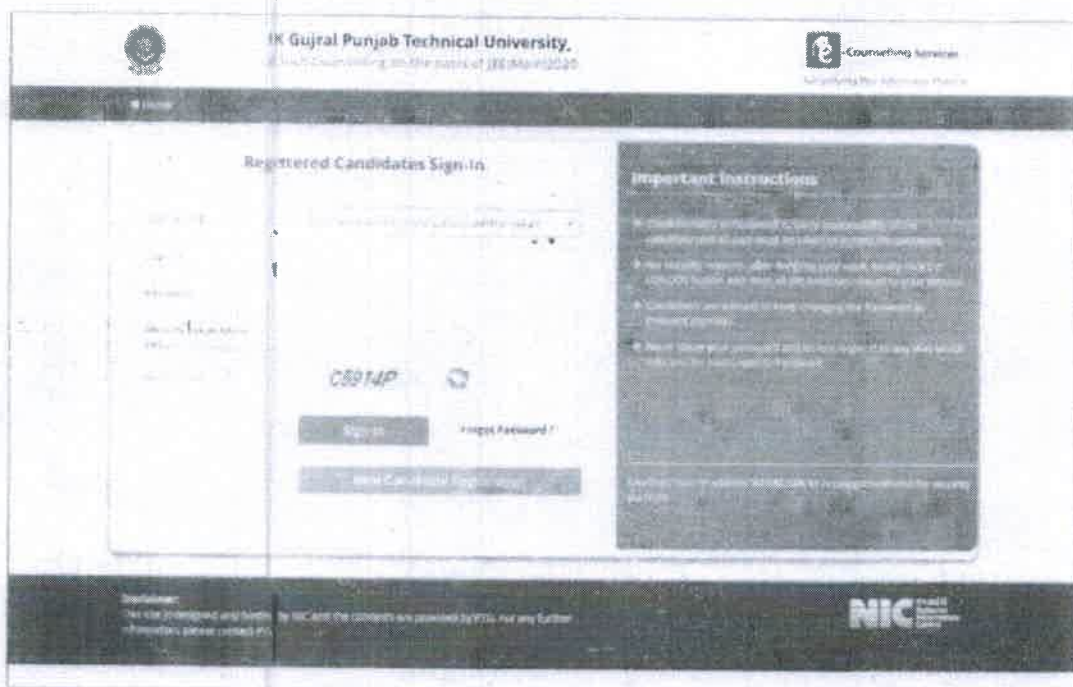
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(Handwritten signatures and stamps)

Dean
 I. K. Gujral Punjab Technical University
 Jalandhar-Kapurthala Highway, Kapurthala

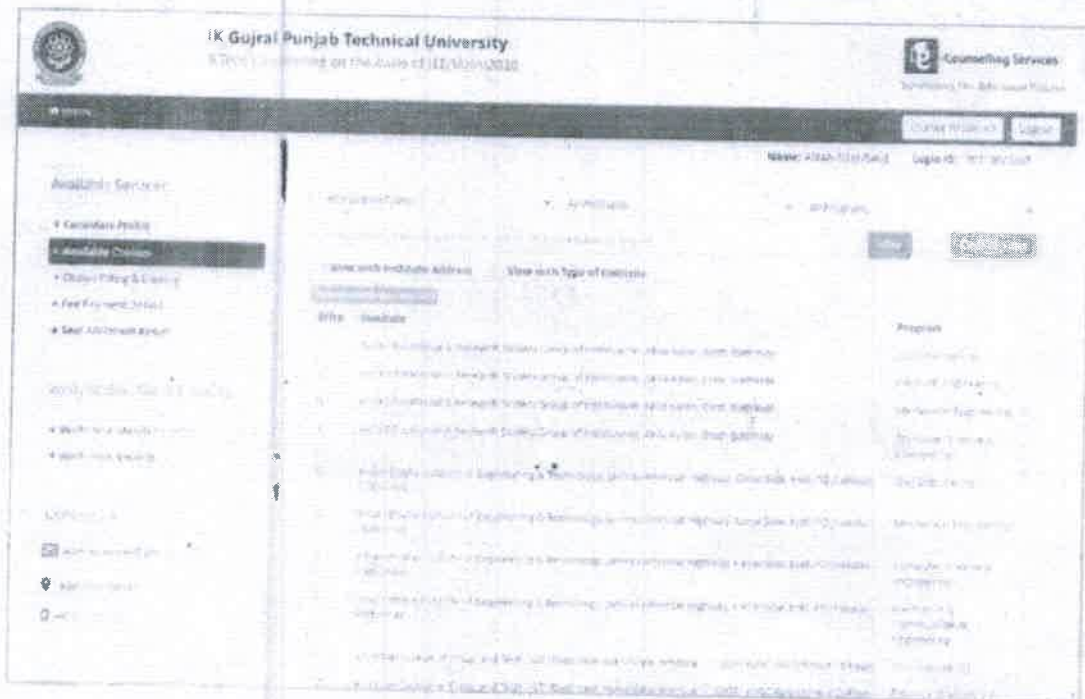
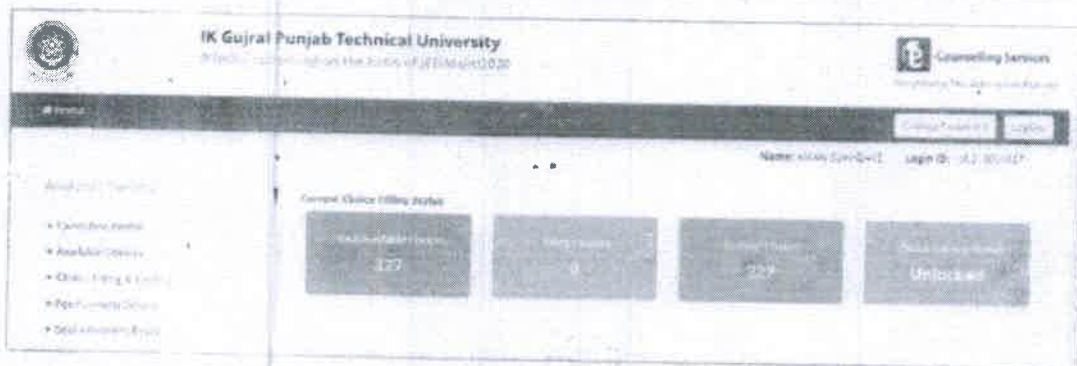
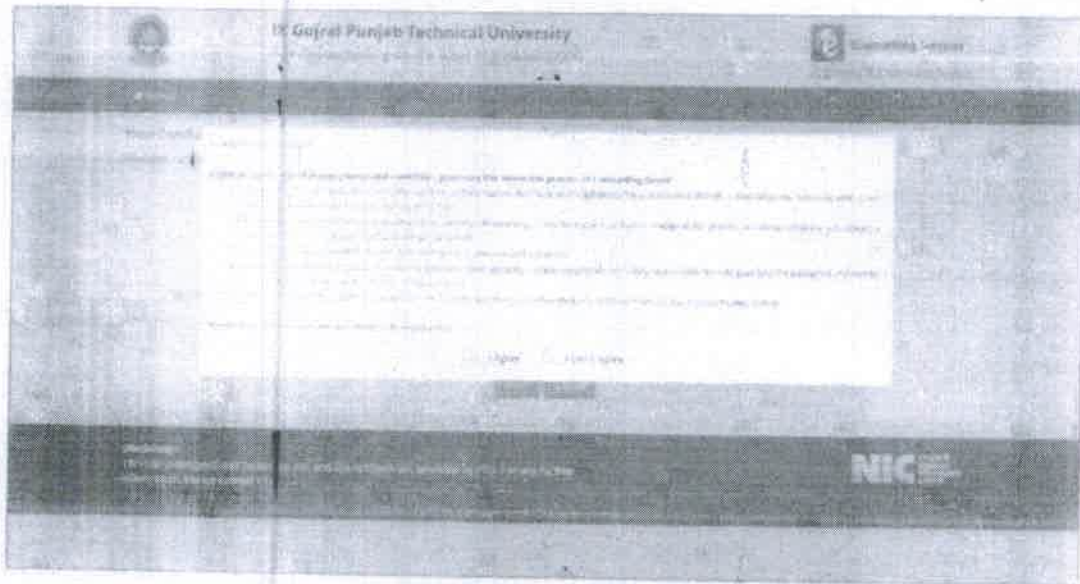


