1.2.2

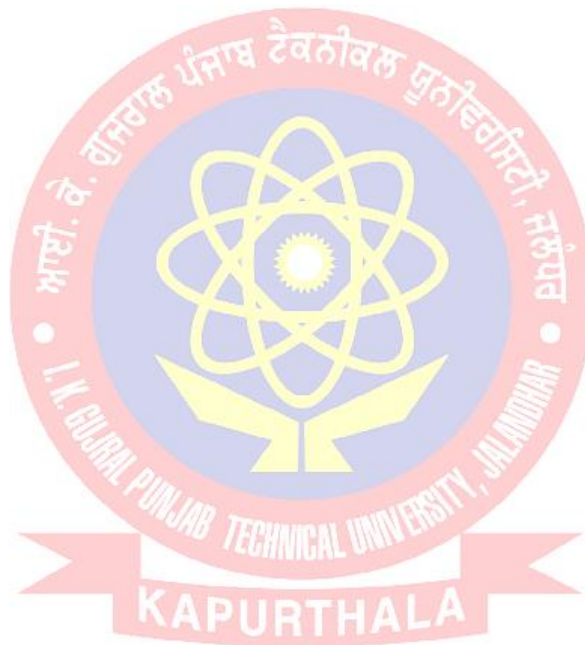## Supporting Documents-

Department of Mathematical Sciences

Approved Minutes of BOS Meeting(s)

1.1.2 & 1.2.2

<u>Supporting Documents- Mathematical Sciences</u>

Approved MoMs of BoS/Academic Council highlighting relevant metric

I. K. Gujral Punjab Technical University

Department of Mathematical Sciences

Minutes of the meeting of Board of Studies (BOS) of Mathematics held on July 11, 2017

The meeting of Board of studies of Mathematics was held on 11/07/2017. The following members were present in the meeting

1. Prof. Vinay Kanwar
2. Prof. D. S. Pathania
3. Dr. S. K. Srivastava
4. Dr. Ashish Aarora
5. Dr. Arvind Sharma
6. Dr. Honey Sharma
7. Dr. Harpreet Kaur
8. Dr. Vikramjeet Singh
9. Dr. Gurjinder Singh
10. Dr. Rajesh Narula (Special Invitee)
11. Dr. Megha Goyal (Special Invitee)

The following recommendations were given by the Board:

Agenda 1. The board recommended the reshuffling of subjects of various semesters as follows:

Semester-I:
(i) Fundamentals of Computer and C programming (MMS-105) is recommended to be replaced by Mathematical Methods (MMS-402). Hence the subject Mathematical Methods now may be given new code of MMS-105.
(ii) Fundamentals of Computer and C Programming Lab (MMS-106) is recommended to be replaced with Mathematical Software Lab and may be assigned the code MMS-106.
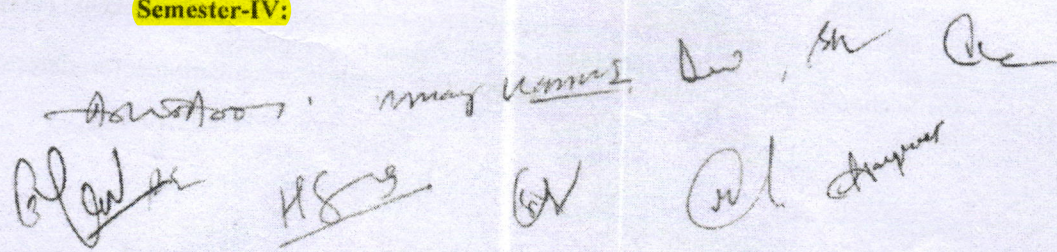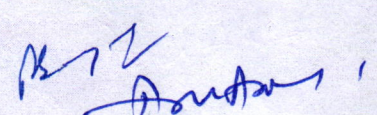
Semester-II:
(i) Tensors and Differential Geometry (MMS-204) is recommended to be replaced by Partial Differential Equations (MMS-403). Hence the subject Partial Differential Equations now may be given new code of MMS-204.

Semester-III:
(i) Operations Research (MMS-302) is recommended to be replaced with Number Theory and Cryptography (MMS-508). The Operations Research is recommended to be incorporated in the list of Elective-I. Subject code of Operations Research may be assigned as MMS-503 and subject code of Number theory and cryptography may be given as MMS-302.

Semester-IV:

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(i) Discrete Mathematics (MMS-401) is recommended to be replaced by Mechanics-II. Hence the subject Mechanics-II now may be given new code of MMS-401.
(ii) Mathematical Methods (MMS-402) is recommended to be replaced by Mathematical Statistics-II. Hence the subject Mathematical Statistics-II now may be given new code of MMS-402.
(iii) Partial Differential equations (MMS-403) is recommended to be replaced by Tensors and Differential Geometry (MMS-204). Hence the subject Tensors and Differential Geometry (MMS-204) now may be given new code of MMS-402.

Elective Subjects:
The list of Electives was reviewed by the Board and following changes/incorporations were suggested

Elective-I
MMS-501 Wavelet Theory
MMS-502 Coding Theory
MMS-503 Operations Research
MMS-504 Advanced Linear Algebra

Elective-II

MMS-505 Advanced Complex Analysis
MMS-506 Advanced Operations Research
MMS-507 Advanced Fluid Mechanics
MMS-508 Advanced Solid Mechanics

Elective-III

MMS-509 Theory of Linear Operators
MMS-510 Advanced Numerical Methods
MMS-511 Topological Vector Spaces
MMS-512 Fractional Calculus

Revision of Instructions for paper setters and candidates:

The following changes were recommended by the Board for examination of M.Sc. (Mathematics)
(i) The entire question paper should be distributed into three sections viz. Section-A, Section-B, Section-C
(ii) Section-A should contain eight question of two marks each. This section should cover the entire syllabus. All questions in this section should be compulsory.
(ii) Section-B and Section-C should contain three questions each carrying 16 (sixteen) marks.

(iii) Student should be asked to attempt at least two questions from Section-B and Section-C each.

(iv) The awards for internal and external examination should be in 20:80 ratio.

Revision of course contents:

It was recommended by the Board that for revision of course contents external experts of different Universities may be requested.

(i) The following is the list of courses and the corresponding experts as recommended by the Board:

S. No	Course Code	Course Title	Expert	University
1.	MMS-101	Algebra-I	Prof. D. K. Khurana	Panjab University
2.	MMS-201	Algebra-II	Prof. D. K. Khurana	Panjab University
3.	MMS-102	Real Analysis-I	Dr. Vikas Bist	Panjab University
4.	MMS-202	Real Analysis-II	Prof. T. D. Narang	Guru Nanak Dev University
5.	MMS-103	Complex Analysis	Prof. S.S. Dhaliwal	SLIET, Longowal
6.	MMS-104	Ordinary Differential Equations and Special Functions	Dr. S.K. Srivastav	BCET, Gurudaspur
7.	MMS-106	Software Lab	Dr. Honey Sharma, Dr. Arvind Sharma, Dr. Gurjinder Singh	Main Campus and affiliated colleges
8.	MMS-205	Numerical Analysis	Prof. Vinay Kanwar	Panjab University
9.	MMS-206	Numerical Analysis Lab	Prof. Vinay Kanwar	Panjab University
10	MMS-203	Mechanics-I	Prof. S. K. Tomar	Panjab University
11.	MMS-401	Mechanics-II	Prof. S. K. Tomar	Panjab University
12.	MMS-301	Topology	Dr. N. S. Noorie	Punjabi University
13.	MMS-302	Number Theory and Cryptography	Prof. A. K. Agarwal	Panjab University

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14.	MMS-303	Mathematical Statistics-I	Prof. Narinder Kumar	Panjab University
15.	MMS-402	Mathematical Statistics-II	Prof. Narinder Kumar	Panjab University
16.	MMS-403	Tensors And Differential Geometry	Prof. R. K. Nagaich	Punjabi University

It was also recommended by the Board that the course contents of the subjects of Electives shall be discussed in detail in the next meeting. It was also recommended that the changes in Semester-I should be implemented with immediate effect in anticipation of the approval of Academic Council as the changes are quite necessary and the semester is scheduled to begin from August 1, 2017. The course contents of Number Theory and Cryptography (MMS-302) and Functional Analysis (MMS-304) should be reviewed immediately and necessary changes must be incorporated with immediate effect.
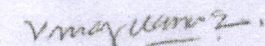
Agenda 2.

After discussion the board recommended the following changes in credit of various subjects

(i) In Semesters-III, for the subject Elective-I (MMS-XXX), one tutorial period is recommended to be added. Now, the subject Elective-I is recommended to be of 5 credits.
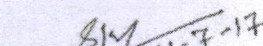
(ii) In Semesters-IV, for the subject Elective-III (MMS-ZZZ), one tutorial period is recommended to be added. Now, the subject Elective-III is recommended to be of 5 credits.

(iii) It was also recommended that the course codes henceforward be changed. MMS in all course codes may be replaced with MSM to avoid any further confusion.
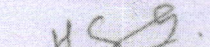
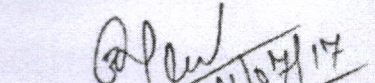The meeting ended with the vote of thanks,
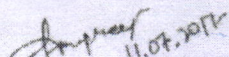
Prof. Vinay Kanwar   Prof. D. S. Pathania   Dr. S. K. Srivastva
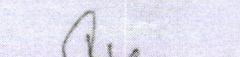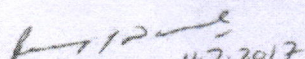
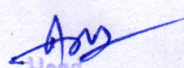Dr. Ashish Arora   Dr. Honey Sharma   Dr. Arvind Sharma

Dr. Harpreet Kaur   Dr. Vikramjeet Singh   Dr. Gurjinder Singh

Dr. Rajesh Narula   Dr. Megha Goyal

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Attendance Sheet

Meeting of... BOS Mathematics

held on ..11/07/2017..... at ..... 11:00 AM..... meeting hall, Academic Deptt. IKG PTU

Sr. No.	Name & Address	Contact Number	E-Mail I.D.	Signature
1	Prof. V. Kumar P.U. Chd	9878369981	vmithil@ yahoo.co.in	Vinay Kumar
2	Dr D.S. Pathans Professor GNDEC LDH	9878634245	dspathans@ Yahoo.com	Dw
3	Dr. SK Srivastava BCET Gurdaspur	9855965832	sks64_bceb @yahoo.co.in	Sk
4.	Dr. Rajesh Nasul IKGPTU, Campus	94780 98073	dr.sbnasul @gmail.com	—
5	Dr. Honey Sharma GGI, Ludhiana	98887- 61800	pro.sharma. n@gmail.com	—
6.	Dr. Arvind Sharma CEC, Landran	93161 54500	arvindkamalsharma @gmail.com	— 11/07/17
7	Dr. Vikramjeet Singh IKGPTU. Campus Batala	9988600786	Vikram3172 @gmail.com	—
8.	Dr. Harpreet kaur IKGPTU, Main Campus	9465884840	mainh57@gmail.com	11.07.2017
9.	DR. MEGHA GOYAL IKGPTU, MAIN CAMPUS	94640-53322	meghagoyal2021@ gmail.com	11/7/2017
10.	Dr. Gurjinder Singh IKGPTU, Main Campus	93156-53551	gurjinder11@ gmail.com	11/7/2017

11. Dr. Ashish Arora   9478098067   dr.ashish10@ hotmail.com   11/7/2017

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(Department of Mathematical Sciences)

Ref. No. IKG-PTU/ DOMS/ 116   Date: 07/07/2017

Dr. Ashish Arora, Head, Department of Mathematical Science, IKGPTU -Kapurthala
Dr. D.S Pathania, GNDEC Ludhiana
Dr. G.N. Verma, SSIET, Derabassi
Dr. Joginder Singh, CGC Landran
Dr. Arvind Sharma, CEM, Kapurthala
Dr. Honey Sharma, GIT, Khanna
Dr. Sanjeev Kumar Srivastava, BCET Gurdaspur
Dr. Vikramjeet Singh, IKGPTU, Kapurthala
Dr. Harpreet Kaur, IKGPTU, Kapurthala
Dr. Gurjinder Singh, IKGPTU, Kapurthala
Dr. Om Parkash, GNDU, Amritsar
Prof. Vinay Kanwar, UIET, PU,Chd
Dr. N. S. Noorie, PU, Patiala
S. Navdeepak Sandhu, IKGPTU, Kapurthala

Subject: **Meeting of Board of Studies Mathematics**

Sir/ Madam

A meeting of the above said members of Board of Studies **Mathematics** is scheduled to be held on **July 11th 2017 at 11:30** in the conference hall, 2nd floor, department of Academics, IK Gujral Punjab Technical University main Campus, Jalandhar-Kapurthala highway, Punjab.

