



**DELHI TECHNOLOGICAL UNIVERSITY**

**MINUTES**

**of**

**31<sup>st</sup> Meeting**

**ACADEMIC COUNCIL**

**Date : 03.12.2021**

**Time : 11:30 A.M.**

**Venue : Through Video Conferencing  
(Online)**

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**DTU Campus, Shahbad Daulatpur, Bawana Road, Delhi-110042**

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# DELHI TECHNOLOGICAL UNIVERSITY

Established under Govt. of Delhi Act 6 of 2009

(Formerly Delhi College of Engineering)

BAWANA ROAD, SHAHBAD DAULATPUR, DELHI-110042

No. F.DTU/Org/AC/Meeting/01(1)/10/Vol-XIV/1811

Dated : 09/12/2021

**Minutes of the 31<sup>st</sup> meeting of the Academic Council held online on 03.12.2021 at 11:30 A.M.**

The following members were present:

1. Prof. J.P. Saini, Vice Chancellor, Delhi Technological University and Chairperson, Academic Council.
2. Prof. Neharika Vohra, Vice Chancellor, Delhi Skill & Entrepreneurship University, Dwarka, Delhi.
3. Prof. D.P. Goyal, Director, Indian Institute of Management, Shilong
4. Prof. Bhim Singh, Electrical Engineering Department, Indian Institute of Technology, Delhi
5. Prof. B.R. Chahar, Professor, Civil Engineering, Indian Institute of Technology, Delhi (All India Council for Technical Education nominee)
6. Sh. Rajesh Mathur, Advisor, Environmental Systems Research Institute (FICCI nominee).
7. Prof. Ashutosh Trivedi, Dean (Industrial Research Development)
8. Prof. S.C. Sharma, Dean Academic (PG)
9. Prof. Madhusudan Singh, Dean Academic (UG), Registrar and Member Secretary, Academic Council, DTU
10. Prof. Narendra Kumar, Dean, Student Discipline.
11. Prof. Rajesh Rohilla, Dean, Alumni Affairs and Head, T&P.
12. Prof. S. Indu, Dean (Student Welfare)
13. Prof. A.K. Srivastava, Dean (Outreach & Extension Activities)
14. Prof. S.K. Singh, Head, Environmental Engineering Department
15. Prof. V.K. Minocha, Head, Civil Engineering Department
16. Prof. S. K. Garg, Head, Mechanical Engineering Department
17. Prof. Uma Nangia, Head, Electrical Engineering Department
18. Prof. Rinku Sharma, Head, Applied Physics Department
19. Prof. Kapil Sharma, Head, Department of Information Technology
20. Prof. Rajni Jindal, Head, Computer Science & Engineering Department
21. Prof. Ruchika Malhotra, Head, Software Engineering Department
22. Prof. N. S. Raghava, Head, Electronics & Communication Engineering Department
23. Prof. Nand Kumar, Head, Department of Humanities
24. Prof. Pravir Kumar, Head, Department of Bio-Technology
25. Prof. Ranganath M. S., Head, Department of Design
26. Prof. S. Sivaprasad Kumar, Head, Applied Mathematics Department
27. Dr. Archana Singh, Head, Delhi School of Management

28. Prof. Amit Mookerjee, Head, University School of Management and Entrepreneurship (USME)
29. Sh. Kamal Pathak, Controller of Examinations
30. Prof. Pragati Kumar, Professor, Electrical Engineering Department
31. Prof. Reeta Wattal, Professor, Mechanical Engineering Department
32. Sh. Rajesh Birok, Associate Professor, Electronics and Communication Engineering Department
33. Dr. M. Jayasimhadri, Assistant Professor, Applied Physics Department
34. Ms. Divya Narayan, Head, Computer Centre.

Following persons were invited to attend the meeting as special invitee:

1. Dr. Girish Kumar, Chief Executive Officer, DTU-Innovation and Incubation Foundation
2. Sh. R.K. Shukla, Librarian
3. Sh. D.P. Dwivedi, Consultant, Finance & Planning

Prof. Vishal Verma, Dean, International Affairs; Prof. S.G. Warkar, Head, Applied Chemistry Department; Prof. Naokant Deo, In-charge, B.Tech (Evening) could not attend the meeting due to their pre-occupations.



### Agenda 31.1 : Opening Remarks by the Chairperson.

The Chairperson welcomed all the members and special invitees of Academic Council in its 31<sup>st</sup> meeting held on 03.12.2021. He informed the Council that former Vice Chancellor, Prof. Yogesh Singh was relieved on 7<sup>th</sup> October 2021 to enable him to join his new assignment as Vice Chancellor, University of Delhi. The council members appreciated the remarkable progress and contribution made by Prof. Yogesh Singh during his about six years of stay in the University. The Council placed on record his contribution, progressive thoughts and dedication towards overall progress of the University. The Chairperson also intimated that the placement record of DTU has been excellent in current academic year and appreciated the hard work made by the Training and Placement team. The placement details are as under:

Placement Statistics 2021-22 (as on 01.12.2021)	
No. of Companies	205
No. of offers	1609
Highest CTC	64 LPA, Apple
No. of offers above 20 Lacs	315
No. of offers between 10 and 20 Lacs	660
Average CTC till date	16.53 LPA
Median CTC till date	13.61 LPA

The Chairperson also informed that the 8<sup>th</sup> Convocation of the University will be held on 24.12.2021 at 11:00 A.M. The address of Hon'ble Lt. Governor, Delhi/ Chancellor will be delivered on this occasion. The Hon'ble Deputy Chief Minister and Education Minister, Government of NCT of Delhi, Sh. Manish Sisodia will be the Guest-of-Honor on this occasion. At the end the Chairperson invited all the esteemed members of the Council for Convocation and Golden Pride Function to be held in the evening of 23.12.2021.

Prof. Madhusudan Singh, Registrar welcomed new Vice Chancellor, DTU, Prof. J.P. Saini and also expressed his gratitude and regards to Prof. Yogesh Singh for his valuable and memorable contribution to the overall growth of the University during last six years.



**Agenda 31.2 : Confirmation of the minutes of the 30<sup>th</sup> meeting of Academic Council held on 22.09.2021.**

It was submitted to the Academic Council that the minutes of the 30<sup>th</sup> meeting of Academic Council held on 22.09.2021, were circulated among all the members vide forwarding no. F.DTU/ORG/AC/ Meeting/01(1)/2010/Vol-XIII/1214-35 dated 26.09.2021 for comments.

No comments have been received from any of the members.