8.3.2 Candidate Choice Filing

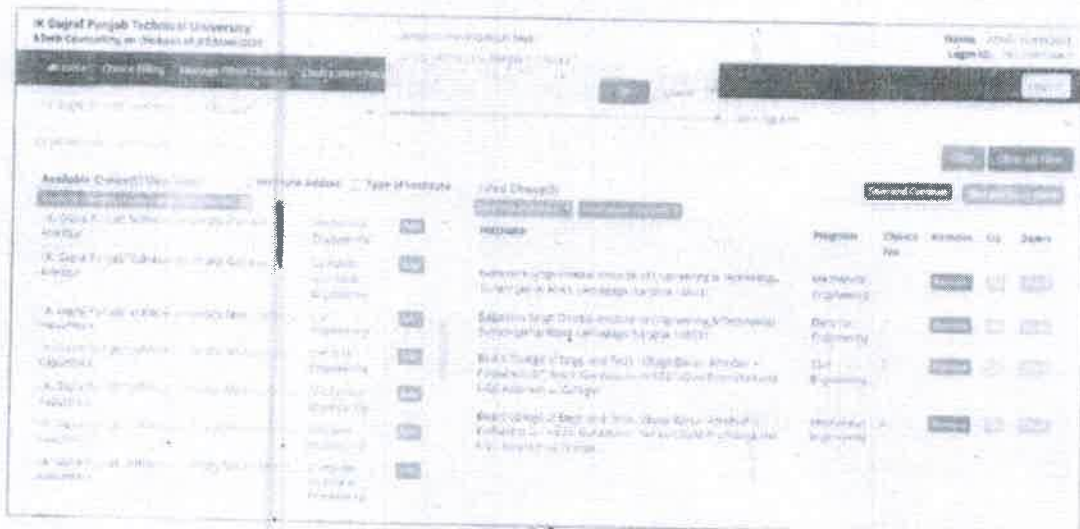
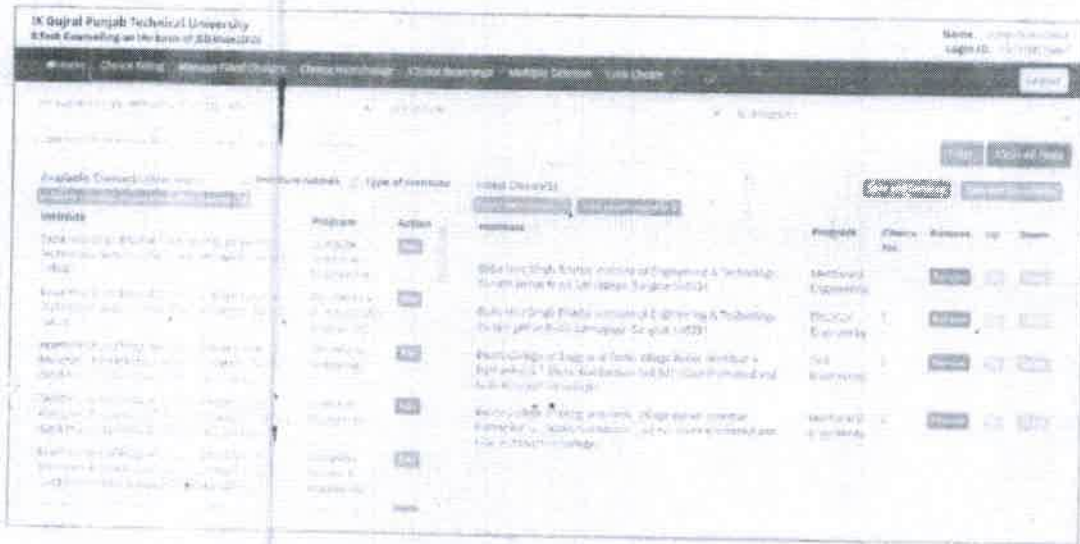
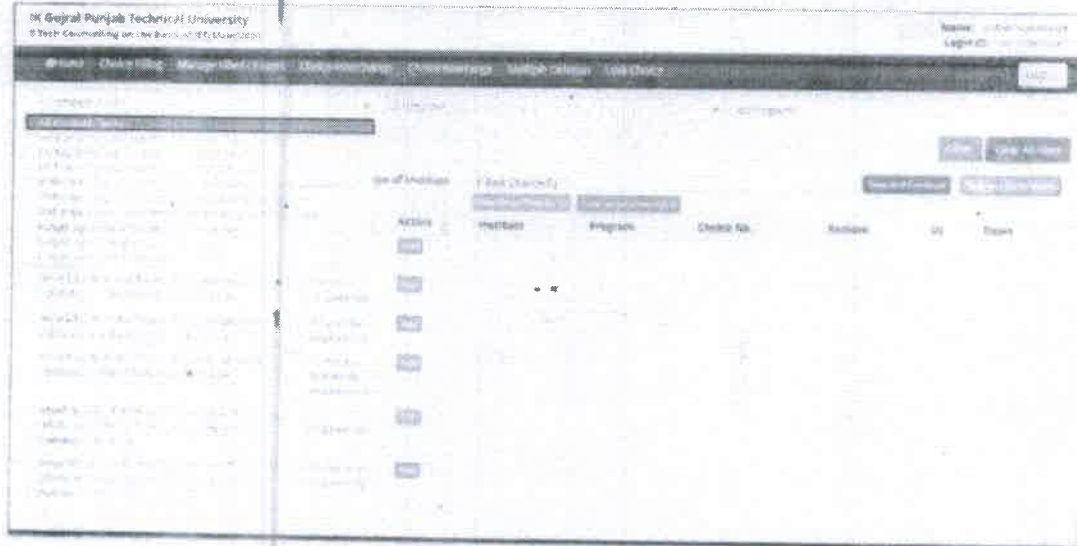


Dean (Academics)

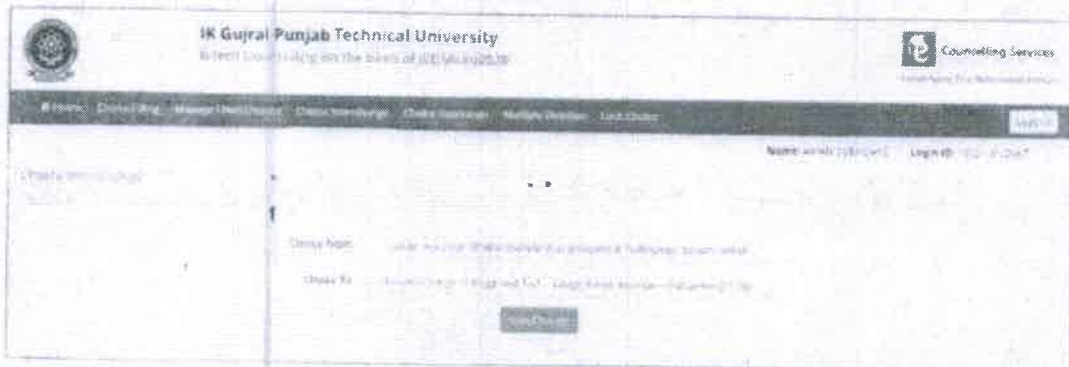
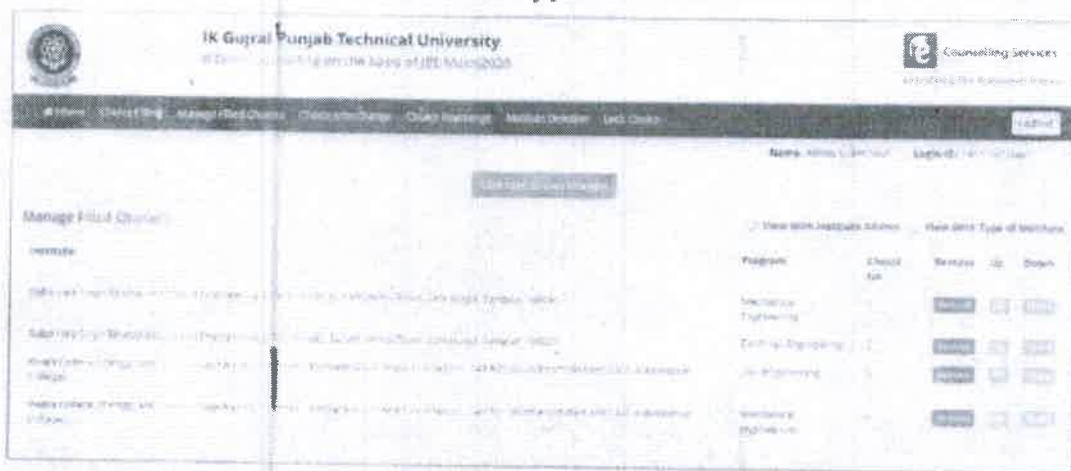
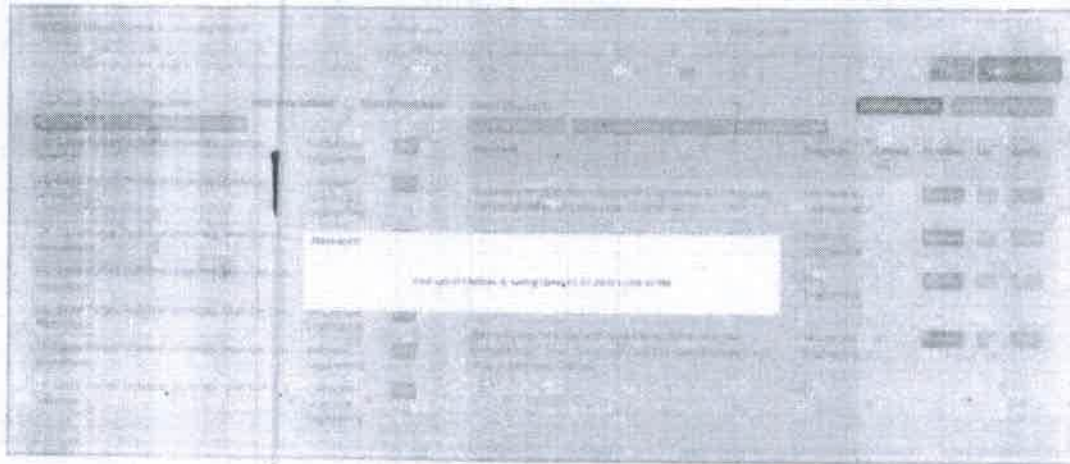
 IKGPTU - Kapurthala Highway, Kapurthala




(Handwritten signatures and initials)



Handwritten signatures and initials in blue ink.