The agenda of the meeting is as follows:

1. Restructuring of the curriculum of M.Sc. Mathematics
2. Review and formulation of CBCS for M.Sc. Mathematics
3. Review of the syllabus of different subjects being taught in M.Sc. Mathematics
4. Any other matter with the permission of Chair.

You are requested to participate and contribute through your suggestions. Kindly confirm your participation in the said meeting through e-mail Dr.ashish10@htmail.com or through SMS at 9478098067.

TA & DA / Honorarium will be paid as per the University rules.

HOD Mathematical Sciences
Chairman BOS Mathematical Sciences

Cc:

- **Dean Academics** for information.

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb (India)

I. K. Gujral Punjab Technical University

Department of Mathematical Sciences

Ref. No: 3KGPTU/DMS/111

Date: 03/07/17

Subject: Meeting of BOS of Mathematics on 11/07/2017

A meeting of Board of studies of Mathematics is being organized on 11/07/2017 at 10:30 am..
The agenda of the meeting is as follows:

1. Restructuring of the curriculum of M. Sc. Mathematics

2. Review and formulation of CBCS for M. Sc. Mathematics

3. Review of the syllabus of different subjects being taught in M. Sc. Mathematics
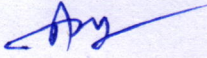
4. Any other as desired by the members of BOS and the Chairperson

You are requested to make necessary arrangements for the meeting

Dr. Ashish Arora

Head

Co-ordinator BOS
(Incharge.)

CC: Dean Academics

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I. K. Gujral Punjab Technical University
Department of Mathematical Sciences

Ref No.: IKGPTU/DMS/356

Dated: 15/03/2018

Minutes of the meeting of Board of Studies (BOS) of Mathematics held on March 15, 2018

The meeting of Board of studies of Mathematics was held on 15/03/2018. The following members were present in the meeting

1. Prof. Om Prakash
2. Prof. Vinay Kanwar
3. Dr. G.N. Verma
4. Dr. S. K. Srivastava
5. Dr. Ashish Aarora
6. Dr. Honey Sharma
7. Dr. Harpreet Kaur
8. Dr. Gurjinder Singh
9. Dr. Rajesh Narula (Special Invitee)
10. Dr. Megha Goyal (Special Invitee)

The following recommendations were given by the Board:

Agenda 1. The board confirmed the minutes of last BOS meeting which was held on July 11, 2017.

Agenda 2. Revision of course contents:
It was recommended by the Board that for revision of course contents of remaining subjects of third and fourth semesters of M. Sc. (Mathematics) external experts of different Universities may be requested.
The following is the list of courses and the corresponding experts as recommended by the Board:

S. No	Course Code	Course Title	Expert	University
1.	MSM-301	Topology	Dr. N. S. Noorie	Punjabi University
2.	MSM-303	Mathematical Statistics-I	Prof. Narinder Kumar	Panjab University
3.	MSM-401	Mechanics-II	Prof. S.K. Tomar	Panjab University
4.	MSM-402	Mathematical Statistics-II	Prof. Narinder Kumar	Panjab University
5.	MSM-403	Tensors And Differential Geometry	Prof. R. K. Nagaich	Punjabi University

Agenda 3. Finalizing the scheme of M.Sc. (Mathematics) for batch 2018 onwards.

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1) Change of Elective Courses:

The Elective-II course Advanced Operations Research (MSM-506) should be replaced by Advanced Number Theory and the course code MSM-506 may be assigned to Advanced Number Theory for the batch 2018 onwards. And the syllabus of Advanced Number Theory may be reviewed by subject expert Prof. A.K. Agarwal, Department of Mathematics, Panjab University, Chandigarh.Board also suggested that Discrete Mathematics should be added in the list of Elective-I subjects and the course code MSM-500 may be given to this subject.

2) Inclusion of Course objectives & Program Objectives:

It was recommended by the members of board that course objectives and outcomes should also be provided by the experts developing the course contents.

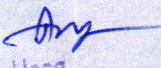### 3) Change of Credits for Theory and Labs:

The Board recommended that the credits of Theory lectures should be changed from 5 (five) credits to 4 (four) credits and the credits of Labs should be changed from 1 (one) credit to 2 (two) credits. Also, the teaching hours of Labs should now be increased to 4 (four) hrs./week as per the increase in credits. The revised structure and scheme of M. Sc Mathematics for the batch 2018 onwards as recommended by board should be as under.

First Semester   **Contact Hours: 27 Hrs.**

Course Code	Course Title	Load Allocation			Marks Distribution			Credits
		L	T	P	Internal	External	Total	
MSM-101	Algebra-I	4	1	0	30	70	100	5
MSM -102	Real Analysis-I	4	1	0	30	70	100	5
MSM -103	Complex Analysis	4	1	0	30	70	100	5
MSM -104	Ordinary Differential Equations and Special Functions	4	1	0	30	70	100	5
MSM -105	Mathematical Methods	4	1	0	30	70	100	5
MSM -106	Introduction to Computer Algebra System (Lab)	0	0	4	30	20	50	2
Total		20	05	04	180	370	550	27

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Second Semester   **Contact Hours: 27 Hrs.**

Course Code	Course Title	Load Allocation			Marks Distribution			Credits
		L	T	P	Internal	External	Total	
MSM -201	Algebra-II	4	1	0	30	70	100	5
MSM -202	Real Analysis-II	4	1	0	30	70	100	5
MSM -203	Mechanics-I	4	1	0	30	70	100	5
MSM -204	Partial Differential Equations	4	1	0	30	70	100	5
MSM -205	Numerical Analysis	4	1	0	30	70	100	5
MSM -206	Numerical Analysis (Lab)	0	0	4	30	20	50	2
Total		20	5	4	180	370	550	27

The board recommended to bifurcate the 30 marks of internal examination as under.

Assignment/seminar/Attendance	MST	Total
10	20	30

The board decided to update the scheme of 3rd and 4th semester for 2018 batch onwards in next meeting. It was also recommended by the board that credit of each core subject should be 5 and the policy document stating (100 marks=4 credits; Skeleton of M.Sc.) should be reviewed.

4) Revision of Instructions for paper setters and candidates:

The following changes were recommended by the Board for examination of M.Sc. (Mathematics) for the batch 2018 onwards.
a) The entire question paper should be distributed into three sections viz. Section-A, Section-B, Section-C.
b) Section-A should contain five questions of two marks each. This section should cover the entire syllabus. All questions in this section should be compulsory.
c) Section-B and Section-C should contain three questions each carrying 15 (fifteen) marks.
d) Student should be asked to attempt at least two questions from Section-B and Section-C each.

5) Revision in the list of recommended books of various courses:

The Board suggested the following books to be incorporated in the list of Recommended books of various courses.

S. No	Course Code	Course Title	Recommended Book

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1.	MSM-510	Advanced Numerical Methods	1. M. K. Jain, S. R. K Iyengar and R. K. Jain, Computational Methods for Partial Differential Equations, New Age International Publishers, 2nd Ed. 2016. 2. Curtis F. Gerald, Applied Numerical Analysis, Pearson Education, 7th Ed.
2.	MSM-103	Complex Analysis	1. R. Roop Kumar, Complex Analysis, Pearson Education, 2015
3.		Engineering Mathematics	1.Das and Vijay Kumari, Engineering Mathematics, Pearson Education

Agenda 4. Finalizing the syllabus of B.Tech (all semesters) as per AICTE guidelines.

The Board recommended that the syllabus of B. Tech (all semesters) as recommended by AICTE will be adopted as such. But keeping in view that the syllabus is too vast to be covered in 3+1 and 2+1 systems, and also keeping in view thestudent's previous knowledge in the field of Mathematicsand the difficulty of the course contents of Maths-I, Maths-II, Maths Paper-1, Maths Paper-2 etc., the Board suggested that the recommended Scheme and Credit of these courses as suggested by AICTE
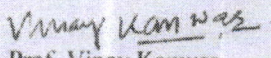
L	T	P	Credits
3	1	0	4

may be replaced by

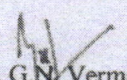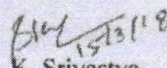| L	T	P	Credits
4	1	0	5

It was also noted by the board that in the model curriculum developed by AICTE, the credits and teaching hours are not compatible for Mathematics-2 and Mathematics-III given on page number 16 and 90, respectively.
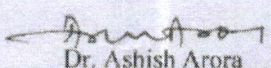
The meeting ended with the vote of thanks.
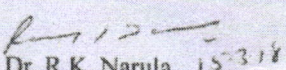
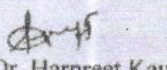Prof. Om Prakash   Prof. Vinay Kanwar   Dr. G.N. Verma
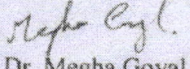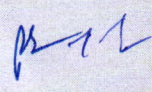
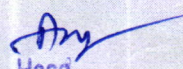Dr. S. K. Srivastva   Dr. Ashish Arora   Dr. Honey Sharma

Dr. R.K. Narula 15.3.18   Dr. Harpreet Kaur   Dr. Gurjinder Singh

Dr. Megha Goyal

Head
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I. K. Gujral Punjab Technical University
Department of Mathematical Sciences

Ref No.: IKGPTU/DMS/S01

Dated: 24/07/2018

Minutes of the meeting of Board of Studies (BOS) of Mathematics held on July 24, 2018

The meeting of Board of studies of Mathematics was held on 24/07/2018. The following members were present in the meeting

1. Prof. D.S. Pathania
2. Dr. Ashish Aarora
3. Dr. Honey Sharma
4. Dr. Harpreet Kaur
5. Dr. Gurjinder Singh
6. Dr. Vikramjeet Singh
7. Dr. Rajesh Narula (Special Invitee)
8. Dr. Megha Goyal (BOS Coordinator)

The following recommendations were given by the Board:

Agenda 1. <u>Finalizing the scheme of M.Sc. (Mathematics) for batch 2018 onwards:</u>

The board finalized the scheme and syllabus of 3rd and 4th semester of M.Sc. (Mathematics) for batch 2018 onwards. The Board recommended that on page 1 of the scheme and structure of M.Sc. Mathematics for Batch 2018 onwards, the word "Course" should be replaced with "Program" and the objectives of the Program may be extended including teaching as one of the objectives. Eligibility condition for admission in M.Sc. Mathematics should be read as "B.A./B.Sc. or equivalent from a recognized university with Mathematics as one of the major subjects with at least 50% marks in aggregate".