**Decision : The Academic Council confirmed the minutes of 30<sup>th</sup> meeting of the Academic Council.**



**Agenda 31.3 : Action taken report on the decisions taken in the 30<sup>th</sup> meeting of the Academic Council.**

Action Taken Report on the decisions taken in the 30<sup>th</sup> meeting of the Academic Council held on 22.09.2021 was presented before the Council as below:

S. No.	Agenda Item	Decision	Action Taken by Council Branch	Compliance Report
30.1	Opening Remarks by the Chairperson.	Points mentioned are taken on record.	Noted.	Matter of record.
30.2	Confirmation of the minutes of the 29 <sup>th</sup> meeting of Academic Council held on 23.07.2021.	The Academic Council confirmed the minutes of 29 <sup>th</sup> meeting of the Academic Council.	Noted.	No action required.
30.3	Action taken report on the decisions taken in the 29 <sup>th</sup> meeting of the Academic Council.	The Academic Council took the action taken report on record	Noted.	Matter of record.
30.4	Approval of Academic Calendar for B. Tech. (Continuing Education) 1st Semester, academic year 2021-22.	The Academic Council considered and approved the Academic Calendar for B. Tech. (Continuing Education) 1st Semester academic year 2021-22.	Decision conveyed to Dean, Academic (UG) vide letter no. 1378 dated 12.10.2021.	Notified vide office letter no. F. No. DTU/B. Tech. (Evening)/2021-22/402-411 dated 10.09.2021.
30.5	Approval for Internal Upgradation and Allotment of branch-wise roll numbers to the 1st year B.Tech students, 2020-21 batch.	The Academic Council considered and approved the Internal Upgradation and allotment of branch-wise roll numbers to the 1st year B.Tech students (2020-21 batch).	Decision conveyed to Dean, Academic (UG) vide letter no. 1379 dated 12.10.2021.	Roll Numbers to the B.Tech. 1 <sup>st</sup> year students 2020-21 have been issued.
30.6	To consider the formal registration to following Ph.D. Students upon successful completion of course work and comprehensive examinations and approval of research Plan by respective DRCs.	The Academic Council considered and approved the formal registration of 64 candidates and confer their candidacy for Ph.D. program.	Decision conveyed to Dean, Academic (PG) vide letter no. 1380 dated 12.10.2021.	Registration letters have been issued to all concerned students.
30.7	Admission in Ph.D. programme (August Session- 2021) against additional seats in Electrical Engineering and admission under QIP scheme.	The Academic Council considered and approved the admissions of above mentioned 04 candidates.	Decision conveyed to Dean, Academic (PG) vide letter no. 1381 dated 12.10.2021.	Roll numbers have been issued to the admitted students.



30.8	Cancellation/Withdrawal of admission from Ph.D. programme in July to September 2021.	The Academic Council considered and approved the cancellation of admissions of above mentioned 11 candidates.	Decision conveyed to Dean, Academic (PG) vide letter no. 1382 dated 12.10.2021.	Letters have been issued.
30.9	Approval for re-continuation of a student in Ph.D. programme.	The Academic Council approved the re-continuation in Ph.D. programme of the above mentioned student, Dhruv Goyal.	Decision conveyed to Dean, Academic (PG) vide letter no. 1383 dated 12.10.2021.	Letters have been issued.
30.10	Approval for admissions made in various Master of Technology (M.Tech.) programme for the session 2021-22.	The Academic Council considered and approved the 317 admissions in M.Tech programme for the session . 2021-22. However, the Council advised to constitute a committee to examine the issue of vacant seats in various M.Tech programmes and suggest the needful.	Decision conveyed to Dean, Academic (PG) vide letter no. 1384 dated 12.10.2021.	Roll numbers have been issued to the admitted students and the academic session is started. The committee is constituted to suggest means to enhance percentage of admission in M.Tech programmes.
30.11	To Consider and approve admissions made in Master of Design (M. Des.) programme for the session 2021-22.	The Academic Council considered and approved 42 admissions in Master of Design (M. Des.) programme for the session 2021-22.	Decision conveyed to Dean, Academic (PG) vide letter no. 1385 dated 12.10.2021.	Roll numbers have been issued to the admitted students and academic session started.
30.12	To Consider and approve admissions made in Master of Science (M. Sc.) programmes for the session 2021-22.	The Academic Council considered and approved 240 admissions made in Master of Science (M. Sc.) programmes for the session 2021-22.	Decision conveyed to Dean, Academic (PG) vide letter no. 1386 dated 12.10.2021.	Roll numbers have been issued to the admitted students and academic session started.
30.13	To consider and approve admissions made in Master of Business Administration (Executive) programme and MBA (Business Analytics) programme for the session 2021-22.	The Academic Council considered and approved 53 admissions made in Master of Business Administration (Executive) programme and 26 admissions in MBA (Business Analytics) programme for the session 2021-22.	Decision conveyed to Dean, Academic (PG) vide letter no. 1387 dated 12.10.2021.	Roll numbers have been issued to the admitted students and academic session started.
30.14	Approval for starting a certificate course titled as "Basic Computer Course" Under Lab on Wheels Scheme for the candidates from the Government	The Academic Council considered and approved in principle for starting the certificate course titled as "Basic Computer Course" Under Lab on Wheels	Decision conveyed to Dean (O&EA) vide letter no. 1388 dated 12.10.2021.	Certificate course for school level students is started.

	Schools of NCT of Delhi or from society.	Scheme of 3 months' duration from the AY 21-22 and to engage DTU USIP Intern/LoW intern/students registered under FEC (OEA) for conducting the classes, examinations and evaluate the candidates under the guidance of the course coordinator.		
30.15	Approval for introduction of new post graduate programme as Master of Arts (Economics) in the University School of Management and Entrepreneurship w.e.f. 2022-23.	The Academic Council considered and approved the introduction of new post graduate programme as Master of Arts (Economics) in USME. The Academic Council advised to increase the intake to 60 and also to constitute a committee to re-examine the eligibility criteria for admission to M.A. (Economics) programme. The Council also authorized Vice Chancellor to approve the recommendations of the committee.	Decision conveyed to Prof. Amit Mookerjee, Head (USME) vide letter no. 1389 dated 12.10.2021.	Committee has been formed to review the matter.
30.16	Approval for revision of MBA- Family Business and Entrepreneurship program Objectives and Structure offered at USME, East Campus from academic year 2022-23 onwards.	The Academic Council considered and approved the revision of MBA- Family Business and Entrepreneurship program Objectives and Structure offered at USME, East Campus from AY 2022-23 onwards with some modifications.	Decision conveyed to Prof. Amit Mookerjee, Head (USME) vide letter no. 1390 dated 12.10.2021.	The new structure and objectives of MBA-FBE have been notified.
30.17	Approval for changes in PEOs and POs of B.A.(H)-Economics program offered at USME, East Campus from academic year 2022-23 onwards.	The Academic Council considered and advised to review the PEO, PO and PSO of B.A.(H)-Economics program by the same committee constituted to examine eligibility for admission to the M.A.-Economics programme. The Council authorized the Vice Chancellor to approve the recommendations of the committee.	Decision conveyed to Prof. Amit Mookerjee, Head (USME) vide letter no. 1391 dated 12.10.2021.	Committee has been formed for reviewing the matter.
30.18	To consider the proposal for Academic Calendar 2021-22 for the MBA-BA, MBA-IEV and MBA (USME) &	The Academic Council considered and approved the Academic Calendar 2021-22 for the MBA-BA and MBA	Decision conveyed to Prof. Amit Mookerjee, Head (USME)	The academic schedule has been implemented and