 Dean (Academics)
 L.K. Gujral Punjab Technical University
 Jalandhar-Kapurthala Highway, Kapurthala

IK Gujral Punjab Technical University
 B.Tech. Counseling on the basis of JEE Main 2020

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Home | About Us | Contact Us | Admissions | Fee Structure | Placement | Alumni | Login | Register

Name: / Email:

View with Institute Address: View with Type of Institute:

New Choice No:

Final Choice

Choice No. Academic Program

1	Mechanical Engineering
2	Electrical Engineering
3	Computer Engineering
4	Information Technology

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Name: / Email:

View with Institute Address: View with Type of Institute:

Multiple Choice

Choice No.	Program Name
1	Mechanical Engineering
2	Electrical Engineering
3	Computer Engineering
4	Information Technology

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Name: / Email:

View with Institute Address: View with Type of Institute:

Looking Admission

After looking you will be redirected to the selected options on JEE Main 2020. Please check your Final Choice carefully before submit.

View with Institute Address: View with Type of Institute:

Total Final Choice

Choice No.	Program Name
1	Mechanical Engineering
2	Electrical Engineering
3	Computer Engineering
4	Information Technology

Looking Admission

After looking you will be redirected to the selected options on JEE Main 2020. Please check your Final Choice carefully before submit.

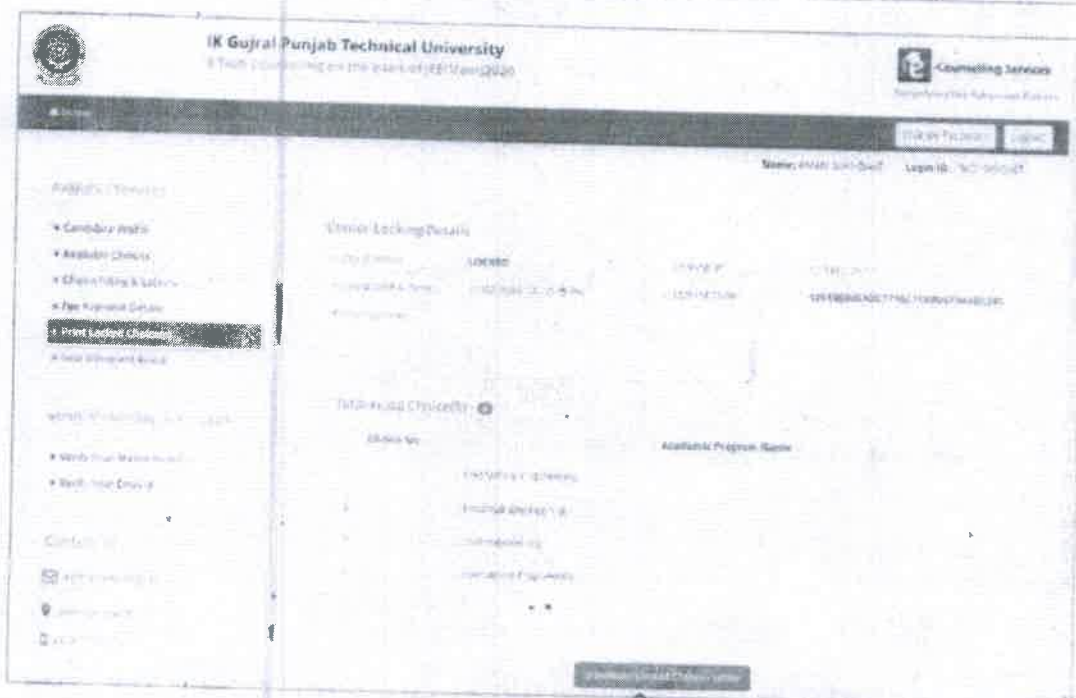
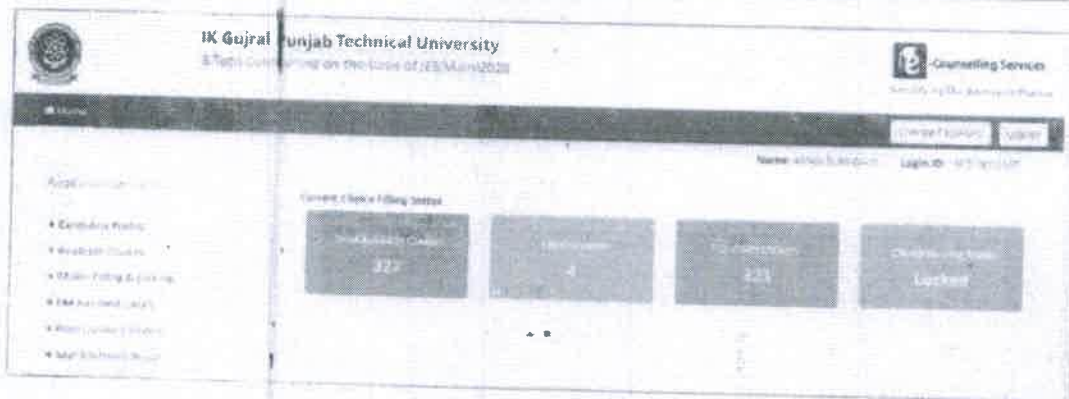
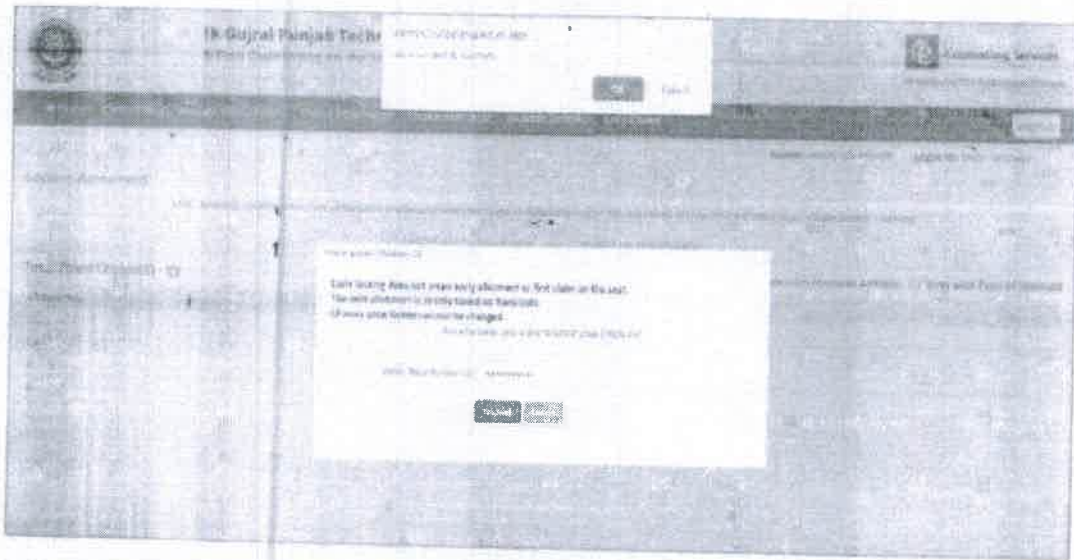
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View with Institute Address: View with Type of Institute:

View with Institute Address: View with Type of Institute:

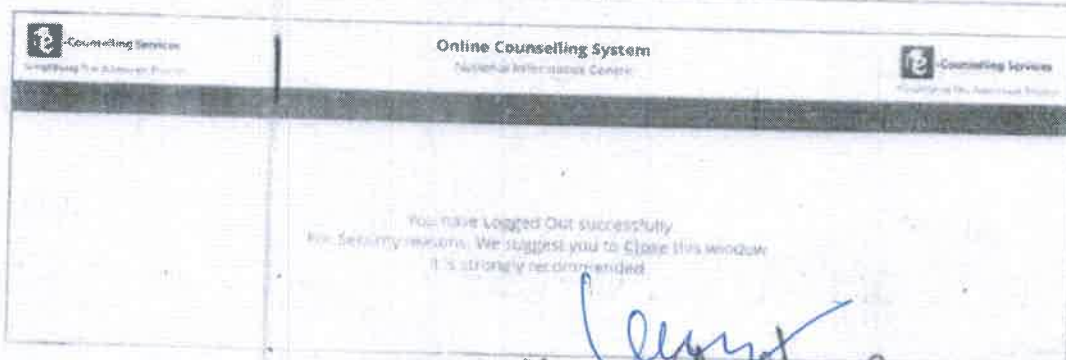
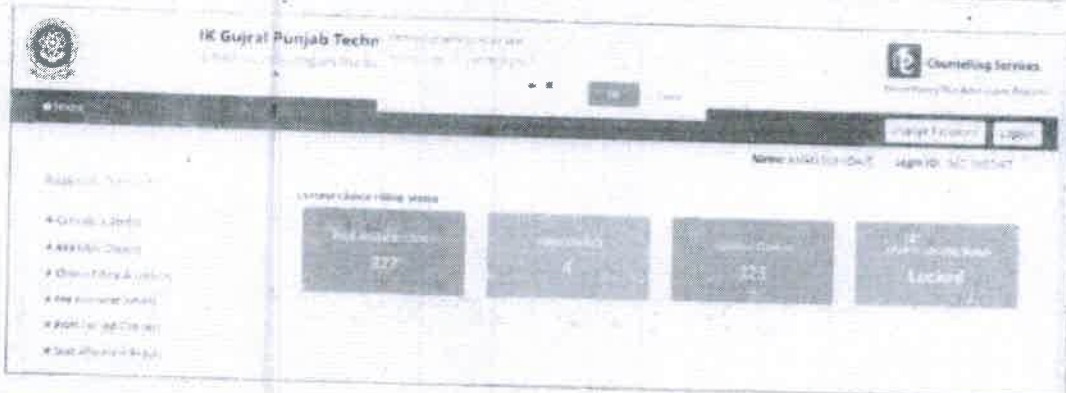
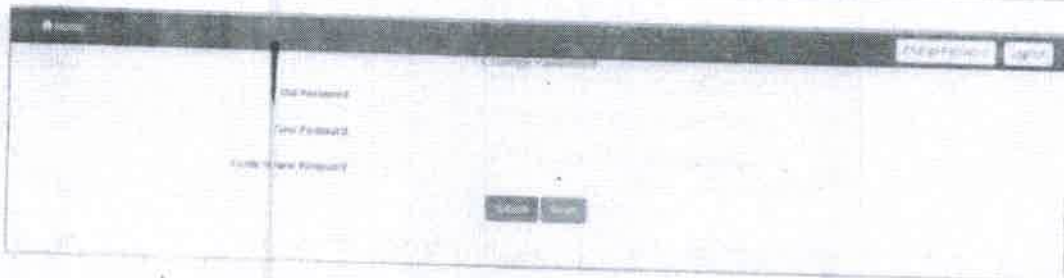
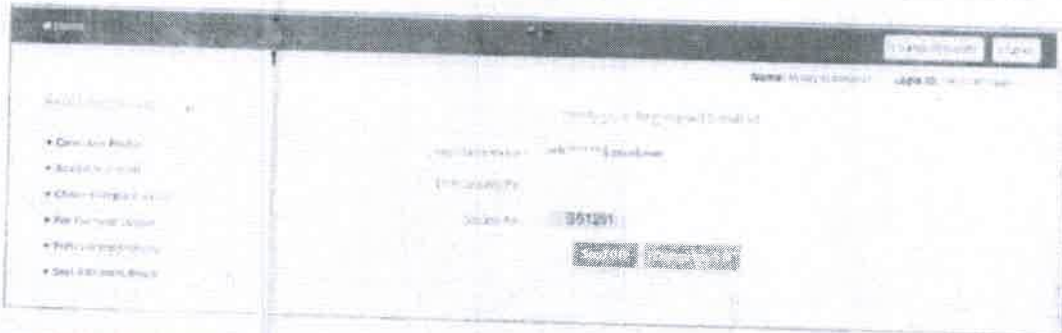
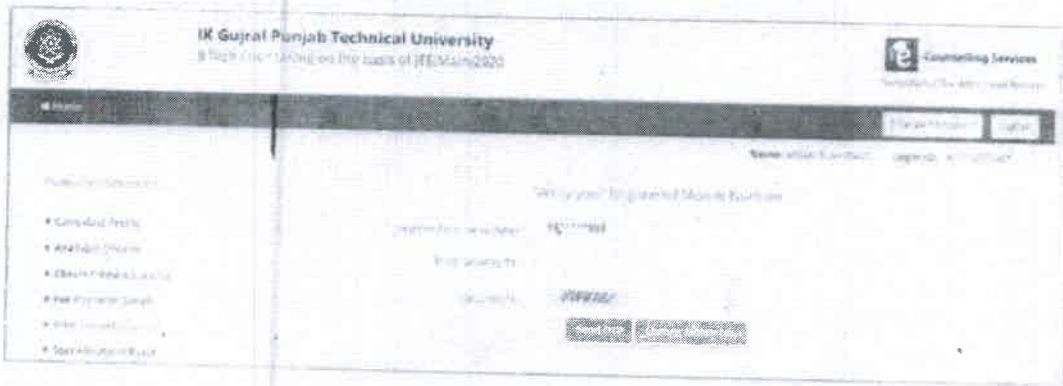
Geet
 Dean (Academics)
 IK Gujral Punjab Technical University
 Kanyathala Hatway, Kanyathala

MK



[Handwritten signatures and stamps]
 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Landrahi-Kapurthala Highway, Kapurthala

CAS (IKGPTU) – Stakeholder Requirements Specifications



[Handwritten Signature]
 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Guruhala Highway, Kapurthala

8.3.3 Administrator Module Screens

NIC National Informatics Centre

IKGPTU -Counselling Services

Agency/Board:
I.K. Gujral Punjab Technical University

User Id:
[Input field]

Password:
[Input field]

Enter Security Pin:
63ER38

Security Pin:
63ER38

Submit

I.K. Gujral Punjab Technical University
I.Tech Counselling on the Basis Inter-segment of 2017 Exam 2020
Direct Counselling

IKGPTU -Counselling Services
Simplifying The Admission Process

I.Tech Counselling on the Basis Inter-segment of 2017 Exam 2020

User Information

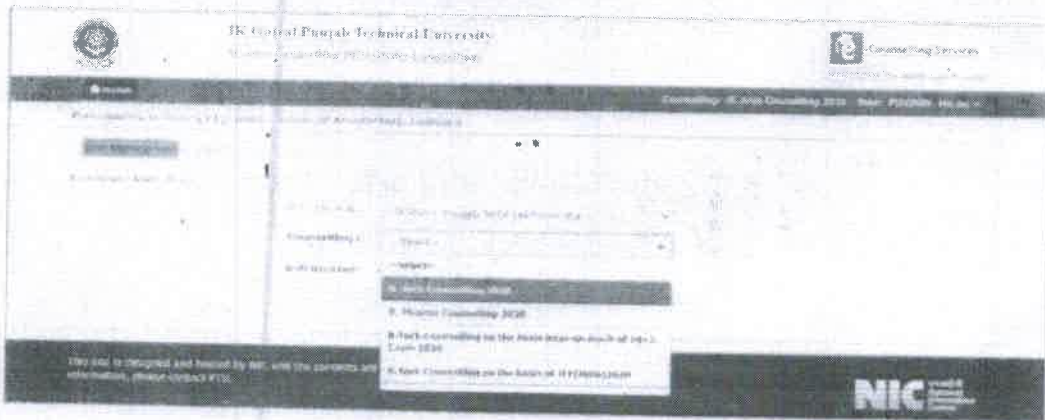
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Available Services

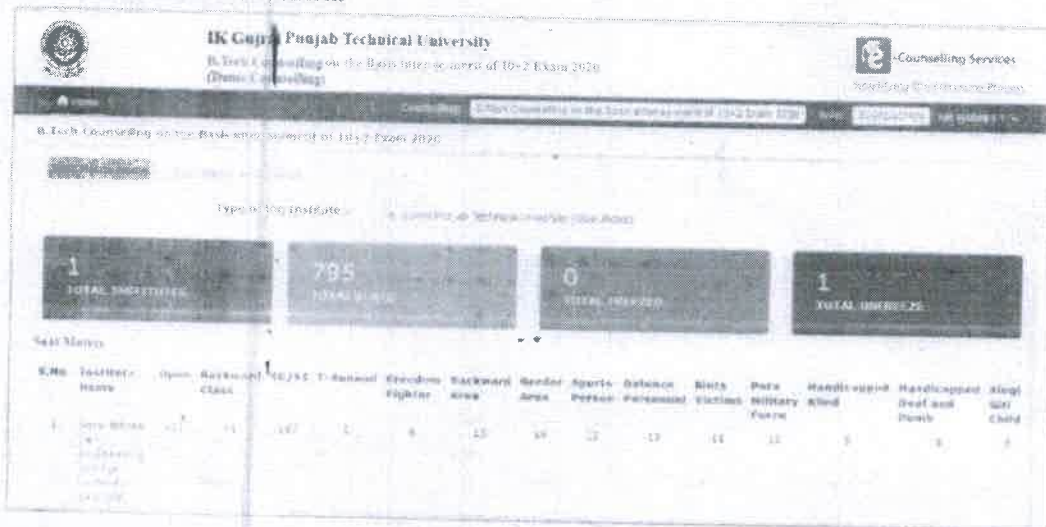
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8.3.4 User Management at Admin and PI module



8.3.5 Institute wise Seat Matrix



S.No.	Institute Name	Open	Reserved	CLASS	10+2	1-Round	2-Round	Backward Area	Gender	Sports	Defense	Blind	Para Military	Handicapped	Handicapped	Total
1	GGS Indraprastha College	11	11	10+2	1	1	1	1	1	1	1	1	1	1	1	1

Please note that These are sample illustration.