Agenda 2. <u>Revision of the course contents of the subjects Mathematical Statistics and Mechanics-II of M.Sc. (Mathematics) for batch 2018 onwards:</u>

It was recommended by the Board that for revision and formation of course contents of subjects Mathematical Statistics and Mechanics-II, external experts of different Universities may be requested.
The following is the list of courses and the corresponding experts as recommended by the Board:

S. No	Course Code	Course Title	Expert	University
1.	MSM-303, MSM- 402	Mathematical Statistics	Prof. Narinder Kumar	Panjab University
2.	MSM-401	Mechanics-II	Prof. S.K. Tomar	Panjab University

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The syllabus of the subject Mathematical Statistics-I & II with subject codes MSM-303 and MSM-402 should be merged and may be assigned a single subject code, that is, MSM303-18. The subject code of Mechanics-II should be MSM305-18.

Agenda 3. To introduce the subject Differential Geometry as Core subject and Advanced Topology as Elective subject in Semester IV for batch 2018 onwards.

It was recommended by the Board that the subject Differential Geometry should be introduced as a core subject and Advanced Topology as an Elective subject in Semester IV for batch 2018 onwards. The subject code MSM401-18 may be assigned to the subject Differential Geometry and MSM513-18 may be assigned to the subject Advanced Topology. For revision and formation of course contents of these subjects, the following subject experts are recommended by the Board:

1.	MSM401-18	Differential Geometry	Dr. Rakesh Kumar	Punjabi University
2.	MSM513-18	Advanced Topology	Prof. N.S. Noorie	Panjabi University

Agenda 4. To revise and merge the list of Elective-I, II and III subjects of various courses of M.Sc. (Mathematics) for the batch 2018 onwards.

It was recommended by the board to merge the list of Elective-I, II, III and make one comprehensive list of electives to be offered in 4th semester.

Agenda 5. To finalize the Choice based credit scheme of M.Sc. (Mathematics) as per the approved skeleton of M.Sc. courses by IKG Punjab Technical University.

The board recommended the changes in credits as per the approved system of 25 marks equal to one credit for all theory and lab courses. A lab on Number theory and Cryptography was recommended by the board to be introduced in third semester and the subject code MSM306-18 may be assigned to it. The revised structure and scheme of M. Sc Mathematics for the batch 2018 onwards as recommended by board should be as under.

First Semester   **Contact Hours: 28 Hrs.**

Course Code	Course Title	Load Allocation			Marks Distribution			Credits
		L	T	P	Internal	External	Total	

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MSM101-18	Algebra-I	4	1	0	30	70	100	4
MSM102-18	Real Analysis-I	4	1	0	30	70	100	4
MSM103-18	Complex Analysis	4	1	0	30	70	100	4
MSM104-18	Ordinary Differential Equations and Special Functions	4	1	0	30	70	100	4
MSM105-18	Mathematical Methods	4	1	0	30	70	100	4
MSM106-18	Introduction to Computer Algebra System (Lab)	0	0	3	50	25	75	3
Total		20	05	03	200	375	575	23

Second Semester   **Contact Hours: 28 Hrs.**
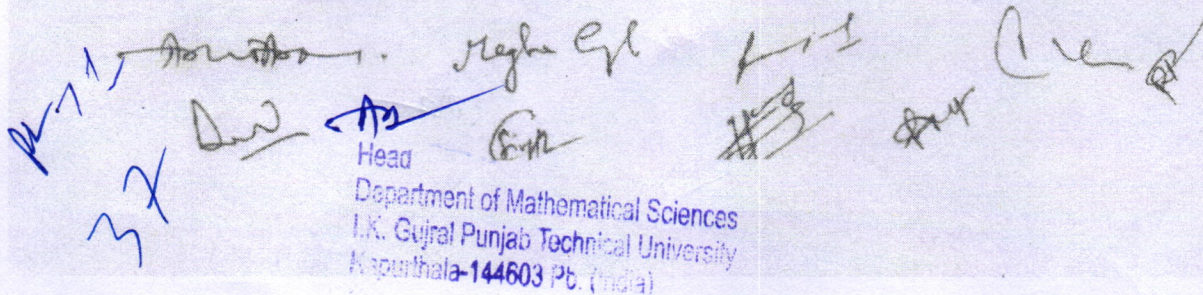
Course Code	Course Title	Load Allocation			Marks Distribution			Credits
		L	T	P	Internal	External	Total	
MSM201-18	Algebra-II	4	1	0	30	70	100	4
MSM202-18	Real Analysis-II	4	1	0	30	70	100	4
MSM203-18	Mechanics-I	4	1	0	30	70	100	4
MSM204-18	Partial Differential Equations	4	1	0	30	70	100	4
MSM205-18	Numerical Analysis	4	1	0	30	70	100	4
MSM206-18	Numerical Analysis (Lab)	0	0	3	50	25	75	3
Total		20	5	3	200	375	575	23

Third Semester   **Contact Hours: 27 Hrs.**

Course Code	Course Title	Load Allocation			Marks Distribution			Credits
		L	T	P	Internal	External	Total	

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MSM301-18	Topology	4	1	0	30	70	100	4
MSM302-18	Number Theory and Cryptography	4	1	0	30	70	100	4
MSM303-18	Mathematical Statistics	4	1	0	30	70	100	4
MSM304-18	Functional Analysis	4	1	0	30	70	100	4
MSM305-18	Mechanics-II	4	1	0	30	70	100	4
MSM306-18	Number Theory and Cryptography (Lab)	0	0	2	33	17	50	2
Total		20	05	03	183	367	550	22

Fourth Semester

Contact Hours: 35 Hrs.

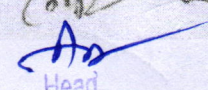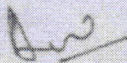| Course Code	Course Title	Load Allocation			Marks Distribution			Credits
		L	T	P	Internal	External	Total	
MSM401-18	Differential Geometry	4	1	0	30	70	100	4
MSM WWW	Elective	4	1	0	30	70	100	4
MSM XXX	Elective	4	1	0	30	70	100	4
MSM YYY	Elective	4	1	0	30	70	100	4
MSM ZZZ	Elective	4	1	0	30	70	100	4
MSM601-18	Dissertation	0	0	10	250	-	250	10
Total		20	05	8	400	350	750	30

Agenda 6. To revise the course and syllabus of Mathematics of B.Tech-I semester civil engineering as per AICTE model curriculum.

On the basis of queries received from various colleges, the Board recommended that the syllabus of B. Tech 1st semester Civil branch as recommended by AICTE should be revised and modules 4b-d of Matrices and Vector Spaces should be deleted.

Agenda 7. Rectification of the nomenclature of M.Sc. program on examination portal of IKGPTU.

The board taken a serious note of the appearance of M. Sc. (Applied Mathematics) on the examination portal ptudocs.com of IKGPTU. The terminology Applied Mathematics was never

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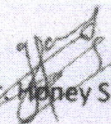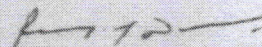# I. K. Gujral Punjab Technical University
Department of Mathematical Sciences

The board taken a serious note of the appearance of M. Sc. (Applied Mathematics) on the examination portal ptudocs.com of IKGPTU. The terminology Applied Mathematics was never approved by the board and is misleading and must be rectified. The word applied should be removed as the nomenclature of the program is M.Sc. (Mathematics).
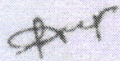
The meeting ended with the vote of thanks.

Dr. D.S. Pathania   Dr. Ashish Arora   Dr. Honey Sharma
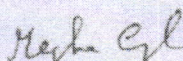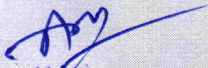
Dr. R.K. Narula 24/7/2018   Dr. Harpreet Kaur   Dr. Gurjinder Singh

Dr. Vikramjeet Singh   Dr. Megha Goyal

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Department of Mathematical Sciences

Ref No.: IKGPTU/DMS/834

Dated: 01-03-2019

Minutes of the meeting of Board of Studies (BOS) of Mathematics held on March 01, 2019

The meeting of Board of studies of Mathematics was held on 01/03/2019. The following members were present in the meeting

1. Dr. Tejwant Singh, Retd. Professor, PAU, Ludhiana, Ex-Chairman BoS
2. Dr. Vinay Kanwar, Professor, PU, Chandigarh, Outside Expert
3. Dr. D.S. Pathania, Professor, GNDEC, Ludhiana,
4. Dr. G.N. Verma, Professor, SSIET, Dera Bassi
5. Dr. Sanjeev Kumar Srivastava, Asso. Prof., BCET, Gurdaspur
6. Dr. Ashish Arora, IKGPTU, Kapurthala, Chairman (Ex-officio)
7. Dr. Vikramjeet Singh, Asst. Prof., IKGPTU, Batala
8. Dr. Rajesh Kumar Narula, Special Invitee, IKGPTU, Kapurthala
9. Dr. Gurjinder Singh, Asst. Prof., IKGPTU, Kapurthala
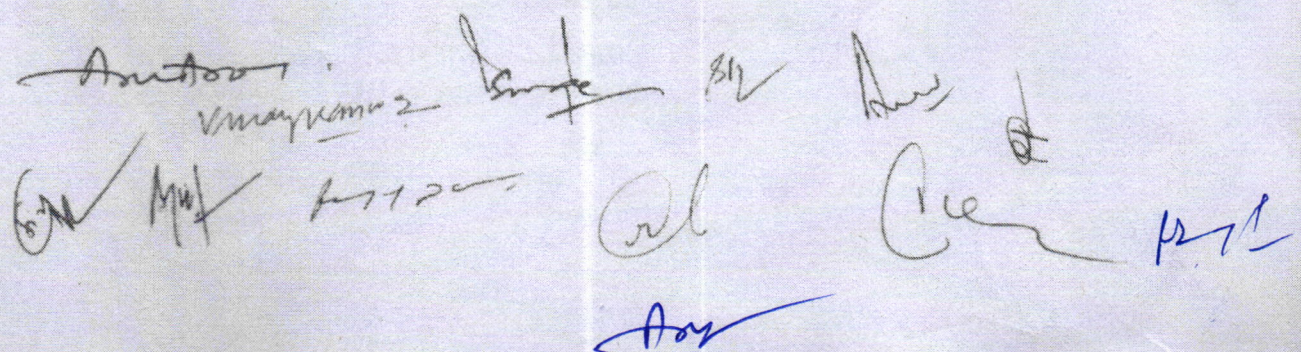10. Dr. Megha Goyal, Bos Coordinator, IKGPTU, Kapurthala

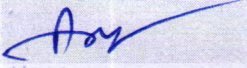The following recommendations were given by the Board:

Agenda 1. To finalize the Program objectives, Program Outcomes and Program Specific Outcomes, Course objectives and Course outcomes of M.Sc. (Mathematics):

The board suggested some significant changes in Course outcomes, Course objectives and Program objectives of M.Sc. (Mathematics) for batch 2018 onwards. It was recommended that the faculty member teaching the particular course shall make the requisite changes in the course objectives and course outcomes. The final document should be sent to all board members through e-mail with in a week of the meeting for approval. After the approval of all board members, the final document should be sent to competent authority for further action.