	MBA-FBE program(s).	(USME) & MBA-FBE programmes in USME.	vide letter no. 1392 dated 12.10.2021.	session started as per the calendar.
30.19	Approval for introduction of new course as Master of Technology in Communication Systems.	The Academic Council considered and referred the matter to the committee in agenda 30.10 to re-examine the introduction of new course and re-submit the proposal to the Academic Council in its next meeting.	Decision conveyed to Prof. N.S. Raghava, HOD (ECE) vide letter no. 1393 dated 12.10.2021.	Committee will be constituted in due course.
30.20	Approval for revision of course EC-302 in B.Tech (ECE).	The Academic Council considered and approved the revision of course EC-302 in B.Tech (ECE).	Decision conveyed to Prof. N.S. Raghava, HOD (ECE) vide letter no. 1394 dated 12.10.2021.	Conveyed to concerned faculty members for implementation.
30.21	Approval for adding specialization in Master of Design (M.Des.) and Bachelor of Design (B.Des.) programmes in Department of Design.	The Academic Council considered and approved for adding specialization in Master of Design (M.Des.) and Bachelor of Design (B.Des.) programmes in Department of Design as proposed.	Decision conveyed to Prof. M.S. Ranganathan, HOD (DoD) vide letter no. 1395 dated 12.10.2021.	Specialization shall be added in M.Des and B.Des programmes from the Academic Session 2022-23 onwards.
30.22	Approval for enhancement of number of Interns in University Internship Program.	The Academic Council consider and recommended the enhancement of number of interns in University Internship Program to the Board of Management for its approval. The Board in its 45 <sup>th</sup> meeting held on 29.09.2021 approved for enhancement of number of Student Interns in University Internship Program upto the limit of 2% of the total student strength of the University. The interns will be paid remuneration at the rate of Rs. 3500 per month from the Students' Welfare Fund w.e.f. 1st October 2021 onwards.	Decision conveyed to Prof. Neeta Pandey, (ECE) vide letter dated 12.10.2021.	Number of interns has been increased from 100 to 142 till date and revised rates of remuneration notified.
30.23	Approval for including new Foundation Elective Courses for UG students.	The Academic Council considered and approved for inclusion of new Foundation Elective Courses for UG students.	Decision conveyed to Dr. T. Vijay Kumar, (Civil Engg.) vide letter no. 1397 dated 12.10.2021.	New Foundation Elective Courses for UG students shall be included from even semester 2021-22 session.



30.24	Approval of electives to be offered under "Minor in Innovation and Entrepreneurship" for B.Tech students in DTU, proposed by Delhi School of Management.	The Academic Council considered and approved the proposal. The Council also advised to resolve any issue in collaboration with DTU-IIF.	Decision conveyed to Prof. Archana Singh, HOD (DSM) vide letter no. 1398 dated 12.10.2021.	Electives will be offered under Minor in Innovation and Entrepreneurship from even semester 2021-22 session.
30.25	Approval for Academic Calendar of MBA Program and MBA (Executive)- ODD Semester, 2021-22 in Delhi School of Management, Delhi Technological University.	The Academic Council may consider and approve the Academic Calendars of MBA and MBA (Executive) Odd Semester, 2021-22 in Delhi School of Management of the University.	Decision conveyed to Prof. Archana Singh, HOD (DSM) vide letter no. 1399 dated 12.10.2021.	Circulated and uploaded on University website.
30.26	Matter for Ratification: i. Restoration of admission of Mr. Vivek Patwal in B.Tech (IT) programme 2019-20 batch.	The Academic Council ratified the action taken regarding restoration of admission of Mr. Vivek Patwal in B.Tech (IT) programme 2019-20 batch.	Decision conveyed to Dean, Academic (UG) vide letter no. 1400 dated 12.10.2021.	Notified vide office letter no. F. No.105(343)DTU / Acad-UG/Re-Reg./2016-17/ 11235-44 dated 06.09.2021.
30.27	Any other item with the permission n of the Chair.	One Supplementary Agenda discussed as 30.28	Noted	No further action required.
S.A 30.28	Approval for BBA and BA (H) Economics Program Academic Calendar - ODD Semester, Academic year 2021-22.	The Academic Council considered and approved the proposed Academic Calendar of BBA and BA (H) Economics Program Academic Calendar - ODD Semester, Academic year 2021-22.	Decision conveyed to Prof. Amit Mookerjee, Head (USME) vide letter no. 1401 dated 12.10.2021.	Implemented.

**Decision : The Academic Council took the action taken report on record.**

**Agenda 31.4 : To consider the proposal of conferment of degrees on the students who have successfully completed the requirements prescribed under the ordinances of the University.**

It was submitted to the Academic Council that the University proposed to confer degrees on the students who have successfully completed the requirements prescribed under the Ordinances of the University. The programme-wise number of eligible students till date is as follows:

**Year : 2021**

S. No.	Program	Total Degrees
1.	Bachelor of Technology	1831
2.	Bachelor of Technology (Evening)	189
3.	Bachelor of Arts (Hons.) Economics	113
4.	Bachelor of Business Administration	100
5.	Master of Technology	244
6.	Master of Technology (Part Time)	11
7.	Master of Business Administration	106
8.	Master of Business Administration (Executive)	41
9.	Master of Business Administration (USME)	22
10.	Master of Business Administration (Business Analytics)	16
11.	Master of Business Administration (Family Business & Entrepreneurship)	11
12.	Master of Business Administration (Innovation Entrepreneurship & Venture Development)	15
13.	Master of Science	91
14.	Doctor of Philosophy	50
	Total	2840

**Decision :** The Academic Council considered and recommended the proposal of conferment of degrees on the students who have successfully completed the requirements to the Board of Management and also authorised the Vice chancellor to include candidates who become eligible for conferment of degree in due course.

**Agenda 31.5 : Approval of Academic Calendar for UG Programs (B. Tech./ BA(Eco)H/ BBA Programs) : Odd semester (Academic Year (2021-22) and Academic Calendar for Even Semester (Academic Year-2021-22) for 2<sup>nd</sup> /3<sup>rd</sup> /4<sup>th</sup> year UG and PG Programs & B. Des 2<sup>nd</sup> semester.**

The Academic Calendars for UG Programs (B. Tech./ BA(Eco)H/ BBA Programs) : Odd semester (Academic Year (2021-22) were submitted to the Academic Council for approval as under: -