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 Punjab Technical University

 Kanpur Highway, Kanurhela

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

Courses: B.Tech (LEET), B.Pharmacy, B.Pharmacy (LEET), B.Architecture, M.Tech, M.Pharma, MBA & MCA

**National Informatics Centre (MeitY),
"A" Block, CGO Complex, Lodhi Road,
New Delhi – 110 003
India**

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I. K. Gujral Punjab Technical University
Jalandhar, Kanourthala Highway, Kanourthala

Amendment log

Version	Date	Brief Description	Section Change
0.1	16/08/2021	The StRS document defines the requirements for IKGPTU Counselling 2021. It contains the scope of application, business environment, goals, operational requirements and user requirements etc.	
0.2	17/08/2021	Changes incorporated in StRS as per NIC HQ guidelines	All Sections were vetted and amended suitably.
0.3	18/08/2021	Changes incorporated in StRS as per NIC HQ guidelines	All Sections were vetted and amended suitably.
0.4	20/08/2021	Changes suggested by IKGPTU were incorporated	All Sections were vetted and amended suitably.



 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar-Kapurthala Highway, Kapurthala



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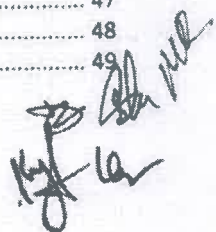
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 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar - Kapurthala Highway, Kapurthala



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 2020-21, the University has affiliated 68 Engg. Colleges, 103 Management and Computer Application courses, 37 institutions imparting Pharmacy education, 05 colleges imparting hotel management education and 06 colleges are providing Architecture Education. 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.Arch. and B.Tech. Lateral Entry, B.Pharmacy, B.Pharmacy Lateral Entry, MBA, MCA, M.Pharmacy & M.Tech. 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.Arch. and B.Tech. Lateral Entry, B.Pharmacy, B.Pharmacy Lateral Entry, MBA, MCA, M.Pharmacy & M.Tech. 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.

The bottom right corner of the page contains several handwritten signatures in blue ink. Below the signatures is a blue circular stamp with the text: "Dean (Academics)", "I. K. Gujral Punjab Technical University", and "Jalandhar, Kapurthala Highway, Kapurthala".

1.2 Business Scope

This sub-section defines the business domain under consideration by

The proposed system (IKGPTU-2021) 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-2021.
2. Customise/configure online eCounselling system as per the **Business Rules** finalized by Technical Committee of IKGPTU-2021.
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, Persons with Disabilities) 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, Persons with Disabilities)
 - 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.

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- 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 2021-22 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.

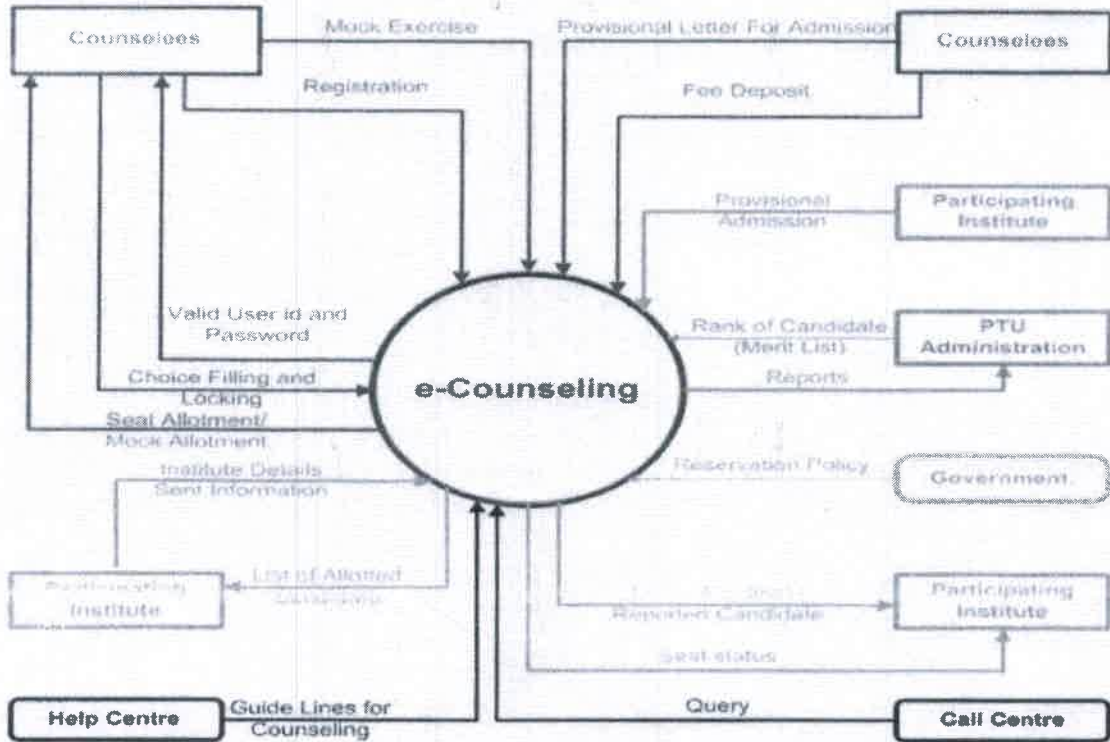
1.3.2.3 Payment Gateway Integrator (PGI)

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 eCounseling 2021.
- 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.



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 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar, Kapurthala Highway, Kapurthala

Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar, Kapurthala Highway, Kapurthala

University of Jalandhar

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
DP	Persons with Disabilities
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

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 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar-Kapurthala Highway, Kapurthala

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	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)

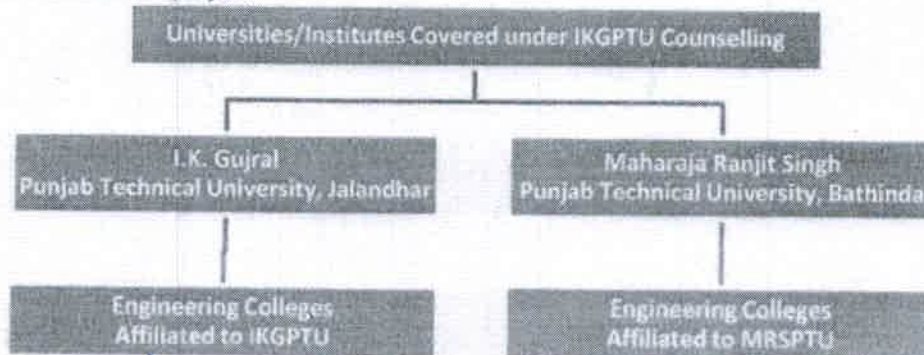
Subcategory Code	Description
01	Grade A
02	Grade B
03	Grade C
04	Grade D

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

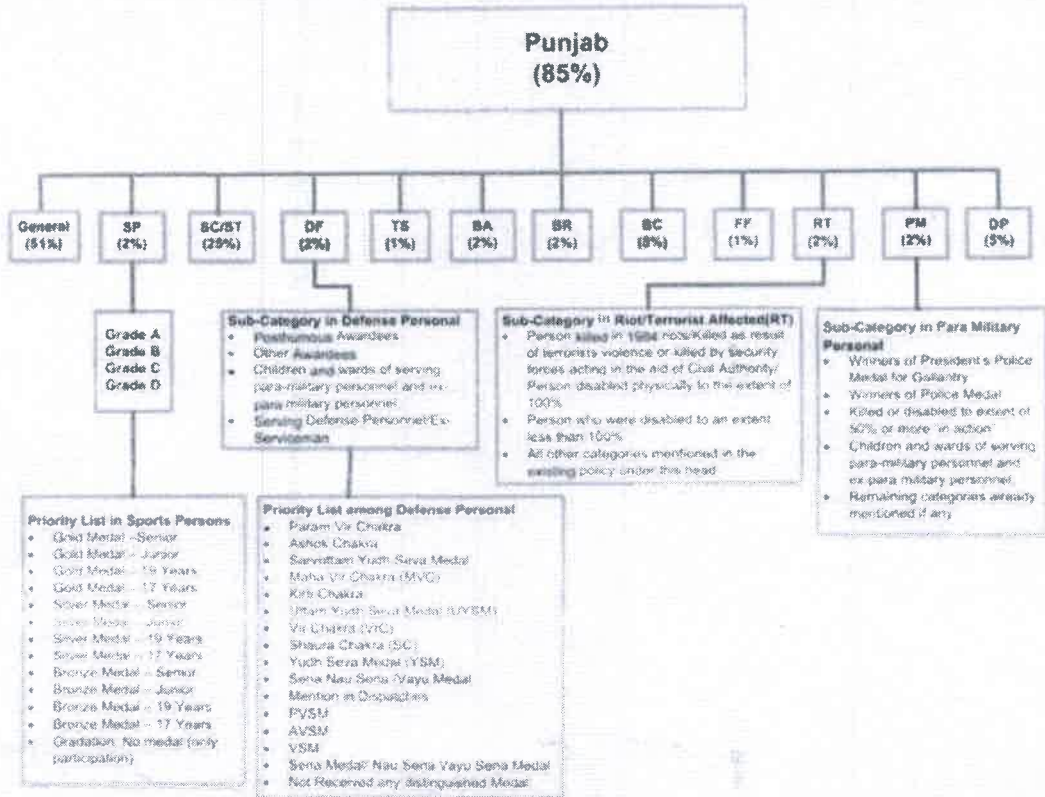
The total intake for B.Tech (LEET), B.Pharmacy, B.Pharmacy(LEET), B.Architecture, M.Tech, M.Pharma, MBA & MCA programs offered by participating institutions are divided into fifteen different seat categories. Following reservation policies as adopted by Universities will be used in the project.