Agenda 2. Framing the course contents of the subject Number Theory & Cryptography (LAB) for the batch 2018 and onwards.

It was recommended by the Board that Dr. Megha Goyal, Assistant Professor, Department of Mathematical Sciences shall formulate the course contents of Number Theory and Cryptography (LAB) for the batch 2018 onwards. After formulation of contents, the document should be sent to all board members for further suggestion or modifications if any and ratification thereafter.

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Agenda 3. <u>To introduce value added courses in Semester IV of M.Sc. (Mathematics) for the batch 2018 and onwards.</u>

It was recommended by the Board that a value-added course should be introduced as an audit course in M.Sc. Mathematics for batch 2018 onwards. The value-added course should consists of Latex and Maple-soft software. The course contents shall be formulated by Dr. Gurjinder Singh, Assistant Professor, Department of Mathematical Sciences. The subject code MSMVA-18 may be assigned to the value-added course. This course should also be sent to all board members for ratification through e-mail.

Agenda 4. <u>To formulate the bridge courses for change of B.Tech branches.</u>

The board recommended that two bridge courses, namely, Bridge Course-I and Bridge course-II should be formulated as per the recommendations given by the committee formulated by the registrar of the University for this case. The Board recommended the following subject codes for Bridge Courses.

| 1. | BTAMBC1-18 | Bridge Course-I |
| 2. | BTAMBC2-18 | Bridge Course-II |

The board further recommended that these courses should be formulated at departmental level and sent to the board members through e-mail for further suggestions and ratification.

Agenda 5. <u>To revise the course of Mathematics in 3rd semesters of B.Tech (all branches) as per AICTE model curriculum.</u>

The board finalized the syllabus of Mathematics Courses for B.Tech 3rd semester, batch 2018 onwards for all branches as per AICTE model curriculum. The Board recommended the following subject codes for Mathematics Courses for B.Tech 3rd semester, batch 2018 onwards.

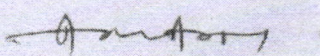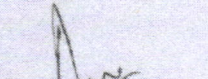| S.No.	Subject Code	Subject Title	Branch
1.	BTAM301-18	Mathematics-III (Vector & Transform Calculus)	Civil Engineering
2.	BTAM302-18	Mathematics-III (Probability and Statistics)	Electrical Engineering
3.	BTAM303-18	Mathematics-III (PDE, Probability & Statistics)	Mechanical Engineering
4.	BTAM304-18	Mathematics-III (Calculus and Ordinary Differential Equations)	Computer Science Engineering
5.	BTAM302-18	Mathematics-III (Probability and Statistics)	Electronics and Communications Engineering

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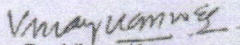## Department of Mathematical Sciences

It was also decided by the board that remaining syllabus of B.Tech. for 4th semester and onwards will be discussed and ratify in the next meeting. The percentage of change in curriculum of M. Sc. Will also be discussed in next meeting.
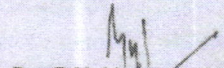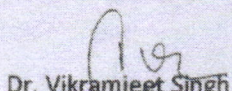
The meeting ended with the vote of thanks.
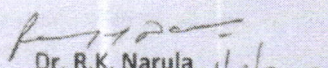
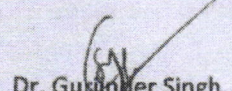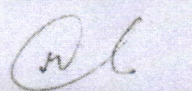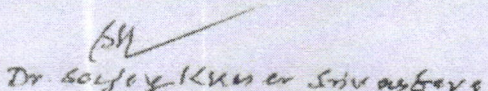Dr. Ashish Arora   Dr. Tejwant Singh   Dr. D.S. Pathania

Dr. Vinay Kanwar   Dr. G.N. Verma
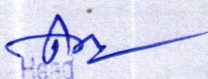
Dr. Vikramjeet Singh   Dr. R.K. Narula 1/3/2019   Dr. Gurjinder Singh

Dr. Megha Goyal   Dr. Sanjoy Kumar Srivastava

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Department of Mathematical Sciences

Ref No.: IKGPTU/DMS/1000   Dated:11/07/2019

Minutes of the meeting of Board of Studies (BOS) of Mathematics held on July 11, 2019

The meeting of Board of studies of Mathematics was held on 11/07/2019. The following members were present in the meeting

1.   Dr. Vinay Kanwar, Professor, PU Chandigarh, Outside Expert
2.   Dr. Amritbir Singh, Professor, BBSBEC, Fatehgarh Sahib
3.   Dr. Manoranjan Mishra, Associate Professor, IIT Ropar
4.   Dr. Ashish Arora, IKGPTU, Kapurthala, Chairman (Ex-officio)
5.   Dr. Rajesh Kumar Narula, Asst. Prof, IKGPTU Kapurthala
6.   Dr. Megha Goyal, BoS Coordinator, IKGPTU, Kapurthala
7.   Dr. Gurjinder Singh, Special invitee, , IKGPTU, Kapurthala

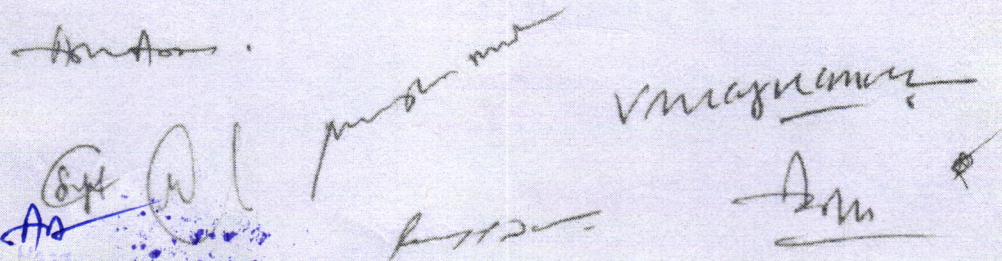The following recommendations were given by the Board:

Agenda 1. Framing the Structure and course contents of the subjects of B.Sc (Mathematics) Ist semester for the batch 2019 and onwards.

The Board finalized the Structure/Scheme and course contents of the subjects of B.Sc (Mathematics) Ist semester for the batch 2019 and onwards. The recommended course contents of the subjects of B.Sc (Mathematics) Ist semester will be formulated as per the suggestions of BOS and shall be sent to the members for their consent through email.

Agenda 2. To Finalize the pattern of Question papers of B.Sc (Mathematics) and M.Sc. (Mathematics) for the batch 2019 and onwards.

The Board discussed pattern of examination of B.Sc.(Hons.) Mathematics & M.Sc. Mathematics for batch 2019 onwards. The ratio of marks for external and internal exam as recommended by BOS will be 60:40. Also board recommended the following style of external paper (60 marks) for both B.Sc. and M.Sc. courses:
- 50 percent content of the external examination will be conceptual/numerical in nature and remaining 50 percent will be from theory.
- There should be three sections A, B and C in the question paper. Each section should be of twenty marks.
- Section A will contain ten objective type questions covering the whole syllabus and having two marks each.
- Section B will contain four questions having eight marks each. This section will cover the unit I & II of syllabus.

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- Section C will contain four questions having eight marks each. This section will cover the unit III & IV of syllabus.
- Sub-parts of the questions in Section B and C should be preferred for numerical/conceptual questions.

Section A will be compulsory. Students shall be asked to attempt any five questions from section-B and C, selecting at least two from each section.

While discussing the standard of question settings for the final examination, the board recommended that, for each course, COE may collect the question papers from more than one external experts to make a pool of question paper bank. The committee consisting of COE, HOD and one (more) external expert(s) avoiding any conflict of interest may be constituted to select the final question papers.

Internal marks (40) will be bifurcated as follow:

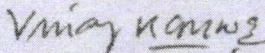|		
Average of Two MSTs	-	24
Assignments (Minimum two)	-	10
Attendance/General behavior	-	06

Agenda 3. To revisit the Syllabus/structure of M.Sc. (Mathematics) of batch 2018 onwards.
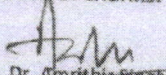
The board recommended the minor changes in the syllabus of certain subjects M.Sc (Mathematics) course of batch 2018 onwards and removal of number theory and cryptography lab.
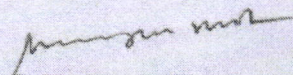
Agenda 4: To revise the list of core subjects to be offered for pre-Ph.D course work (Mathematics)
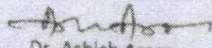
The Board recommended the addition of subject of specialization of each faculty of the department in the list of core subjects to be offered for Pre-Ph.D course work of Mathematics. The board recommended that the concerned faculty member shall prepare the course contents of the subjects to be incorporated in the list of pre-Ph.D course work and e-mail to the members of BOS for their consent/suggestions

The meeting ended with the vote of thanks.
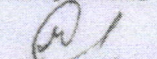
Dr. Vinay Kanwar

Dr. Amritbir Singh
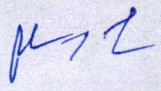
Dr. Manoranjan Mishra

Dr. Ashish Arora

Dr. R.K. Narula   11/7/2019
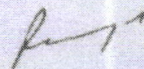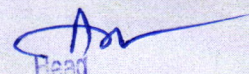
Dr. Megha Goyal

Dr. Gurjinder Singh

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Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

I.K. Gujral Punjab Technical University, Jalandhar

(Department Of Mathematical Sciences)

B.Sc. (Hons.)In Mathematics

Program Structure & Syllabus

(Choice Based Credit System)

For Batch 2019 Onwards

Title Of the Program: B.Sc. (Hons.) In Mathematics
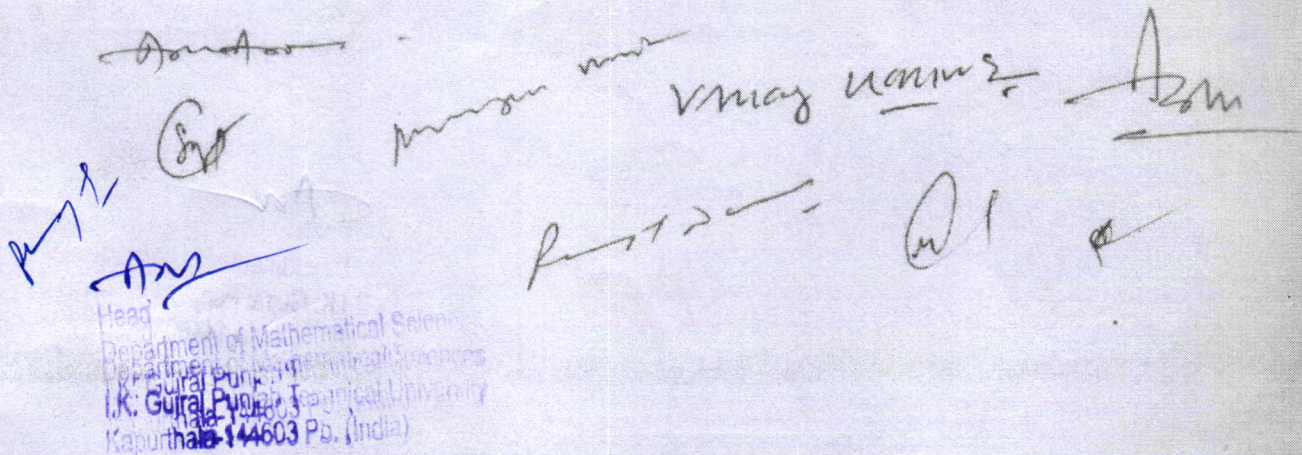
Duration : 3 Years (6 Semesters)

Eligibility: 50% in 10+2 in any stream with Mathematics as one of the main subjects.