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9/3

1.(a)	Academic Calendar for B. Tech. 1 <sup>st</sup> Semester (Academic Year-2021-2022)		
	S.No.	Activity	Date
	1.	Online Orientation cum Induction and Registration	20.12.2021 to 24.12.2021
	2.	Teaching Starts	27.12.2021
	3.	Minor Tests I & II	On any working day <b>without prior information</b> to the Students
	4.	Submission of Proposal of Innovative Work* to the concerned faculty for <b>MTE component</b> for courses having <b>ETE</b>	31.01.2022
	5.	Submission of Proposal of Innovative Practical Work* to the concerned faculty for <b>PRS component</b> for courses having <b>PRE</b>	
	6.	Class Test – I & Practical Test – I (On any working day <b>with prior information</b> to the Students)	Between 24.01.2022 & 04.02.2022
	7.	1 <sup>st</sup> Review of Innovative Work* for <b>MTE</b> components for courses having <b>MTE</b>	Between 28.02.2022 & 04.03.2022
	8.	1 <sup>st</sup> Review of Innovative Practical Work* for <b>PRS</b> components for courses having <b>PRE</b>	
	9.	Class Test – II & Practical Test – II (On any working day <b>with prior information</b> to the Students)	Between 07.03.2022 & 17.03.2022
	10.	Submission & Evaluation of Innovative Work* for <b>MTE</b> component for courses having <b>MTE</b>	Between 30.03.2022 & 10.04.2022
	11.	Submission & Evaluation of Innovative Practical Work* for <b>PRS</b> component for courses having <b>PRE</b>	
	12.	Class Test – III & Practical Test – III (On any working day <b>with prior information</b> to the Students)	Between 11.04.2022 & 22.04.2022
	13.	Teaching Ends	22.04.2022
	14.	Online Submission of Marks of All Components of Evaluation	25.04.2022 ( Action: Faculty)
	15.	Online Submission of Grades to Examination Branch by Course Coordinators	27.04.2022
	16.	Declaration of Results	29.04.2022
	* Innovative Work in the form of Small Project, Start up Idea, Collaborative Projects, Automation, Simulation, Case Study, Solutions to Real Time Social, Economic and Technical problems etc. (Group of maximum 2 students).		

1.(b)	<b>BBA and BA (H) Economics Program Academic Calendar – 1<sup>st</sup> year Odd Semester, Academic year 2021-22</b>		
	<b>S.No.</b>	<b>Assessment Activity</b>	<b>Date</b>
	1.	Orientation program including interaction with faculty, students clubs and society, Election of CRs, Eco tech activities etc.	22 <sup>th</sup> to 26 <sup>th</sup> November 2021
	2.	Commencement of Teaching	29 <sup>th</sup> November 2021
	3.	Minor test I & II	On any working day
	4.	Submission of Proposal of Innovative Project to the concerned faculty for MTE component for courses having ETE	Between 6 <sup>th</sup> December 2021 & 10 <sup>th</sup> December 2021
	5.	Submission of Proposal of Innovative Practical Work to the concerned faculty for PRS component for courses having PRE	
	6.	Class Test - I & Practical Test – I With prior information to students	Between 13 <sup>th</sup> to 17 <sup>th</sup> December 2021 Online Submission of Marks: 24 <sup>th</sup> December 2021
	7.	Review of Innovative Work for MTE components for courses having MTE	28 <sup>th</sup> December 2021
	8.	Review of Innovative Practical Work for PRS components for courses having PRE	
	9.	Class Test – II & Practical Test – II With prior information to students	Between 3 <sup>rd</sup> to 7 <sup>th</sup> January 2022 Online Submission of Marks : 14 <sup>th</sup> January 2022
	10.	Submission & Evaluation of Innovative Work for MTE component for courses having MTE	21 <sup>st</sup> January 2022
	11.	Submission & Evaluation of Innovative Practical Work for PRS component for courses having PRE	
	12.	Class Test - III & Practical Test - III With prior information to students	Between 14 <sup>th</sup> to 20 <sup>th</sup> February 2022 Online Submission of marks: 24 <sup>th</sup> February 2022
	13.	End of teaching for the Session	28 <sup>th</sup> February 2022
	14.	Online Submission of Marks of All Components of Evaluation	2 <sup>nd</sup> March 2022
	15.	Online Submission of Grades to the Examination Branch by Course Coordinators.	4 <sup>th</sup> March 2022
	16.	Declaration of Result	21 <sup>st</sup> March 2022



**Academic Calendar for Even Semester (Academic Year-2021-22) for  
2<sup>nd</sup>/3<sup>rd</sup> /4<sup>th</sup> year UG and PG Programs & B. Des 2<sup>nd</sup> semester:**

1.(c)	<b>Academic Calendar for Even Semester (Academic Year-2021-22) For 2<sup>nd</sup>/3<sup>rd</sup>/4<sup>th</sup> year UG and PG Programs &amp; B. Des 2<sup>nd</sup> semester</b>		
	<b>S.No.</b>	<b>Activity</b>	<b>Date</b>
	1.	Filling of Online Registration	25.12.2021 to 31.12.2021
	2.	Teaching Starts	04.01.2022
	3.	Minor Tests I & II	On any working day <b>without prior information</b> to the Students
	4.	Submission of Proposal of Innovative Work* to the concerned faculty for <b>MTE component</b> for courses having <b>ETE</b>	01.02.2022
	5.	Submission of Proposal of Innovative Practical Work* to the concerned faculty for <b>PRS component</b> for courses having <b>PRE</b>	
	6.	Class Test – I & Practical Test – I (On any working day <b>with prior information</b> to the Students)	Between 08.02.2022 & 19.02.2022
	7.	1 <sup>st</sup> Review of Innovative Work* for <b>MTE</b> components for courses having <b>MTE</b>	Between 02.03.2022 & 08.03.2022
	8.	1 <sup>st</sup> Review of Innovative Practical Work* for <b>PRS</b> components for courses having <b>PRE</b>	
	9.	Class Test – II & Practical Test – II (On any working day <b>with prior information</b> to the Students)	Between 14.03.2022 & 01.04.2022
	10.	Submission & Evaluation of Innovative Work* for <b>MTE component</b> for courses having <b>MTE</b>	Between 11.04.2022 & 22.04.2022
	11.	Submission & Evaluation of Innovative Practical Work* for <b>PRS component</b> for courses having <b>PRE</b>	
	12.	Class Test – III & Practical Test – III (On any working day <b>with prior information</b> to the Students)	Between 22.04.2022 & 06.05.2022
	13.	Teaching Ends	06.05.2022
	14.	Online Submission of Marks of All Components of Evaluation	10.05.2022
	15.	Online Submission of Grades to Examination Branch by Course Coordinators	11.05.2022
	16.	Declaration of Results	20.05.2022
	* Innovative Work in the form of Small Project, Startup Idea, Collaborative Projects, Automation, Simulation, Case Study, Solutions to Real Time Social, Economic and Technical problems etc. (Group of maximum 2 students).		

**Decision :** The Academic Council considered and approved the Academic Calendars for UG Programs (B. Tech./ BA(Eco)H/ BBA Programs) : Odd semester (Academic Year (2021-22) and Academic Calendar for Even Semester (Academic Year-2021-22) for 2<sup>nd</sup> /3<sup>rd</sup> /4<sup>th</sup> year UG and PG Programs & B. Des 2<sup>nd</sup> semester.