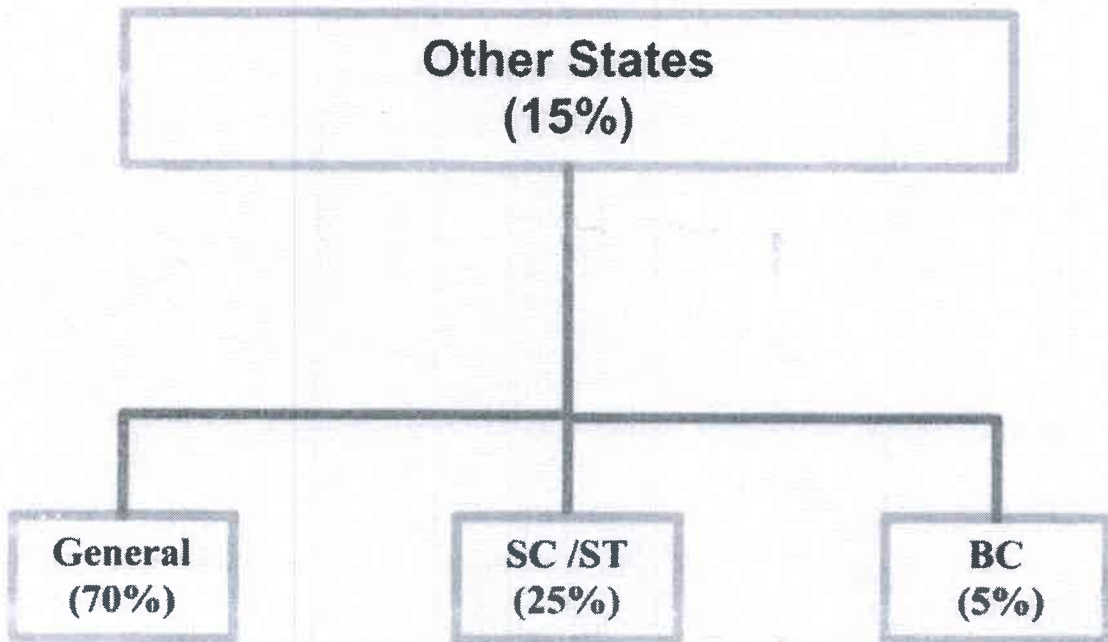
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Reservation Policies for Colleges/Institutions under IKGPTU/MRSPTU – for Punjab 85% Candidates



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



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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 2021-22
- Discussion with Organising University officials.
- Stakeholder Requirement Specifications (StRS) of IKGPTU e-Counselling 2021-22.
- 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.

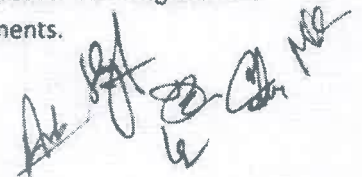
3.3.3 Payment Gateway Integration

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.


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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

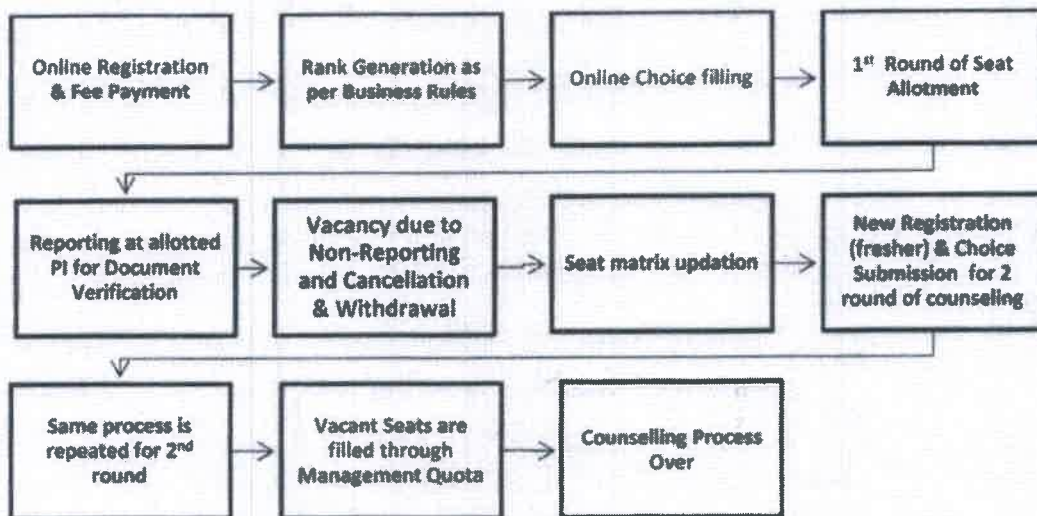
4 Business Operational Requirements

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.

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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.

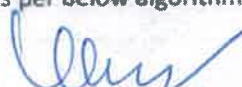
4.1.4 Document discrepancy removal (Optional)

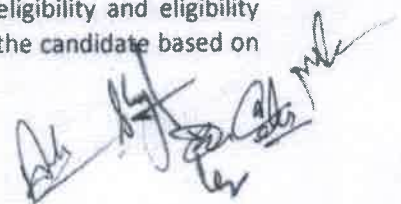
Candidate need to resubmit the document for which a discrepancy has been generated by PI user at the time of document verification for completion of document verification process by PI user.

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.


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CAS (IKGPTU) – Stakeholder Requirements Specifications

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	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General
2.	SC /ST	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, SC
3.	BC	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, BC
4	T-Sunami	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, TS
5.	Freedom Fighter	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, FF
6.	Backward Area	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, BA
7	Defence Personnel	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, DF
8	Terrorist / Riots Victims (RT)	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, RT
9	Para Military forces (WPP)	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, WPP
10	Persons with Disabilities	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, DP
11	Sports	<input checked="" type="checkbox"/>	IKGPTU/MRSPTU General, Sports
12	Border Area	<input checked="" type="checkbox"/>	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 Waiver 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	<input checked="" type="checkbox"/>	(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

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Jalandhar, Baputhala Highway, Kuldihala

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1.	General	<input checked="" type="checkbox"/>	IKGPTU General + MRSPTU General
2.	SC /ST	<input checked="" type="checkbox"/>	IKGPTU General,SC + MRSPTU General,SC
3.	BC	<input checked="" type="checkbox"/>	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 waiving scheme and as well as for Non fee waiving 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


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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.


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CAS (IKGPTU) – Stakeholder Requirements Specifications

- 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

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CAS (IKGPTU) – Stakeholder Requirements Specifications

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

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 (40% 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 33% marks (33% 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

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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 33% marks (33% 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 33% 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 33% aggregate marks.

Or

(c) International Baccalaureate Diploma, after 10 years of schooling with not less than 33% marks in aggregate and with Mathematics as compulsory subjects of examination.

However for SC, ST and OBC candidates the aggregate is 33% 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 70 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	3. Computer Science or Chemistry	4. As per 10+2 DMC
2. Mathematics	or Biology Engineering Drawing	5. As per 10+2 DMC

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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 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 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

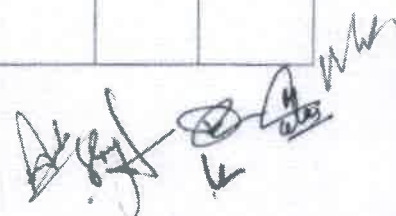
Eligibility requirement by participating Universities is as under:

Sr. No.	Course	Category	Eligibility	Basis of Admission	%age Criteria for Admission	
					IKGPTU	MRSPTU
1	B.Arch.	General	(i) No candidate, shall be admitted to Architecture Course unless he/she has passed an examination at the end of the 10+2 scheme of examination with Physics, Chemistry and Mathematics subjects from a board recognized or established by central/state government through a legislation and a member of Council of Boards of School Education (COBSE) or passed 10+3 Diploma Examination with Mathematics as compulsory subject. (The above relaxation shall be valid for the Academic Session 2021-22 only, irrespective of the year in which a candidate has passed 10+2 or 10+3 examination.) (ii) As per Ministry of Education, Govt. of India Gazette Notification dated August 11, 2020 w.r.t. Minimum Standard of Architecture Education Regulations 2020, qualifying an Aptitude Test in Architecture conducted by Council of Architecture (COA) is mandatory for getting admission in B.Architecture course. (Note: The weightage of Marks secured in the Test and qualifying examination will be counted in the ratio of 50:50.)	Qualifying Marks + NATA Scores in ratio of 50:50	Pass 33%	Pass 33%
		Reserved			Pass 33%	Pass 33%
2	2nd year of B.Tech. & B.Tech. Fee Waiver	General	(i) All those candidates who have passed minimum three years / two years (Lateral Entry) Diploma examination from an AICTE approved institution / recognized university as defined by UGC with at least 45% marks (40% in case of Candidates belonging to reserved category) in any branch of Engineering and Technology shall be eligible to apply. OR (ii) All those candidates who have passed B. Sc. Degree from a recognized University as	Inter-se-merit of Qualifying Examination	45%	45%
		Reserved			40%	40%