First Semester   Total Credits:

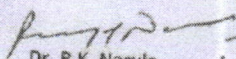| Course Code	Course Title	Load Allocation			Marks Distribution			Credits
		L	T	P	Internal(MST)	External (EST)	Total	
	Calculus -1	4	1	0	40	60	100	4
	Co-ordinate Geometry	4	1	0	40	60	100	4
	Programming-I	0	0	2				1
	Physics							
	Chemistry/Man agerial Economics-I							
	Communicative English	2	0	0				2
	Punjabi/Punjab History and Culture	2	0	0				2

- List of Practicals for Programming-I

  i) Introduction to programming through (FORTRAN and C etc.)

  ii) Matrix Operation (Addition ,Multiplication, inverse, Transpose)

  iii) Plotting of graphs of algebraic and transcendental function. (For example, e^{ax+b}, $\log(ax+b)$, $\frac{1}{ax+b}$, with constants a, b etc.)

  iv) Obtaining Surface of revolution of curves.

  v) Tracing of conics in Cartesian Coordinates /Polar Coordinates.

  vi) Applications of derivative.

Vinay Kumar

11/7/2019

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

I. K. Gujral Punjab Technical University
Department of Mathematical Sciences

Ref No.: IKGPTU/DMS/1655

Dated: 04/012/2019

Minutes of the meeting of Board of Studies (BOS) of Mathematics held on December 4th, 2019

The meeting of Board of studies of Mathematics was held on 04/12/2019. The following members were present in the meeting

1. Dr. Ashish Arora, IKGPTU, Kapurthala, Chairman
2. Dr. Vinay Kanwar, Professor, PU Chandigarh, Outside Expert
3. Dr. D. S. Pathania, Professor, GNE, Ludhiana
4. Dr. Amritbir Singh, Professor, BBSBEC, Fatehgarh Sahib
5. Dr. Satish Kumar Sharma, Assoc. Professor, TIET, Patiala
6. Dr. S.K. Srivastva, Prof. BCET, Gurdaspur
7. Dr. Rajesh Kumar Narula, Asst. Prof., IKGPTU Kapurthala
8. Dr. Harpreet Kaur, BOS Coordinator, IKGPTU, Kapurthala
9. Dr. Gurjinder Singh, Special Invitee IKGPTU, Kapurthala
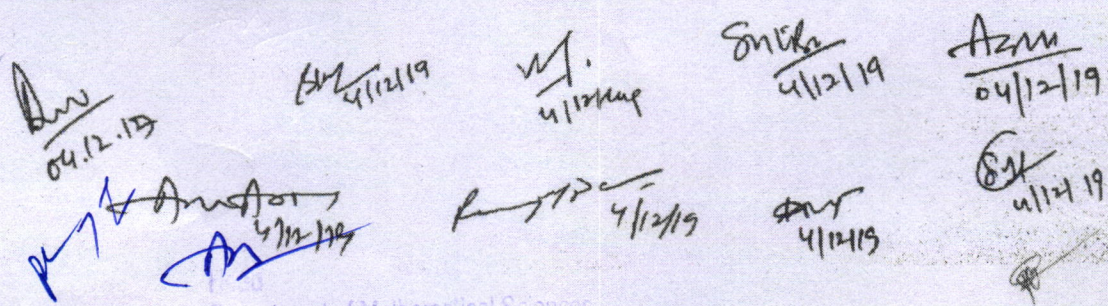
The following recommendations were given by the Board:

Agenda 1. Framing the Structure and course contents of the subjects of B.Sc (Mathematics) 2nd semester for the batch 2019 and onwards.

The Board finalized the Structure/Scheme and course contents of the B.Sc (Mathematics) 2nd semester for the batch 2019 and onwards. The syllabus of Calculus-II, Solid geometry and Programming Lab-II were formulated. The board also passed the course contents of the subjects offered by other departments.

Agenda 2. Decision on equivalency of syllabus of Mathematics of B.Tech Mechanical(2012-2016 batch) and B.Sc/B.A Mathematics

The Board discussed on equivalency of the mathematics syllabus of B.Tech Mechanical with B.Sc./B.A. The content of syllabus of subject mathematics in B.Tech. Mechanical Engineering is based on applications of mathematics in engineering, but B.Sc./B.A syllabus is designed from

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Department of Mathematical Sciences

theoretical point of view and basic sciences oriented. Also Mathematics is a subsidiary subject in the case of B. Tech (Mechanical Engineering) whereas Mathematics is a major subject in case of B.Sc./ B.A. The board recommended that the equivalency cannot be given of the subject mathematics in B.Tech. and B.Sc./B.A.

The meeting ended with the vote of thanks.

Dr. Vinay Kanwar

Dr. Amritbir Singh

Dr. D.S. Pathania

Dr. Satish Kumar Sharma

Dr. S.K. Srivastva

Dr. Ashish Arora

Dr. R.K. Narula

Dr. Harpreet Kaur

Dr. Gurjinder Singh

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

2)

Autonomous

Universities of Punjab
PTU-DEPT
Dept of Mathematical Sciences

SUBJECT

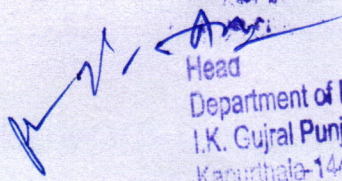|		
Main Category	:	Boards Of Studies
Sub Category	:	Meetings
Description	:	Regarding Minutes of BOS and Updated syllabus of B.Sc.(Hons.) Mathematics

---

OTHER DETAILS

Retention	:	
Priority	:	
Language	:	English
Remarks	:	

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

File No. I/398/2020-MATH SCI (Computer No. 16799)

I. K. Gujral Punjab Technical University
Department of Mathematical Sciences

Dated: 18/05/2020

Minutes of the meeting of Board of Studies (BOS) of Mathematics held online on May 18th, 2020

The meeting of Board of studies of Mathematics was held on 18/05/2020. The following members were present in the meeting

1. Dr. Ashish Arora, Associate Professor, IKGPTU, Kapurthala, Chairman
2. Dr. Vinay Kanwar, Professor, PU Chandigarh, Outside Expert
3. Dr. D. S. Pathania, Professor, GNE, Ludhiana
4. Dr. Amritbir Singh, Professor, BBSBEC, Fatehgarh Sahib
5. Dr. Satish Kumar Sharma, Associate Professor, TIET, Patiala
6. Dr. S.K. Srivastva, Professor, BCET, Gurdaspur
7. Dr. Jitender Singh, GNDU, Amritsar
8. Dr. Rajesh Kumar Narula, Asst. Prof., IKGPTU Kapurthala
9. Dr. Harpreet Kaur, BOS Coordinator, IKGPTU, Main Campus, Kapurthala
10. Dr. Megha Goyal, Asst. Prof, IKGPTU, Kapurthala
11. Dr. Gurjinder Singh, Special Invitee IKGPTU, Kapurthala

The following recommendations were given by the Board:

Agenda 1. Framing the Structure and course contents of the subjects of B.Sc Hons. (Mathematics) 3rd and 4th semester for the batch 2019 and onwards.

The Board finalized the Structure/Scheme and course contents of the subjects of B.Sc Hons. (Mathematics) 3rd and 4th semester for the batch 2019 and onwards. It was decided that course curriculum shall be developed as per the recommendations of the members of the board and shall be sent to all members for approval through e-mail.

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

I. K. Gujral Punjab Technical University
Department of Mathematical Sciences

Agenda 2. List of Examiners

The board also finalized the list of examiners for May-2020 examination as under:

Sr. No.	Name	Institute	Mobile	Email
1.	Dr. Ashish Arora	Department of Mathematical Sciences, IKGPTU-Main Campus	dr.ashish10@hotmail.com	9478098067
2.	Dr. Jitender Singh	Department of Mathematics, GNDU Amritsar	sonumaths@gmail.com	8146907778
3.	Dr. Rajesh Narula	Department of Mathematical Sciences, IKGPTU-Main Campus	dr.rknarula@gmail.com	9478098073
4.	Dr. Satish Kumar	School of Mathematics Thapar University, Patiala	Satishk.sharma@thapar.edu	9780493782
5.	Dr. Harpreet Kaur	Department of Mathematical Sciences, IKGPTU-Main Campus	maanh57@gmail.com	9465884840
6.	Dr. Sukhjit Singh	Department of Mathematics, NIT, Jalandhar	sukhjitmath@gmail.com	7872001816
7.	Dr. Divya Taneja	Department of Applied Sciences, YCoE, Talwandi Saboo	dtaneja25@yahoo.co.in	98555-26296
8.	Dr. Gurjinder Singh	Department of Mathematical Sciences, IKGPTU-Main Campus	gurjinder11@gmail.com	98156-58551
9.	Dr. Megha Goyal	Department of Mathematical Sciences, IKGPTU-Main Campus	meghagoyal2021@gmail.com	9464053322
10.	Dr. Suraj Goyal	Department of Mathematics, JCB YMCA University, Faridabad	surajgoyal87@gmail.com	9417728292
11.	Dr. Mahendra Kumar Gupta	Department of Mathematics, NIT Jamshedpur	mkgupta.math@nitjsr.ac.in, mahendra14389@gmail.com	9414333978
12.	Dr. Rachna Sachdeva	Department of Mathematics, Jammu University, Jammu	surajgoyal87@gmail.com	9417728292
13.	Dr. Rabia Kamra	Department of Applied Sciences, PEC, Chandigarh	karma.rabia@gmail.com	9555982876
14.	Dr. Monika Rani Assistant Prof.	Department of Mathematics, Kanya Maha Vidyalaya, Jalandhar	gargnitk24@gmail.com	9317820270
15.	Dr. Sarita Pippal	Department of Mathematics, Panjab University, Chandigarh	saritamath@pu.ac.in	9870841523
16.	Dr. D.S. Pathania	Department of Applied Sciences, GNE, Ludhiana	despathania@yahoo.com	9878634245
17.	Dr. Himani Arora Assistant Prof.	Department of Mathematics, GNDU, Amritsar	arorahimani362@gmail.com	9988214199
18.	Dr. Munish Kansal	School of Mathematics, Thapar University, Patiala	munish.kansal@thapar.edu	9855087206
19.	Rajat Singla	Department of Mathematics Akal University, Talwandi Sabo	rajat_math@auts.ac.in	9914966789
20.	Komalpreet Kaur	Department of Mathematical Sciences, IKGPTU-Main Campus	komal2581516@gmail.com	9914533423

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

I. K. Gujral Punjab Technical University
Department of Mathematical Sciences

21.	Dr. Paramjeet Singh	School of Mathematics Thapar University, Patiala	paramjeet.singh@thapar.edu	9646056500
22.	Akansha Mehta	Department of Mathematical Sciences, IKGPTU-Main Campus	mehta.akansha49@gmail.com	9888195725

The meeting ended with the vote of thanks.