**Agenda 31.6 : To consider the formal registration to following Ph.D. Students upon successful completion of course work and comprehensive examinations and approval of research Plan by respective DRCs.**

It was submitted to the Academic Council that the Dean, Academic (PG) has forwarded a list of **31 candidates** to consider their registration for Ph.D. candidature upon successful completion of course work and comprehensive examinations along with approval of Research Plan by respective DRCs.

**Department of Applied Chemistry**

Sr. No.	Name of the Candidate	Roll No	Name of the Department	Date of the SRC
1.	Meenakshi Tanwar	2K19/PHDAC/503	Applied Chemistry	07.09.2021
2.	Jigyasa Pathak	2K19/PHDAC/05	Applied Chemistry	20.09.2021

**Department of Biotechnology**

Sr. No.	Name of the Candidate	Roll No	Name of the Department	Date of the SRC
1.	Manish Kumar Mishra	2K18/PHDBT/508	Biotechnology	12.08.2021
2.	Neha Kumari	2K19/PHDBT/06	Biotechnology	21.10.2021
3.	Priya Rai	2K19/PHDBT/02	Biotechnology	28.10.2021
4.	Harshita Singh	2K19/PHDBT/03	Biotechnology	29.10.2021
5.	Sidharth Sharma	2K19/PHDBT/501	Biotechnology	29.10.2021
6.	Ms. Shivangi*	2K18/PhD/BT/507	Biotechnology	27.10.2021
7.	Ms. Ritu*	2K19/PhD/BT/13	Biotechnology	09.11.2021

**Department of Computer Science and Engineering**

Sr. No.	Name of the Candidate	Roll No	Name of the Department	Date of the SRC
1.	Vinay Dubey	2K18/PHDCO/04	CSE	13.10.2021
2.	Aastha Maheshwari	2K18/PHDCO/502	CSE	12.07.2021
3.	Puneet Kansal	2K19/PHDCO/503	CSE	12.08.2021
4.	Pooja Mithoo	2K19/PHDCO/501	CSE	12.08.2021
5.	Irfan Alam	2K19/PHDCO/04	CSE	12.08.2021
6.	Diksha Ruhela	2K19/PHDCO/11	CSE	12.07.2021
7.	Madhuri Yadav	2K18/PHDCO/11	CSE	13.10.2021
8.	Prerna Sharma	2K19/PHDCO/14	CSE	30.07.2021

**Department of Applied Physics**

Sr. No.	Name of the Candidate	Roll No	Name of the Department	Date of the SRC
1.	Mansha Kansal*	2K19/PhD/AP/508	Applied Physics	30.11.2021

**Department of Electronics & Communication Engineering**

Sr. No.	Name of the Candidate	Roll No	Name of the Department	Date of the SRC
1.	Sumit Kumar Khandelwal	2K19/PHDEC/13	ECE	08.10.2021
2.	Neha Garg	2K19/PHDEC/12	ECE	08.10.2021
3.	Mr. Om Krishna Gupta*	2K18/PHDEC/513	ECE	27.10.2021
4.	Ms. Tanim Ghosh*	2K19/PhD/EC/506	ECE	25.10.2021

**Department of Electrical Engineering**

Sr. No.	Name of the Candidate	Roll No	Name of the Department	Date of the SRC
1.	Pooja Singh	2K18/PHDEE/505	Electrical Engg.	17.06.2021
2.	Mr. Ajit Nandawadkar*	2K20/PhD/EE/10	Electrical Engg.	25.10.2021

**Department of Environmental Engineering**

Sr. No.	Name of the Candidate	Roll No	Name of the Department	Date of the SRC
1.	Sumit Dagar	2K19/PHDEN/04	Environmental Engg.	08.09.2021
2.	Aparupa Shenoy	2K19/PHDEN/03	Environmental Engg.	15.09.2021

**Department of Electronics & Communication Engineering**

Sr. No.	Name of the Candidate	Roll No	Name of the Department	Date of the SRC
1.	Faizan Khalid	2K19/PHDME/19	Mechanical Eng.	18.08.2021
2.	Vaibhav Shivhare	2K19/PHDME/21	Mechanical Eng.	29.09.2021
3.	Vineet Kumar Vashishtha	2K18/PHDME/524	Mechanical Eng.	21.09.2021
4.	Maneesh Kumar Shivhare	2K18/PHDME/37	Mechanical Eng.	21.09.2021

**Department of Applied Mathematics**

Sr. No.	Name of the Candidate	Roll No	Name of the Department	Date of the SRC
1.	Ms. Surya Giri*	2K19/PHD/AM/503	Applied Mathematics	29.10.2021

**Decision :** The Academic Council considered and approved formal registration of 31 candidates and confer their candidacy for Ph.D. program.

**Agenda 31.7 : Approval for Admission Brochure for the Academic session: January 2022 for Ph.D programme.**

It was submitted to the Academic Council that the Admission Brochure for Ph.D. Programme for the academic session commencing in January 2022 was placed before the University Admission Committee in online meeting. The Committee approved the Admission Brochure for the Academic session: January 2022 for Ph.D programme.

**Decision : The Academic Council considered and ratified Admission Brochure for the Academic session: January 2022 for Ph.D programme.**

**Agenda 31.8 : Approval for admissions made in M.Tech (Data Science) and M.Tech (Power Systems) programmes for the session 2021-22.**

It was submitted to the Academic Council that 12 admissions were made in Master of Technology (Data Science) programme in the department of Software Engineering and 01 more student was admitted in M.Tech (Power Systems) programme in the department of Electrical Engineering for the session 2021-22. Detail of the admitted students are as under:

**Master of Technology (Data Science) 2021-22**

S. No.	Registration	Roll No	Full Name	Gender	Category
1	MTFT(P2)000217	2K21/DSC/01	Aakash Verma	Male	OBC
2	MTFT(P2)000292	2K21/DSC/02	Amulya Kaustubh	Male	Gen
3	MTFT(P2)000289	2K21/DSC/03	Ashish Verma	Male	OBC
4	MTFT(P2)000225	2K21/DSC/04	Ayush Agarwal	Male	EWS
5	MTFT(P2)000279	2K21/DSC/05	Devanshu Walecha	Male	Gen
6	MTFT(P2)000177	2K21/DSC/06	Gaurav Kumar Singh	Male	Gen
7	MTFT(P2)000148	2K21/DSC/07	Manan Puliyani	Male	Gen
8	MTFT(P2)000125	2K21/DSC/08	Praveen Singh Rawal	Male	Gen
9	MTFT(P2)000155	2K21/DSC/09	Rohit Ramchandani	Male	Gen
10	MTFT(P2)000103	2K21/DSC/10	Swapnil Karn	Male	Gen
11	MTFT(P2)000090	2K21/DSC/11	Umar Tahir Kidwai	Male	Gen
12	MTFT(P2)000307	2K21/DSC/12	Vedansh Gupta	Male	Gen

**Master of Technology (Power System) 2021-22**

S. No.	Registration	Roll No	Full Name	Gender	Category
1	MT(F)21002005	2K21/PSY/08	MD Khalid Akhlaque	Male	Gen

**Decision : The Academic Council considered and approved admissions in M.Tech programme for the session 2021-22.**

**Agenda 31.9 : To consider and approve admissions made in Master of Business Administration programme for the session 2021-22 in DSM and USME.**

It was submitted to the Academic Council that 146 admissions were made in Master of Business Administration programme in DSM and 86 admissions in MBA programme, 16 admissions in MBA-FBE and 14 admissions in MBA-IEV programmes in USME for the session 2021-22.