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Jalandhar-Kaushal Highway, Bathinda



CAS (IKGPTU) – Stakeholder Requirements Specifications

Sr. No.	Course	Category	Eligibility	Basis of Admission	%age Criteria for Admission	
					IKGPTU	MRSPTU
			<p>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.</p> <p>OR</p> <p>(iii) Passed D.Voc. stream in the same or allied sector. (The Universities will offer suitable bridge courses such as Mathematics, Physics, Engineering drawing etc., for the students coming from diverse backgrounds to achieve desired learning outcomes of the programme)</p>			
3	1st year of B.Pharm. & B.Pharm. Fee Waiver	General	<p>Candidate shall have passed 10+2 examination conducted by the respective state/central government authorities recognized as equivalent to 10+2 examination by the Association of Indian Universities (AIU) with English as one of the subjects and Physics, Chemistry, Mathematics / Biology as optional subjects individually. "However, the students possessing 10+2 qualification from non-formal and non-class rooms based schooling such as National Institute of Open Schooling, open school systems of States etc. shall not be eligible for admission to B.Pharm Course."</p> <p>Any other qualification approved by the Pharmacy Council of India as equivalent to any of the above examinations.</p>	Inter-se-merit of Qualifying Examination	Pass 33%	Pass 33%
		Reserved			Pass 33%	Pass 33%
4	2nd year of B.Pharm. & B.Pharm. Fee Waiver	General	<p>All those candidates who have passed the diploma in Pharmacy from an Institution approved by PCI u/s 12 Pharmacy Act, 1948 with subject to following conditions.</p> <p>(i) Such D.Pharm holders admitted directly to B.Pharmacy 2nd Year shall pass those subjects of B.Pharmacy 1st year which are not covered under D.Pharm.</p> <p>(ii) At any given time the admission in B.Pharmacy 2nd year should not exceed the sanctioned intake of B.Pharmacy 1st year +10% seats of sanctioned intake of B.Pharmacy 1st year.</p>	Inter-se-merit of Qualifying Examination	Pass 33%	Pass 33%
		Reserved			Pass 33%	Pass 33%
5	MBA	General	<p>All those candidates who have passed bachelors degree of minimum three years duration with at least 50% marks (45% marks in case of candidates belonging to reserved category) in any disciplines from the University recognized by the University Grants Commission (UGC) and with valid rank in C-MAT shall be eligible to apply for MBA course</p>	Valid CMAT Scores followed by Inter-se-merit of Qualifying Examination	50%	50%
		Reserved			45%	45%
6	MCA 1st Year	General	<p>All those candidates who have passed BCA / Bachelor Degree in Computer Science Engineering or Equivalent Degree.</p>	Inter-se-merit of Qualifying Examination	50%	50%

CAS (IKGPTU) – Stakeholder Requirements Specifications

Sr. No.	Course	Category	Eligibility	Basis of Admission	%age Criteria for Admission	
					IKGPTU	MRSPTU
		Reserved	<p>OR</p> <p>Passed B.Sc./ B.Com. / B.A. with Mathematics at 10+2 or at Graduation Level (with additional bridge Courses as per the norms of the concerned University).</p> <p>And</p> <p>obtained at least 50% marks (45% in case of candidate belonging to reserved category) in the qualifying examination.</p>		45%	45%
7	M.Pharma. (Full Time)	General	<p>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 score shall be eligible to apply for master's programme in Pharmacy (M.Pharma) Course.</p> <p>In case candidates with valid GPAT Score are not available the seats shall be filled on the basis of inter-se-merit in qualifying examination.</p>	Valid GPAT Scores followed by Inter se merit of Qualifying Examination	55%	55%
		Reserved			50%	50%
8	M.Tech. (Full Time)	General	<p>All those candidates who have passed B.E. / B. Tech. with atleast 50% (45% in case of candidate belonging to reserved category) marks in aggregate and with valid GATE Score shall be eligible to apply for Postgraduate level M.Tech. course</p> <p>In case seats haven't been filled under respective categories, admission shall be considered on the basis of inter-se-merit in qualifying examination.</p>	Valid GATE Scores followed by Inter-se-merit of Qualifying Examination	50%	50%
		Reserved			45%	45%

Course Wise Criteria for Merit Preparation & Tie Breaking for Session 2021-22

Sr. No.	Course Name	Criteria for the preparation of Merit and Tie Breaking
1.	B.Tech. 1 st Year (JEE Main Basis)	<p>The merit shall be prepared on the basis of Total Score (Percentile Score) obtained in JEE Main 2021. The candidate obtained higher Percentile Score in JEE Main 2021 shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher percentile score in Mathematics in JEE Main 2021 shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidates obtained higher percentile score in Physics in JEE Main 2021 shall Rank higher in the order of Merit.</p> <p>(c) In case of Tie in (b) above, the candidates obtained higher percentile score in Chemistry in JEE Main 2021 shall Rank higher in the order of Merit.</p> <p>(d) In case of Tie in (c) above, the candidate obtained higher marks in qualifying exam (10+2) shall Rank higher in the order of Merit.</p> <p>(e) In case of Tie in (d) above, the candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(f) In case of Tie in (e) above, the candidate senior in age shall Rank higher in the order of Merit.</p>
2.	B.Tech. 1 st Year (10+2 Basis)	<p>(i) In case of candidate participating on the basis of 10+2 examination, the marks of all 05 subjects (includes any 3 compulsory subjects as per Punjab Govt. Notification and 2 optional subjects) of 10+2 examination will be captured in the counselling registration form from participating candidates.</p>

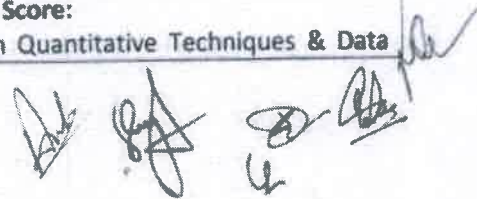
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Sr. No.	Course Name	Criteria for the preparation of Merit and Tie Breaking																					
		<p>The Rank of the candidates in the merit list will be prepared on the basis of aggregate marks of 10+2 examination.</p> <p>(ii) In case of candidate participating on the basis of Diploma in any Engineering Trade from PSBTE, SLIET or any other recognized State Board of Technical Education then the Rank of the candidates in the merit list will be prepared on the basis of total aggregate percentage marks obtained in Diploma as per respective Board.</p> <p>(iii) In case of candidate participating on the basis of 2 years Certificate from SLIET then the Rank of the candidates in the merit list will be prepared on the basis of total aggregate percentage marks obtained in qualifying exam.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>																					
3.	B.Pharmacy 1 st Year	<p>The merit list shall be prepared on the basis of Aggregate percentage Marks of the following subjects of qualifying examination:-</p> <p>Compulsory Subjects : Physics & Chemistry One of the Subjects : Mathematics / Biology</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Physics + Chemistry shall rank higher in the order of merit.</p> <p>(b) In the case of Tie in (a) above, the candidate obtained higher marks in Physics shall rank higher in the order of merit.</p> <p>(c) In the case of Tie in (b) above, the candidate obtained higher aggregate marks in Matriculation shall rank higher in the order of merit.</p> <p>(d) In case of Tie in (c) above, the candidate Senior in Age shall rank higher in the order of merit.</p>																					
4.	B.Architecture	<p>For merit, the weightage of Marks secured in the NATA and qualifying examination will be counted in the ratio of 50:50. The candidate obtained higher weightage marks shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidates obtained higher Score in NATA shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate obtained higher aggregate marks in Qualifying Examination shall Rank higher in the order of Merit.</p> <p>(c) In case of Tie in (b) above, the candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(d) In case of Tie in (c) above, the candidate senior in age shall Rank higher in the order of Merit.</p>																					
5.	B.Tech. Lateral Entry	<p>The rank of the candidates in the merit list shall be determined on the basis of aggregate marks obtained in the qualifying examination (Diploma) as per the weighted percentage given below :</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="4">Candidates having 3 years Diploma</th> </tr> <tr> <th>1st Year</th> <th>2nd Year</th> <th>3rd Year</th> <th>Aggregate</th> </tr> </thead> <tbody> <tr> <td>25%</td> <td>50%</td> <td>100%</td> <td>Weighted %age</td> </tr> </tbody> </table> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">Candidates having 2 years Diploma</th> </tr> <tr> <th>2nd Year</th> <th>3rd Year</th> <th>Aggregate</th> </tr> </thead> <tbody> <tr> <td>50%</td> <td>100%</td> <td>Weighted %age</td> </tr> </tbody> </table>	Candidates having 3 years Diploma				1 st Year	2 nd Year	3 rd Year	Aggregate	25%	50%	100%	Weighted %age	Candidates having 2 years Diploma			2 nd Year	3 rd Year	Aggregate	50%	100%	Weighted %age
Candidates having 3 years Diploma																							
1 st Year	2 nd Year	3 rd Year	Aggregate																				
25%	50%	100%	Weighted %age																				
Candidates having 2 years Diploma																							
2 nd Year	3 rd Year	Aggregate																					
50%	100%	Weighted %age																					