Dr. Vinay Kanwar   Dr. Amritbir Singh   Dr. D.S. Pathania

Dr. Satish Kumar Sharma   Dr. S.K. Srivastva   Dr. Jitender Singh

Dr. Ashish Arora   Dr. R.K. Narula   Dr. Harpreet Kaur

Dr. Gurjinder Singh   Dr. Megha Goyal

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

M Gmail

Harpreet Maan <maanh57@gmail.com>

BOS Meeting id and password

Amritbir Singh <amritbir.singh@bbsbec.ac.in>   Sat, Jun 13, 2020 at 7:32 PM
To: Harpreet Maan <maanh57@gmail.com>

Dear Madam

Thanks for sending me the minutes of the meeting of BOS in Mathematics, held online on 18-5-2020. Minutes are well prepared and points discussed in the meeting have been incorporated in the syllabus discussed. I am giving my consent for the attached syllabus of B.Sc Hons. Mathematics 3rd & 4th semester.

With regards

Dr Amritbir Singh
Prof. & Head
Department of Applied Sciences
B.B.S.B. Engg. College Fatehgarh Sahib

On Mon, 8 Jun, 2020, 1:39 PM Harpreet Maan, <maanh57@gmail.com> wrote:
  Respected Sir,
            The meeting of Board of studies of Mathematics was held on 18/05/2020. The minutes of meeting and syllabus of B.Sc. Hons. Mathematics 3rd and 4th semester are attached herewith. This is submitted for your kind consent.

  --
  Thanks and Regards
  Dr. Harpreet Kaur
  Assistant Professor
  Dept. of Mathematical Sciences
  I.K. Gujral Punjab Technical University, Jalandhar

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

32

54

M Gmail

Harpreet Maan <maanh57@gmail.com>

Re: BOS Minutes

Satishk sharma <satishk.sharma@thapar.edu>
To: Harpreet Maan <maanh57@gmail.com>

Sun, Jun 14, 2020 at 9:08 AM

Dear Harpreet
I give my consent to the minutes and the syllabus of B.Sc. Hons. Mathematics 3rd and 4th semester.
Thanks and regards

Dr. Satish kumar
TIET, Patiala

On Sat, 13 Jun 2020, 18:38 Harpreet Maan, <maanh57@gmail.com> wrote:

-------- Forwarded message --------
From: **Harpreet Maan** <maanh57@gmail.com>
Date: Mon, 8 Jun 2020, 13:36
Subject: Re: BOS Meeting id and password
To: <despathania@yahoo.com>, Amritbir Singh <amritbir.singh@bbsbec.ac.in>, <satishk.sharma@thaper.edu>,
vinay kanwar <vmithil@yahoo.co.in>, Jitender Singh <sonumaths@gmail.com>, <Sks64_bcet@yahoo.co.in>,
Gurjinder Singh <gurjinder11@gmail.com>, Dr. Rajesh Narula <dr.rknarula@gmail.com>, Megha Goyal
<meghagoyal2021@gmail.com>
Cc: Dr. Ashish Arora <Dr.Ashish10@hotmail.com>

Respected Sir,
         The meeting of Board of studies of Mathematics was held on 18/05/2020. The minutes of meeting
and syllabus of B.Sc. Hons. Mathematics 3rd and 4th semester are attached herewith. This is submitted for your
kind consent.

--
Thanks and Regards
Dr. Harpreet Kaur
Assistant Professor
Dept. of Mathematical Sciences
I.K. Gujral Punjab Technical University, Jalandhar

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
la-144603 Pb. (India)

M Gmail

Harpreet Maan <maanh57@gmail.com> 33

BOS Meeting id and password

vinay kanwar <vmithil@yahoo.co.in>
Reply-To: vinay kanwar <vmithil@yahoo.co.in>
To: Harpreet Maan <maanh57@gmail.com>

Mon, Jun 8, 2020 at 4:01 PM

Respected Madam Harpreet

Good evening.

Thanks for your mail and information. I have gone through the proposed mathematics syllabus for third and fourth semester of B.Sc. (Hons) students. Syllabus is OK from my side, however, there are some minor typographically mistakes in the proposed syllabus (Please see the attached file).

With best wishes,

V. Kanwar

Dr. V.Kanwar

Professor (Mathematics),

University Institute of Engineering and Technology,

Panjab University, Chandigarh-160 014, India.

Phone NO:09878369981, Fax: 0172-2547986.

[Quoted text hidden]

2 attachments

📄 **DA-PTU(BOS).pdf**
570K

📄 **Minor Corrections related to 3rd and 4th Seme.docx**
13K

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

34

56

M Gmail   Harpreet Maan <maanh57@gmail.com>

BOS Meeting id and password

Harpreet Maan <maanh57@gmail.com>   Mon, Jun 8, 2020 at 8:39 PM
To: vinay kanwar <vmithil@yahoo.co.in>

Respected Sir,
        Very good evening. Thank you so much for kind response and valuable corrections. Please get the
corrected syllabus of 3rd and 4th semester of B.Sc. Hons. mathematics as per your suggested corrections in
attachment.
[Quoted text hidden]

Updated B.Sc.(Hons.) 1st and 2nd Year University Campus.pdf
2201K

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)
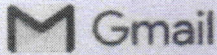
M Gmail   Harpreet Maan <maanh57@gmail.com>

BOS Meeting id and password

Dr. Rajesh Narula <dr.rknarula@gmail.com>   Fri, Jun 19, 2020 at 11:18 AM
To: Harpreet Maan <maanh57@gmail.com>

It seems ok.

On Mon, Jun 8, 2020, 1:39 PM Harpreet Maan <maanh57@gmail.com> wrote:
Respected Sir,

       The meeting of Board of studies of Mathematics was held on 18/05/2020. The minutes of meeting and syllabus of B.Sc. Hons. Mathematics 3rd and 4th semester are attached herewith. This is submitted for your kind consent.

—
Thanks and Regards
Dr. Harpreet Kaur
Assistant Professor
Dept. of Mathematical Sciences
I.K. Gujral Punjab Technical University, Jalandhar

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

File No. I/398/2020-MATH SCI (Computer No. 16799)
Receipt No : 19913/2020/Dept of Mathematical Sciences

M Gmail

Harpreet Maan <maanh57@gmail.com>

BOS Meeting id and password

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devinder singh <despathania@yahoo.com>   Tue, Jun 9, 2020 at 12:35 PM
To: Harpreet Maan <maanh57@gmail.com>

(Syllabus was discussed and it is fine) Dr DSPathania

----- Forwarded Message -----
From: Harpreet Maan <maanh57@gmail.com>
To: Amritbir Singh <amritbir.singh@bbsbec.ac.in>; vinay kanwar <vmithil@yahoo.co.in>; Jitender Singh
<sonumaths@gmail.com>; Satishk sharma <satishk.sharma@thapar.edu>; "sks64_bcet@yahoo.co.in"
<sks64_bcet@yahoo.co.in>; "despathania@yahoo.com" <despathania@yahoo.com>
Sent: Monday, June 8, 2020, 01:47:25 PM GMT+5:30
Subject: Fwd: BOS Meeting id and password

Respected Sir,

        All are requested please send the duly filled and signed DA form. Kindly mention honorarium amount
Rs. 5000. The formulated Syllabus and scheme with minutes of meeting has sent you late. Beacuse in this
programme various subjects are from other departments. We have received syllabus and mapping of courses with
programme outcomes of their subjects in the last week.

Join Zoom Meeting
https://us04web.zoom.us/j/72703194508?pwd=ckhiQUxJWVZPU0FJb1pReTRuQW4vZz09

Meeting ID: 727 0319 4508
Password: 9ynidk

On Fri, 15 May 2020, 18:47 Harpreet Maan, <maanh57@gmail.com> wrote:
    Respected Sir,

    The meeting of the Board of Studies of the department of **Mathematical Sciences, IKGPTU
    Main Campus** is scheduled to be held online at Zoom app on **May 18th, 2020 at 11:00 AM.** The
    meeting id and password will be shared with you. The agenda of the meeting to be discuss
            1.   The study scheme and syllabus of B. Sc.(Hons.) Mathematics 3rd and 4th semester for
        batch 2019 and onwards.
            2.   List of examiners
            3.   Any other matter with the permission of Chair.

    You are requested to participate and contribute through your suggestions. Kindly confirm your
    participation in the said meeting through e-mail or SMS at 9478098067 or 9465884840.

    Thanks and Regards
    Dr. Harpreet Kaur
    Assistant Professor
    Dept. of Mathematical Sciences
    I.K. Gujral Punjab Technical University, Jalandhar

--   cc
Thanks and Regards
Dr. Harpreet Kaur

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University

Receipt No : 19913/2020/Dept of Mathematical Sciences

Thanks and Regards
Dr. Harpreet Kaur
Assistant Professor
Dept. of Mathematical Sciences
I.K. Gujral Punjab Technical University, Jalandhar
[Quoted text hidden]

DA form-1.pdf
747K

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

File No. I/398/2020-MATH SCI (Computer No. 16799)

Receipt No : 19913/2020/Dept of Mathematical Sciences

Harpreet Maan <maanh57@gmail.com>

M Gmail
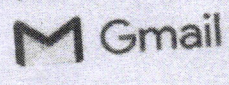
BOS Meeting id and password

Fri, Jun 19, 2020 at 11:19 AM

Gurjinder Singh <gurjinder11@gmail.com>
To: Harpreet Maan <maanh57@gmail.com>

Dear Madam

I have gone through the file. The syllabus is ok.

Sincerely
Gurjinder Singh

On Mon, 8 Jun 2020, 1:39 pm Harpreet Maan, <maanh57@gmail.com> wrote:

Respected Sir,

The meeting of Board of studies of Mathematics was held on 18/05/2020. The minutes of meeting and syllabus of B.Sc. Hons. Mathematics 3rd and 4th semester are attached herewith. This is submitted for your kind consent.