Head, USME informed that one more admission has been made in MBA-IEV programme for the session 2021-22 resulting the total admissions to 15 instead of 14.

**Decision : The Academic Council approved admissions made in MBA programme in DSM and admissions in MBA, MBA-FBE and MBA-IEV programmes in USME for the session 2021-22.**

**Agenda 31.10 : Approval for Academic Calendar 2021-22 for the Master of Technology in Data Science in Department of Software Engineering.**

The Academic Calendar 2021-22 for the Master of Technology in Data Science in the Department of Software Engineering was submitted to the Academic Council as under: -

S. No.	Assessment Activity	Date	
1.	Teaching Starts	04-10-2021	
2.	Minor Class test I & II	On any working day	
3.	Submission of Proposal of Innovative Work to the concerned faculty for <b>*MTE component</b> for courses having <b>ETE</b>	19-11-2021	
4.	Submission of Proposal of Innovative Practical Work* to the concerned faculty for <b>**PRE component</b> for courses having <b>PRE</b>		
5.	Class Test-I & Practical Test-I (On any working day <b>with prior information</b> to the students)	Between 16-11-2021 & 24-11-2021	Online Submission of marks: 25-11-2021
6.	1 <sup>st</sup> Review of Innovative Work for <b>*MTE components</b> for courses having <b>MTE</b>	30-11-2021	
7.	1 <sup>st</sup> Review of Innovative Practical Work <b>**PRE components</b> for courses having <b>PRE</b>		
8.	Class Test-II & Practical Test – II (On any working day <b>with prior information</b> to the students)	Between 02-12-2021 to 07-12-2021	Online Submission of Marks: 12-12-2021
9.	Submission & Evaluation of Innovative Work for <b>*MTE component</b> for courses having <b>MTE</b>	Between 24-12-2021 to 28-12-2021	Online Submission of Marks: 30-12-2021
10.	Submission & Evaluation of Innovative Practical work for <b>**PRE component</b> for courses having <b>PRE</b>		
11.	Class Test-III & Practical Test-III (On any working day <b>with prior information</b> to the students)	Between 30-12-2021 to 06-01-2022	Online Submission of Marks: 09-01-2022
12.	Teaching End	06-01-2022	
13.	Online Submission of Marks of All Components of Evaluation	09-01-2022	
14.	Online Submission of Grade to Examination Branch by Course Coordinators	12-01-2022	

**Decision : The Academic Council considered and ratified the Academic Calendar 2021-22 for the Master of Technology in Data Science in Department of Software Engineering.**

**Agenda 31.11 : Cancellation/Withdrawal of admission during October to November 2021 from Ph.D. programme.  
(To be presented by Dean, Academic - PG)**

It was submitted to the Academic Council that one Ph.D student has withdrawn his admission during October to November 2021 from Ph.D programme. The detail of student whose registration has been cancelled is as under:

S. No.	Roll No.	Full Name	Department
1.	2K19/PHDCE/14	Prabhujeet Kaur	Civil Engineering

**Decision : The Academic Council considered and approved the cancellation of admission of above mentioned one candidate.**



**Agenda 31.12 : Approval for Cancellation/Withdrawal of admission from M.Tech. programmes for the academic year 2021-22.**

It was submitted to the Academic Council that 28 students have withdrawn their admissions from various M.Tech programmes for the academic year 2021-22. The details of the students who have withdrawn admissions and their registrations have been cancelled are as under:

S. No.	Application No.	Roll No	Name of Student	Branch	Date of Withdrawal
1.	MT(F)21000351	2K21/STE/05	Ankush Shivhare	CIVIL	26/07/2021
2.	MT(F)21001989	2K21/C&I/08	Tamal Howladar	Electrical	02/08/2021
3.	MT(F)21000753	2K21/CSE/10	Himanshu Gautam	CSE	01/08/2021
4.	MT(F)21001136	2K21/STE/01	Aatish Anand	CIVIL	05/08/2021
5.	MT(F)21000256	2K21/ENE/12	Tejasvini Ahuja	ENE	13/08/2021
6.	MT(F)21001219	2K21/AFI/10	Vineet Jain	CSE	13/08/2021
7.	MT(F)21000294	2K21/CSE/17	Prashanth Sakthivel	IT	12/08/2021
8.	MT(F)21000234	2K21/SWE/06	Anushka Chadha	SWE	11/08/2021
9.	MT(F)21000458	2K21/SWE/03	Akshay Sunilkumar Nair	SWE	11/08/2021
10.	MT(F)21000720	2K21/MOC/04	Sneha Jha	ECE	11/08/2021
11.	MT(F)21001964	2K21/PSY/02	Gaurav Kumar	Electrical	11/08/2021
12.	MT(F)21000970	2K21/MOC/01	Aakash Singh	ECE	09/08/2021
13.	MT(F)21000077	2K21/SPD/15	Sushant Siwach	ECE	14/08/2021
14.	MT(F)21001727	2K21/AFI/03	Kushagra Chaturvedi	CSE	17/08/2021
15.	MT(F)21000747	2K21/PES/18	Udit Gupta	Electrical	19/08/2021
16.	MT(F)21000500	2K21/SWE/10	Harshal Shridhar Kallurkar	SWE	22/08/2021
17.	MT(F)21001021	2K21/AFI/13	Aayushi Aggarwal	CSE	20/08/2021
18.	MT(F)21000386	2K21/PSY/04	Manish Shekhar	Electrical	18/08/2021
19.	MT(F)21000438	2K21/SPD/18	Vineeth Mandapalli	ECE	18/08/2021
20.	MT(F)21001714	2K21/CSE/22	Sourabh Makhija	CSE	18/08/2021
21.	MT(F)21000099	2K21/ISY/02	Abhishek	SWE	17/08/2021
22.	MT(F)21000993	2K21/ISY/07	Dimpi Singh	IT	17/08/2021
23.	MT(F)21000127	2K21/SPD/07	Mishti Gautam	ECE	24/08/2021
24.	MT(F)21001113	2K21/HFE/01	Nishant Rana	Civil	01/08/2021
25.	MT(F)21001895	2K21/GTE/24	Kshitij Chaudhari	Civil	14/08/2021
26.	MT(F)21001092	2K21/MOC/02	Aditya Yadav	ECE	10/08/2021
27.	MT(F)21001770	2K21/CSE/21	Simarpreet Singh Chawla	CSE	15/08/2021
28.	MT(F)21000220	2K21/C&I/01	Anand Kumar	Electrical	23/08/2021

**Decision :** The Academic Council considered and approved the Cancellation/ Withdrawal of admission from M.Tech. programmes for the academic year 2021-22. The Chairperson stressed upon the need to review the withdrawal policy of students by the same committee as constituted for vacant seats in the various PG programmes vide item no. 30.10 in the last meeting.