CAS (IKGPTU) – Stakeholder Requirements Specifications

Sr. No.	Course Name	Criteria for the preparation of Merit and Tie Breaking											
		Candidates having 2½ years Diploma											
		1 st & 2 nd Sem	3 rd Sem (3A+3B) & 4 th Sem	Aggregate									
		50%	100%	Weighted %age									
		Candidates having 4 years Diploma											
		1 st Year	2 nd Year	3 rd Year									
		25%	25%	50%									
		4 th Year	Aggregate										
		100%	Weighted %age										
		<p>The candidate obtained higher weightage marks shall Rank higher in the order of Merit</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>											
6.	B.Pharmacy Lateral Entry	<p>The rank of the candidates in the merit list shall be determined on the basis of aggregate marks obtained in the qualifying examination (Diploma) as per the weighted percentage given below :</p> <table border="1"> <thead> <tr> <th colspan="3">Candidates having 2 years Diploma in Pharmacy</th> </tr> <tr> <th>1st Year</th> <th>2nd Year</th> <th>Aggregate</th> </tr> </thead> <tbody> <tr> <td>50%</td> <td>100%</td> <td>Weighted %age</td> </tr> </tbody> </table> <p>The candidate obtained higher weightage marks shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>			Candidates having 2 years Diploma in Pharmacy			1 st Year	2 nd Year	Aggregate	50%	100%	Weighted %age
Candidates having 2 years Diploma in Pharmacy													
1 st Year	2 nd Year	Aggregate											
50%	100%	Weighted %age											
7.	BHMCT (AICTE)	<p>The merit shall be prepared on the basis of aggregate marks obtained in qualifying examination. The candidate obtained higher aggregate marks in qualifying examination shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>											
8.	Pharma.D & Pharma.D (Post Baccalaureate)	<p>The merit shall be prepared on the basis of aggregate marks obtained in qualifying examination. The candidate obtained higher aggregate marks in qualifying examination shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>											
6.	MBA	<p>The merit shall be prepared on the basis of CMAT Score followed by aggregate marks obtained in qualifying examination. The candidate obtained higher CMAT score shall Rank higher in the order of Merit and then candidate obtained higher aggregate marks in qualifying examination shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>If the Merit is prepared on the basis of CMAT Score:</p> <p>(a) The candidate obtained higher marks in Quantitative Techniques & Data</p>											


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Sr. No.	Course Name	Criteria for the preparation of Merit and Tie Breaking
		<p>Interpretation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate obtained higher marks in Logical Reasoning shall Rank higher in the order of Merit.</p> <p>(c) In case of Tie in (b) above, the candidate obtained higher marks in Language Comprehension shall Rank higher in the order of Merit.</p> <p>(d) In case of Tie in (c) above, the candidate obtained higher marks in General Awareness shall Rank higher in the order of Merit.</p> <p>(e) In case of Tie in (d) above, the candidates obtained higher aggregate marks in qualifying degree shall Rank higher in the order of Merit.</p> <p>(f) In case of Tie in (e) above, the candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(g) In case of Tie in (f) above, the candidates senior in Age shall rank higher in order of merit.</p> <p>If the Merit is prepared on the basis of Qualifying Examination:</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie In (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>
7.	MCA	<p>The merit shall be prepared on the basis of aggregate marks obtained in qualifying examination. The candidate obtained higher aggregate marks in qualifying examination shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>
8.	M.Tech.	<p>The merit shall be prepared on the basis of Valid GATE Score followed by aggregate percentage marks of all the semesters of Qualifying Examination. The candidate obtained higher GATE Score shall Rank higher in the order of Merit and then the candidate obtained higher aggregate marks in qualifying examination shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>
9.	M.Pharmacy	<p>The merit shall be prepared on the basis of Valid GPAT Score followed by aggregate percentage marks of all the semesters of Qualifying Examination. The candidate obtained higher GPAT Score shall Rank higher in the order of Merit and then the candidate obtained higher aggregate marks in qualifying examination shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p> <p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>
10.	M.Architecture & M.Planning	<p>The merit shall be prepared on the basis of aggregate marks obtained in qualifying examination. The candidate obtained higher aggregate marks in qualifying examination shall Rank higher in the order of Merit.</p> <p>In case of Tie in the above merit the following criteria shall be followed:-</p>

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Sr. No.	Course Name	Criteria for the preparation of Merit and Tie Breaking
		<p>(a) The candidate obtained higher aggregate marks in Matriculation shall Rank higher in the order of Merit.</p> <p>(b) In case of Tie in (a) above, the candidate senior in age shall Rank higher in the order of Merit.</p>

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.

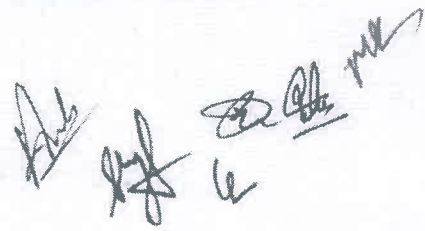
4.2.2 Registration Process

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 '2021' 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.


 Dean (Academics)

I. K. Gujral Punjab Technical University
 Jalandhar-Kapurthala Highway, Kapurthala



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 than 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

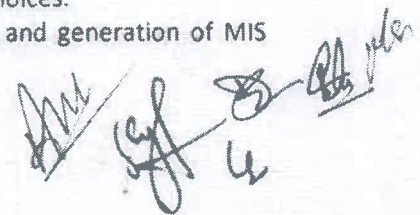
Step-1: The candidate should deposit the counselling fees of Rs. 2000/- non-refundable.

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


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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)
- Person With Disabilities (DP)

Seat Allocation sequence for 85% Punjab Quota

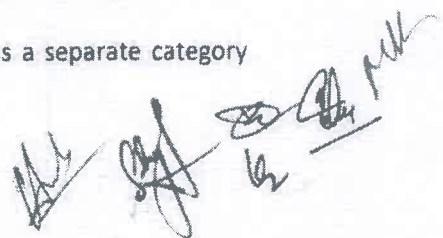
Following rules shall be applicable for seat allotment for counselling for 85% Punjab category for all the institutions under IKGPTU/MRSPTU participating in counselling located in Punjab.

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


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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/ DP)	Sequence of Allotment
<input checked="" type="checkbox"/>			Fee Waiver (Only B.Pharm)
	<input checked="" type="checkbox"/>		General (Open)
		<input checked="" type="checkbox"/>	General (Open), (SC/ST,BC, T-Sunami(TS)/ DF/BA/BR/FF/SP / RT/ PM / DP) 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

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		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 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 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, falling 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 2021, 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


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Jalandhar-Kapurthala Highway, Kapurthala



- 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-2021 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.
- The filled choices will be locked automatically (if not locked manually) at the end of Choice Filling.

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, Sub Category 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

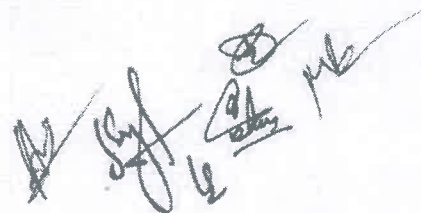
5.3.3.1 View seat Matrix

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.


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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

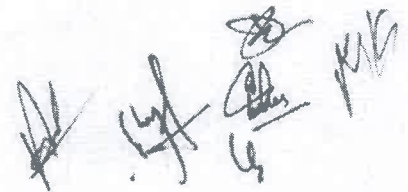
5.3.5.1 View Allotment Dashboard

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.


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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.


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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


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Jalandhar-Kapurthala Highway, Kapurthala



- 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- Persons with Disabilities

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

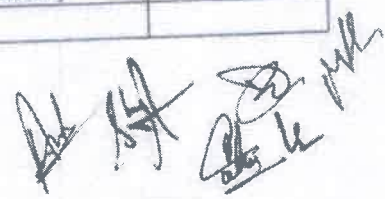
Course Code	Course Name	Short Name
1	APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING	AEIE
2	AUTOMOBILE ENGINEERING	AE
3	BIO MEDICAL ENGINEERING	BME
4	BIO TECHNOLOGY	BT
5	CHEMICAL ENGINEERING	CHE
6	CIVIL ENGINEERING	CIVIL
7	COMPUTER ENGINEERING	CE
8	COMPUTER SCIENCE & ENGINEERING	CSE
9	ELECTRICAL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



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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	

CAS (IKGPTU) – Stakeholder Requirements Specifications

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	
22.	VLSI Design	B.E. / B. Tech. in Textile Engineering
		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/ Chemistry / 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 Institutes

Institute Name	Institute Type	Controlling University
Giani Zail Singh Campus College of Engg. & Tech., MRSPTU, Bathinda, PIN-151001	G	MRSPTU
Malout Institute of Mangement and Information Technology, Green Field Enclave, Near New Grain Market, Malout-142107 . (Govt Promoted college)	G	IKGPTU

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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 College)	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
Aryabhata 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 KheraKhourad, 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, Ferozpur 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
Ferozpur College of Engineering & Technology, Village Ferozeshah,	P	MRSPTU

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District Ferozepur, PIN-142052		
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, Amritsar - 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 Chhapanwali, 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


 Dean (Academics)
 I. K. Gujral Punjab Technical University
 Jalandhar-Kapurthala

 Kapurthala