--
Thanks and Regards
Dr. Harpreet Kaur
Assistant Professor
Dept. of Mathematical Sciences
I.K. Gujral Punjab Technical University, Jalandhar

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

File No. I/398/2020-MATH-SCI (Computer No. 16799)

Receipt No : 19913/2020/Dept of Mathematical Sciences

31   13

M Gmail

Harpreet Maan <maanh57@gmail.com>

BOS Meeting id and password

Megha Goyal <meghagoyal2021@gmail.com>
To: Harpreet Maan <maanh57@gmail.com>

Fri, Jun 19, 2020 at 11:58 AM
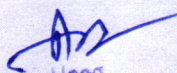
I have read the MoMs... it is Ok...

On Mon, 8 Jun 2020 at 1:39 PM, Harpreet Maan <maanh57@gmail.com> wrote:
Respected Sir,

The meeting of Board of studies of Mathematics was held on 18/05/2020. The minutes of meeting and syllabus of B.Sc. Hons. Mathematics 3rd and 4th semester are attached herewith. This is submitted for your kind consent.

--
Thanks and Regards
Dr. Harpreet Kaur
Assistant Professor
Dept. of Mathematical Sciences
I.K. Gujral Punjab Technical University, Jalandhar

--
Dr. Megha Goyal
Assistant Professor,
Department of Mathematical Sciences,
IKG Punjab Technical University, Jalandhar-144603

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
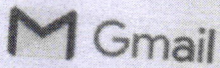Kapurthala-144603 Pb. (India)

40

62 14

M Gmail
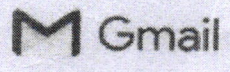
Harpreet Maan <maanh57@gmail.com>

BOS Meeting id and password

Jitender Singh <sonumaths@gmail.com>   Tue, Jun 9, 2020 at 12:21 PM
To: Harpreet Maan <maanh57@gmail.com>

Dear Dr. Harpreet

Thank you for the minutes of the meeting and the copy of the Syllabi discussed during the
BOS.
Attached herewith the filled DA form mentioning the Honorarium amount.

Sincerely
–

Jitender Singh
Assistant Professor
Department of Mathematics
Guru Nanak Dev University Amritsar-143005
Punjab, INDIA
http://sites.google.com/site/sonumaths2/homeJitender-Singh
–

Never take some one for granted,Hold every person Close to your Heart because "You might wake up one day and realize that
you have lost a diamond while you were too busy in collecting stones." Remember this always happens in life.

[Quoted text hidden]

📄 DA form_JitenderSinghGNDUv2.pdf
866K

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

File No. I/398/2020-MATH-SCI.(Computer No. 16799)

15

M Gmail

Harpreet Maan <maanh57@gmail.com>

41

BOS Meeting id and password

sanjay srivastava <sks64_bcet@yahoo.co.in>
To: Harpreet Maan <maanh57@gmail.com>

Mon, Jun 15, 2020 at 12:33 PM

I give my consent for this minutes of meeting and formulated contents of these attached subjects.

[Quoted text hidden]

Head
Department of Mathematical Sciences
I.K. Gujral Punjab Technical University
Kapurthala-144603 Pb. (India)

Note No. #1

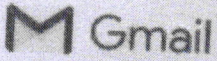**Subject: The minutes of the meeting of BOS held on 2/8/2021 and the syllabus of 5th and 6th semester of B.Sc. (Hons.) Mathematics**

The meeting of the BOS of Mathematics was held online on 2/8/2021. The following members were present:
1. Prof. (Dr.) Ashish Arora (Chairperson)
2. Prof. S. K. Srivastva, SBSSU, Gurdaspur
3. Dr. Amritbir Singh, Baba Banda Singh Bahadur College
4. Prof. D. S. Pathania, GNE, Ludhiana
5. Dr. Jitender Singh, GNDU, Amritsar
6. Dr. Rajesh Narula, IKGPTU main campus
7. Dr. Gurjinder Singh, IKGPTU main campus
8. Dr. Megha Goyal, IKGPTU main campus

The syllabus of 5th and 6th semester of B. Sc. (Hons), Mathematics for batch 2019 onwards was formulated in the meeting. The structure and the detailed syllabus contents along with CO and PO are attached herewith. The approval of the members of BOS is also displayed. Kindly forward the file to IT cell for updating the syllabus on website and also to examination branch for further action.
The file is submitted for your consideration and necessary action please.
📎 **Structure and Syllabus.pdf**

29/09/2021 3:38 PM

DR. ASHISH ARORA
(HOD(MATHAMETICAL SCIENCES))

Note No. #2

For necessary action as per norms.

29/09/2021 3:38 PM

DR. VIKAS CHAWLA
(DIRECTOR(MAIN CAMPUS))

Note No. #3

For n/a

29/09/2021 3:47 PM

DR.NITYA
(DR(ACADEMICS))

Note No. #4

For necessary action please.

29/09/2021 5:34 PM

63959/2021/Dept of Mathematical Sciences

Re: Fw: Meeting of BOS of Mathematics (Updated Syllabus for Approval)

Amritbir Singh <amritbir.singh@bbsbec.ac.in>
Wed 9/1/2021 2:45 PM
To: Dr. Ashish Arora <dr.ashish10@hotmail.com>

Dear Sir

I am giving my approval for the syllabus of B.Sc (Hons.) Mathematics 5th-6th semester, attached with your email.

Name : Dr. Amritbir Singh
Bank Name : Punjab National Bank
Branch : Jyoti Sarup Mor, Fatehgarh Sahib
Account Number : 06452010008520
IFSC Code : PUNB0064510

With warm regards

Dr. Amritbir Singh
Professor-in-Mathematics
B.B.S.B. Engg. College, Fatehgarh Sahib-140407

On Thu, Aug 12, 2021 at 1:33 PM Dr. Ashish Arora <dr.ashish10@hotmail.com> wrote:
Respected Sir
The meeting of the Board of Studies of Mathematics, IKGPTU was held on 2/8/2021. The contents of the syllabus of B.Sc (Hons.) Mathematics 5th-6th semester was finalized. The updated copies of the syllabus of different subjects as recommended by the members of the board for the 5th-6th semester are attached herewith for your consideration and approval. A copy of the syllabus from the 1st-4th semester is also attached for your reference. It is submitted for your approval, please. Also, please provide the following information for the online transfer of the honorarium.
Name:
Bank Name:
Branch:
Account Number:
IFSC code:

Looking forward to your reply.

With best regards
Ashish Arora

From: Dr. Ashish Arora
Sent: Monday, July 26, 2021 10:47 AM
To: Amritbir.singh@bbsbec.ac.in <Amritbir.singh@bbsbec.ac.in>; hod_ash@bbsbec.ac.in <hod_ash@bbsbec.ac.in>
Subject: Meeting of BOS of Mathematics

Respected Sir,
It's my immense pleasure to inform you that you have been nominated as the member of the board of studies of the department of Mathematical Sciences, I. K. Gujral Punjab Technical University.

63959/2021/Dept of Mathematical Sciences

The meeting of the Board of Studies is scheduled on **August 2nd, 2021 at 11:00 AM. at Google Meet** at the following link:

Board of Studies, Department of Mathematical Sciences, I. K. Gujral Punjab Technical University.
Monday, 2 August · 11:00am – 3:00pm
Google Meet joining info
Video call link: https://meet.google.com/mon-wrqc-imb

Meet

Real-time meetings by Google. Using your browser, share your video, desktop, and presentations with teammates and customers.

meet.google.com

The agenda of the meeting is
1. To finalize the syllabus of B. Sc.(Hons.) Mathematics 5th and 6th semester for batch 2019 and onwards.
2. To finalize the syllabus of B. Sc. (Hons) Mathematics 1st and 2nd semester for batch 2021 onwards
3. Any other matter with the permission of Chair.

You are requested to participate and contribute through your suggestions. Kindly confirm your participation in the said meeting through e-mail or SMS at 9478098067. Looking forward for your reply.

With best regards,
Ashish Arora
Professor& Head
Department of Mathematical Sciences
I. K. Gujral Punjab Technical University

63959/2021/Dept of Mathematical Sciences

Fw: Meeting of BOS Mathematics (Updated Syllabus for Approval)

devinder singh <despathania@yahoo.com>
Thu 8/12/2021 5:56 PM

To: Dr. Ashish Arora <dr.ashish10@hotmail.com>

📎 10 attachments (2 MB)

BSM 605 Integral Equations and Integral Transforms.pdf; B.Sc.(Hons.) 1st to 4th semester IKGPTU.pdf; BSM502 Algebra-II.pdf; BSM503 Numerical Methods.pdf; BSM603 Mechanics.pdf; BSM602 Complex Analysis.pdf; BSM504 Partial Differential equations.pdf; BSM501 Real Analysis-II.pdf; BSHM604 Discrete Mathematics.pdf; BSHM601 Number Theory.pdf;

After going through all the syllabi. Everything is correct now and I hereby recommend the same.

Dr D.S.Pathania Professor and Head,GNDEC Ludhiana
----- Forwarded Message -----
From: Dr. Ashish Arora <dr.ashish10@hotmail.com>
To: despathania@yahoo.com <despathania@yahoo.com>
Sent: Thursday, August 12, 2021, 01:31:03 PM GMT+5:30
Subject: Fw: Meeting of BOS Mathematics (Updated Syllabus for Approval)

Name: D.S.Pathania
Bank Name: Punjab and Sind Bank
Branch: Gill Ludhiana
Account Number:00211000021008
IFSC code:PSIB0000021

Looking forward to your reply.

With best regards
Ashish Arora

From: Dr. Ashish Arora <dr.ashish10@hotmail.com>
Sent: Monday, August 2, 2021 10:50 AM
To: despathania@yahoo.com <despathania@yahoo.com>
Subject: Fw: Meeting of BOS Mathematics

From: Dr. Ashish Arora
Sent: Monday, July 26, 2021 10:48 AM
To: despathania@yahoo.com <despathania@yahoo.com>
Subject: Meeting of BOS Mathematics

Respected Sir,
It's my immense pleasure to inform you that you have been nominated as the member of the board of studies of the department of Mathematical Sciences, I. K. Gujral Punjab Technical University. The meeting of the Board of Studies is scheduled on **August 2nd, 2021 at 11:00 AM. at Google Meet** at the following link:
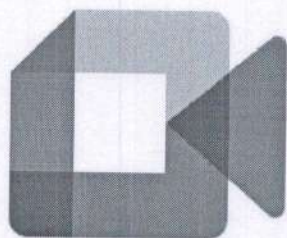Board of Studies, Department of Mathematical Sciences, I. K. Gujral Punjab Technical University.
Monday, 2 August · 11:00am – 3:00pm
Google Meet joining info
Video call link: https://meet.google.com/mon-wrqc-imb

Meet

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meet.google.com

63959/2021/Dept of Mathematical Sciences

The agenda of the meeting is

1. To finalize the syllabus of B. Sc.(Hons.) Mathematics 5th and 6th semester for batch 2019 and onwards.
2. To finalize the syllabus of B. Sc. (Hons) Mathematics 1st and 2nd semester for batch 2021 onwards
3. Any other matter with the permission of Chair.

You are requested to participate and contribute through your suggestions. Kindly confirm your participation in the said meeting through e-mail or SMS at 9478098067. Looking forward for your reply.