**Agenda 31.13 : Approval for Cancellation/Withdrawal of admission from M. Des. programmes for the academic year 2021-22.**

It was submitted to the Academic Council that 04 students have withdrawn their admissions from the M. Des. programme for the academic year 2021-22. The details of the students who have withdrawn admissions and their registrations have been cancelled are as under:

S. No.	Application No.	Roll No	Name of Student	Date of Withdrawal
1.	Mdes21000105	2K21/MDVC/03	Arunesh Ashish Varade	02.08.2021
2.	Mdes21000149	2K21/MDVC/06	Karan Kumar	30.07.2021
3.	Mdes21000151	2K21/MDID/09	Lipi Choudhary	30.08.2021
4.	Mdes21000174	2K21/MDID/01	Abhishek Gupta	30.08.2021

**Decision : The Academic Council considered and approved the Cancellation/ Withdrawal of admission from M. Des. programme for the academic year 2021-22.**

**Agenda 31.14 : Approval for Cancellation/Withdrawal of admission from M. Sc. programmes for the academic year 2021-22.**

It was submitted to the Academic Council that 22 students have withdrawn their admissions from the M. Sc. programmes for the academic year 2021-22. The details of the students who have withdrawn admissions and their registrations have been cancelled are as under:

S. No	Application No.	Roll No	Name of Student	Date of Withdrawal
1.	MSC21001420	2K21/MSCBIO/14	Eshika Bindal	17/08/2021
2.	MSC21001866	2K21/MSCMAT/06	Anshu Yadav	12/08/2021
3.	MSC21000485	2K21/MSCPHY/58	Arunpandian K	27/08/2021
4.	MSC21000458	2K21/MSCPHY/34	Nikhil Bhardwaj	15/09/2021
5.	MSC21000912	2K21/MSCCHE/37	Rashika	16/09/2021
6.	MSC21000923	2K21/MSCCHE/46	Tanya Pawar	31.7.2021
7.	MSC21000860	2K21/MSCPHY/19	Harshit Sharma	30.7.2021
8.	MSC21001650	2K21/MSCBIO/07	Aparna Rai	30.7.2021
9.	MSC21001966	2K21/MSCBIO/28	Muskan Gupta	31.7.2021
10.	MSC21000732	2K21/MSCPHY/25	Kanishka	10.08.2021
11.	MSC21000172	2K21/MSCPHY/18	Harshil Shah	10.08.2021
12.	MSC21000746	2K21/MSCBIO/58	Varsha Meena	17.09.2021
13.	MSC21000012	2K21/MSCPHY/40	Uttam	23.09.2021
14.	MSC21000110	2K21/MSCBIO/51	Sukirti Khantwal	04/10/2021
15.	MSC21001631	2K21/MSCBIO/08	Apoorva Agarwal	04/10/2021
16.	MSC21001487	2K21/MSCBIO/60	Yogesh Kumar Meena	04/10/2021
17.	MSC21001196	2K21/MSCBIO/46	Shabnam	07/10/2021
18.	MSC21000461	2K21/MSCBIO/21	Lavanya Gupta	11/10/2021
19.	MSC21000122	2K21/MSCMAT/49	Shahin	11/10/2021
20.	MSC21000041	2K21/MSCMAT/01	Anjali	08/10/2021
21.	MSC21001769	2K21/MSCMAT/54	Virendra Singh	12.10.2021
22.	MSC21000703	2K21/MSCCHE/48	Udita Choudhury	06.10.2021

**Decision : The Academic Council considered and approved the Cancellation/ Withdrawal of admission from M. Sc. programmes for the academic year 2021-22.**

**Agenda 31.15 : Approval for Cancellation/ Withdrawal of admission from Executive MBA programme for the academic year 2021-22.**

It was submitted to the Academic Council that 06 students have withdrawn their admissions from the MBA programme for the academic year 2021-22. The details of the students who have withdrawn admissions and their registrations have been cancelled are as under:

S. No.	Application No.	Roll No	Name of Student	Date of Withdrawal
1.	EMBA21000171	2K21/EMBA/31	Parul Chandra	22.09.2021
2.	EMBA21000164	2K21/EMBA/22	Kanchan Bisht	23.09.2021
3.	EMBA21000191	2K21/EMBA/27	Manish Sharma	20.09.2021
4.	EMBA21000012	2K21/EMBA/36	Puneet Jain	20.09.2021
5.	EMBA21000011	2K21/EMBA/29	Neha Gupta	19.09.2021
6.	EMBA21000147	2K21/EMBA/52	Vikas Kushwaha	24/09/2021

**Decision :** The Academic Council considered and approved the Cancellation/ Withdrawal of admission from Executive MBA programme for the academic year 2021-22.

**Agenda 31.16 : Approval for Restructuring and enriching the basket of elective courses under different Minors being offered by Department of Applied Physics.**

It was submitted to the Academic Council that the Department of applied Physics offers three Minors to the UG students. The department proposes to-

- (i) Enrich the basket of electives of different Minors by including few additional elective courses.

**(Refer Table 1: EP351, EP316; Table 2: MSPH216, Table 3: EP415)**

- (ii) Restructure the courses and their codes of newly proposed elective courses so as to evenly distribute the spread of the courses in the range 5th - 8th semester.

**(Refer Table 2: EP431 to EP427, Table 3: EP427 to EP313, EP433 to EP315, EP429 to EP318, EP426 to EP320, EP428 to EP322, EP431 to EP427)**

<b>Table 1</b>							
<i>I. Minor in Engineering Physics</i>							
<b>Existing (As per the reference given above)</b>				<b>Approval solicited Restructured/Enrichment</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Sem.</b>	<b>Type</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Sem.</b>	<b>Type</b>
-	-	-	-	<b>EP351</b>	Physics of Engineering Materials	V	DEC
-	-	-	-	<b>EP316</b>	Cosmology and Astrophysics	VI	DEC
<b>Remark: Two electives are to be included in the basket of elective courses.</b>							

Table 2							
II. Minor in Photonics							
EP431	Advanced Materials for Photonic Devices	VII	DEC	EP427	Advanced Materials for Photonic Devices	VII	DEC
-	-	-	-	MSPH216	Advanced Functional Materials*	VIII	DEC
*To be included in minor elective basket							

Table 3							
III. Minor in Material Science and Engineering							
Existing (As per the reference given above)				Approval solicited Restructured/Enrichment			
EP427	Thermodynamics of Materials	VII	DEC	EP313	Thermodynamics of Materials	V	DEC
EP433	Advanced characterization techniques in material Science	VII	DEC	EP315	Advanced characterization techniques in material Science	V	DEC
EP429	Science and Technology of Thin Films	VII	DEC	EP318	Science and Technology of Thin Films	VI	DEC
EP426	Computational Material Science	VIII	DEC	EP320	Computational Material Science	VI	DEC
EP428	Mechanical and Electrical behaviour of Thin Films	VIII	DEC	EP322	Mechanical and Electrical behaviour of Thin Films	VI	DEC
EP431	Advanced Materials for Photonic Devices	VII	DEC	EP427	Advanced Materials for Photonic Devices	VII	DEC
-	-	-	-	EP415	Nano Science and Technology	VII	DEC

**Decision :** The Academic Council considered and approved for Restructuring and enriching the basket of elective courses under different Minors being offered by Department of Applied Physics.