With best regards,
Ashish Arora
Professor& Head
Department of Mathematical Sciences
I. K. Gujral Punjab Technical University

Re: Fw: Meeting BOS of Mathematics (Updated Syllabus for Approval)

Gurjinder Singh <gurjinder11@gmail.com>
Thu 8/19/2021 3:18 PM
To: Dr. Ashish Arora <dr.ashish10@hotmail.com>

Dear Sir

The syllabi of all courses are OK by my side.

Sincerely
Gurjinder Singh

On Thu, Aug 12, 2021 at 1:34 PM Dr. Ashish Arora <dr.ashish10@hotmail.com> wrote:

Respected Sir
The meeting of the Board of Studies of Mathematics, IKGPTU was held on 2/8/2021. The contents of the syllabus of B.Sc (Hons.) Mathematics 5th-6th semester was finalized. The updated copies of the syllabus of different subjects as recommended by the members of the board for the 5th-6th semester are attached herewith for your consideration and approval. A copy of the syllabus from the 1st-4th semester is also attached for your reference. It is submitted for your approval, please. Also, please provide the following information for the online transfer of the honorarium.
Name:
Bank Name:
Branch:
Account Number:
IFSC code:

Looking forward to your reply.

With best regards
Ashish Arora

From: Dr. Ashish Arora
Sent: Monday, July 26, 2021 12:26 PM
To: gurjinder11@gmail.com <gurjinder11@gmail.com>
Subject: Meeting BOS of Mathematics

Respected Sir

It's my immense pleasure to inform you that you have been nominated as the member of the board of studies of the department of Mathematical Sciences, I. K. Gujral Punjab Technical University. The meeting of the Board of Studies is scheduled on **August 2nd, 2021 at 11:00 AM. at Google Meet** at the following link:

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63959/2021/Dept of Mathematical Sciences

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3. Any other matter with the permission of Chair.

You are requested to participate and contribute through your suggestions. Kindly confirm your participation in the said meeting through e-mail or SMS at 9478098067. Looking forward for your reply.

With best regards,
Ashish Arora
Professor& Head
Department of Mathematical Sciences
I. K. Gujral Punjab Technical University

Sent from Mail for Windows 10

63959/2021/Dept of Mathematical Sciences

Re: Fw: Meeting of BOS Mathematics (Updated Syllabus for Approval)

Jitender Singh <sonumaths@gmail.com>
Mon 8/16/2021 4:19 PM
To: Dr. Ashish Arora <dr.ashish10@hotmail.com>

Dear Professor Ashish

Thank you very much. You and your team have worked very well on the Syllabi. Therefore, I approve of the contents of the syllabus of B.Sc (Hons.) Mathematics 5th and 6th semester (as received from you through the last email) as discussed in the online meeting of BOS, IKGPTU, held on **2/8/2021**.

Name: **Jitender Singh**
Bank Name: **State Bank of India**
Branch: **Guru Nanak Dev University Campus**
Account Number: **55144400621**
IFSC code: **SBIN0051135**

Best regards

--
Jitender Singh
Associate Professor
Department of Mathematics
Guru Nanak Dev University Amritsar-143005
Punjab, INDIA
http://sites.google.com/site/sonumaths2/homeJitender-Singh
--

Never take some one for granted,Hold every person Close to your Heart because "You might wake up one day and realize that you have lost a diamond while you were too busy in collecting stones." Remember this always happens in life.

On Thu, Aug 12, 2021 at 1:29 PM Dr. Ashish Arora <dr.ashish10@hotmail.com> wrote:
> Respected Sir
> The meeting of the Board of Studies of Mathematics, IKGPTU was held on 2/8/2021. The contents of the syllabus of B.Sc (Hons.) Mathematics 5th-6th semester was finalized. The updated copies of the syllabus of different subjects as recommended by the members of the board for the 5th-6th semester are attached herewith for your consideration and approval. A copy of the syllabus from the 1st-4th semester is also attached for your reference. It is submitted for your approval, please. Also, please provide the following information for the online transfer of the honorarium.
> Name:
> Bank Name:
> Branch:
> Account Number:
> IFSC code:
>
> Looking forward to your reply.
>
> With best regards
> Ashish Arora

From: Dr. Ashish Arora
Sent: Monday, July 26, 2021 11:49 AM
To: sonumaths@gmail.com <sonumaths@gmail.com>
Subject: Meeting of BOS Mathematics

Respected Sir

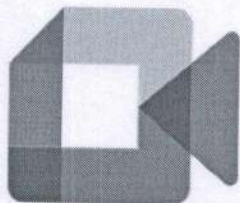It's my immense pleasure to inform you that you have been nominated as the member of the board of studies of the department of Mathematical Sciences, I. K. Gujral Punjab Technical University. The meeting of the Board of Studies is scheduled on August 2nd, 2021 at 11:00 AM. at Google Meet at the following link: Board of Studies, Department of Mathematical Sciences, I. K. Gujral Punjab Technical University.

63959/2021/Dept of Mathematical Sciences

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meet.google.com

The agenda of the meeting is

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You are requested to participate and contribute through your suggestions. Kindly confirm your participation in the said meeting through e-mail or SMS at 9478098067. Looking forward for your reply.

With best regards,
Ashish Arora
Professor& Head
Department of Mathematical Sciences
I. K. Gujral Punjab Technical University

63959/2021/Dept of Mathematical Sciences

Re: Fw: Meeting of BOS Mathematics

Dr. Rajesh Narula <dr.rknarula@gmail.com>
Wed 8/25/2021 10:01 AM
To: Dr. Ashish Arora <dr.ashish10@hotmail.com>

It seems ok. Please ignore the earlier mail sent by mistake.

On Thu, Aug 12, 2021 at 1:35 PM Dr. Ashish Arora <dr.ashish10@hotmail.com> wrote:
> Respected Sir
> The meeting of the Board of Studies of Mathematics, IKGPTU was held on 2/8/2021. The contents of the syllabus of
> B.Sc (Hons.) Mathematics 5th-6th semester was finalized. The updated copies of the syllabus of different subjects as
> recommended by the members of the board for the 5th-6th semester are attached herewith for your consideration
> and approval. A copy of the syllabus from the 1st-4th semester is also attached for your reference. It is submitted for
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> Name:
> Bank Name:
> Branch:
> Account Number:
> IFSC code:
>
> Looking forward to your reply.
>
> With best regards
> Ashish Arora

From: Dr. Ashish Arora
Sent: Monday, July 26, 2021 10:52 AM
To: dr.rknarula@gmail.com <dr.rknarula@gmail.com>
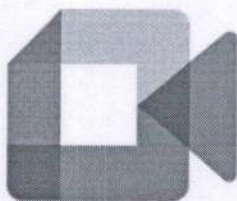**Subject:** Meeting of BOS Mathematics

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63959/2021/Dept of Mathematical Sciences

With best regards,
Ashish Arora
Professor& Head
Department of Mathematical Sciences
I. K. Gujral Punjab Technical University

--

Regards;

Dr. Rajesh Narula

63959/2021/Dept of Mathematical Sciences

Re: BOS meeting (Updated Syllabus for Approval)

sanjay srivastava <sks64_bcet@yahoo.co.in>
Thu 9/2/2021 10:45 AM
To: Dr. Ashish Arora <dr.ashish10@hotmail.com>

Dear Dr. Ashish

       The contents of all the subjects are approved on my behalf.

Sanjay K. Srivastava
SBSSU Gurdaspur
(BCET Gurdaspur)

My details:
 Sanjay Kumar Srivastava
Bank Name: State Bank of India
Branch: BCET, Gurdaspur
Account Number: 55108992450
IFSC code: SBIN0051295
PAN No. : ABPPS6551E

On Thursday, 12 August, 2021, 01:05:52 pm IST, Dr. Ashish Arora <dr.ashish10@hotmail.com> wrote:

Respected Sir
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Bank Name:
Branch:
Account Number:
IFSC code:

Looking forward to your reply.

With best regards
Ashish Arora

From: Dr. Ashish Arora
Sent: Monday, August 2, 2021 10:28 AM
To: Dr. Srivastva BCET <sks64_bcet@yahoo.co.in>
Subject: BOS meeting

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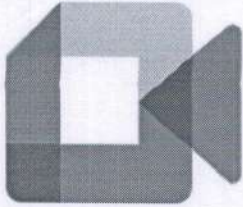Google Meet joining info
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63959/2021/Dept of Mathematical Sciences

Fw: BOS meeting (Updated Syllabus for Approval)

Dr. Ashish Arora <dr.ashish10@hotmail.com>
Thu 8/12/2021 1:05 PM
To: Dr. Srivastva BCET <sks64_bcet@yahoo.co.in>

📎 10 attachments (2 MB)

B.Sc.(Hons.) 1st to 4th semester IKGPTU.pdf; BSHM601 Number Theory.pdf; BSHM604 Discrete Mathematics.pdf; BSM501 Real Analysis-II.pdf; BSM502 Algebra-II.pdf; BSM503 Numerical Methods.pdf; BSM504 Partial Differential equations.pdf; BSM602 Complex Analysis.pdf; BSM603 Mechanics.pdf; BSM 605 Integral Equations and Integral Transforms.pdf;

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Looking forward to your reply.

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To: Dr. Srivastva BCET <sks64_bcet@yahoo.co.in>
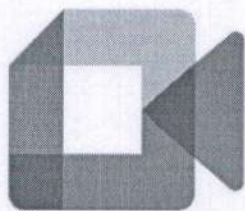**Subject:** BOS meeting

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With best regards,
Ashish Arora
Professor& Head
Department of Mathematical Sciences
I. K. Gujral Punjab Technical University

I. K. Gujral Punjab Technical University

Department of Mathematical Sciences

Minutes of the meeting of Board of Studies (BOS) of Mathematics held on July 21, 2023

The meeting of Board of studies of Mathematics was held on 21/07/2023. The following members were present in the meeting

1. 1 Dr. Ashish Arora, Professor, IKGPTU, Amritsar, Chairman (BOS)
2. Dr. Sanjay Kumar Srivastva, Professor, BCET Gurdaspur
3. Dr. Rajesh Narula, Asst. Prof., IKGPTU, Kapurthala
4. Dr. Gurjinder Singh, Asst. Prof., IKGPTU, Kapurthala
5. Dr. Megha Goyal, Bos Coordinator, IKGPTU, Kapurthala
6. Dr. Harpreet Kaur, Asst Prof, IKGPTU, Mohali
7. Dy. Director/ Assistant Director, Department of CR&A, IKGPTU
8. Ms. Rajveer Kaur, Student, B.Sc (Hons.) Mathematics 5th semester, IKGPTU, Kapurthala
9. Ms. Neha, student, M.Sc Mathematics 3rd semester, IKGPTU, Kapurthala

The following recommendations were given by the Board:

Agenda 1. **To finalize the Course content, Course outcomes and Program objectives of M.Sc. (Mathematics) 4th semester for the batch 2022 and onwards.**

The Course content, Course outcomes and Program objectives of M.Sc. (Mathematics) 4th semester for the batch 2022 and onwards have been finalized. The course content is upgraded more than 25%. The revisions in the syllabi of the following subjects have been proposed:

Semester-IV:

(i) Operations Research, Coding theory, Discrete Mathematics, Advanced Numerical Methods, Advanced Number Theory