**Agenda 31.17 : Approval for introducing new elective courses in the department of Electronics and Communication Engineering.**

It was submitted to the Academic Council that in view of emerging technologies the department was interested to introduce two additional elective courses for the students of higher semesters, the Board of Studies of ECE department has approved the following: –

- **Metamaterials and Nanophotonic Devices (B. Tech V Semester)**
- **Solar Photovoltaics (B. Tech VI semester)**
- **Machine Learning (M. Tech-SPDD I Semester)**

**Syllabus: Metamaterials and Nanophotonic Devices (B. Tech V Semester)**

1. **Subject Code:** EC XXX      **Course Title:** Metamaterials and Nanophotonic Devices
2. **Contact Hours** : L: 3 T: 0 P: 0
3. **Examination Duration** (ETE)(Hrs.) : Theory: 3 Practical: 0
4. **Relative Weightage** : CWS:25 PRS:0 MTE:25 ETE:50 PRE:0
5. **Credits** : 4
6. **Semester** : B. Tech ( Semester V)
7. **Subject Area** : DEC
8. **Pre-requisite** : Electromagnetic Theory
9. **Objective and Importance of the Course:**

This course will introduce the students to nanophotonic platforms like photonic crystals, 2D materials, and metamaterials. These platforms can be engineered on a sub-wavelength scale to tailor their electromagnetic and optical response and hence display unique optical, thermal, acoustic and electrical properties. These nanophotonic and metamaterial devices can be employed for emerging applications in health, defence, energy sector, etc. The course will specifically focus on metamaterials which have revolutionized telecommunications, radio technology, and the power industry.

### Course Outcomes:

The students will be able to:

1. Explain the fundamentals of light-matter interactions and the electromagnetic response of media at different frequencies
2. Identify the advantages and limitations of tailoring the optical and electromagnetic properties of nanophotonic materials and devices
3. Apply the knowledge of fundamentals of nanophotonics to design sensors and other nanophotonic devices
4. Illustrate the fundamentals of metamaterials and metasurfaces and their applications

### 10. Details of the Course:

S. No	Content	Contact Hours
1	Fundamentals of Nanophotonics, Review of Maxwell's equations, Light-Matter Interaction, Diffraction limit, Dispersion, EM properties of nanostructures	6
2	1-D, 2-D and 3-D Photonic Crystals, Omni directional Reflector, Photonic Crystal Waveguides and other applications	8
3	Surface Plasmon Polaritons, Localized Surface Plasmon Resonance, Plasmonic Waveguides, Plasmonic Sensors, Plasmonics for energy conversion and data storage applications	12
4	Metamaterials, Artificial magnetism and negative refractive index, Superlens and Hyperlens, Transformation optics and cloaking, Applications of metamaterials	10
5	Materials, Fabrication of Nanophotonic Devices: Nanolithography techniques, Wet Etching and Reactive Ion Etching, Lift-off, Sputter deposition, E-beam evaporation etc.	6
TOTAL		42

### 11. Reference Books:

1. 'Principles of Nano-Optics' by Lukas Novotny and Bert Hecht, Cambridge, 2006
2. 'Integrated Nanophotonic Devices' by Zeev Zalevsky and Ibrahim Abdulhalim, Elsevier, 2014
3. Electromagnetic metamaterials: transmission line theory and microwave applications by C. Caloz and T. Itoh, John Wiley & Sons, 2005.



## Syllabus: Solar Photovoltaics (B. Tech V Semester)

1. Subject Code: EC XXX
2. Contact Hours : L: 3 T: 0 P: 0
3. Examination Duration (ETE)(Hrs.) : Theory: 3 Practical: 0
4. Relative Weightage : CWS:25 PRS:0 MTE:25 ETE:50 PRE:0
5. Credits : 4
6. Semester : B. Tech (VI)
7. Subject Area : DEC
8. Pre-requisite : Nil
9. Objective & Importance of the Course:

In order to reduce the greenhouse emissions, there is a need of shift from the use of fossil fuels to renewable energy resources. As solar energy is one the most abundant sources of renewable energy, this course focuses on the usage of solar photovoltaic systems for harnessing solar energy. This course will address the fundamentals of photovoltaics, photovoltaic technologies, different generations of solar cells, design of solar cells, calculation of photovoltaic efficiency and applications of photovoltaics.

### Course Outcomes:

The student will be able to:

1. Describe the fundamentals of the sun-earth interaction and the need of solar photovoltaics
2. Illustrate the working principles of a solar cell and solar PV modules
3. Design solar cells and calculate the photovoltaic efficiency of a solar cell
4. Compare and contrast the various solar cell technologies on the basis of their efficiency, ease of fabrication and other important parameters

S. No	Content	Contact Hours
1	Introduction to Photovoltaics, Need for Solar Energy, Challenges in the use of Solar Energy, Solar Radiation, Fundamentals of the Sun-Earth Interaction	6
2	Semiconductors as solar cell materials, Band diagrams, Charge carriers and their motion in semiconductors, Basics of P-N Junction Diode, Homojunctions and heterojunctions. Basics of absorption and recombination process, Photovoltaic efficiency	8
3	Design of solar cells, Fundamental characteristics of the solar cell, Solar cell device parameters, PV modules and arrays, effect of shading, Influence of temperature	10
4	Solar Cell Technologies: Si based solar cells, Thin film solar cell technologies, Amorphous Silicon, GaAs, CdTe, Emerging solar cell technologies, , III-V and chalcogenide-based solar cells, Organic and Inorganic solar cells	12
5	PV panels with nanostructures, Nanomaterials for photovoltaics, Energy yield and economy of a PV Installation, Emerging Solar PV Applications	6
<b>TOTAL</b>		<b>42</b>

## 11.Reference Books

1. Luque, A., & Hegedus, S. (Eds.). (2011). Handbook of photovoltaic science and engineering. John Wiley & Sons.
2. Solar Photovoltaics: Fundamentals, Technologies And Applications by Chetan Solanki
3. Mertens, K. (2018). Photovoltaics: fundamentals, technology, and practice. John Wiley & Sons.
4. Green, M. A. (2006). Third generation photovoltaics.

## Syllabus : Machine Learning M.Tech (SPDD) I Semester

1. **Subject Code:** ECXXX
2. **Contact Hours :** L: 3 T: 0 P: 0
3. **Examination Duration (ETE )(Hrs.) :** Theory 3 Hrs Practical 0
4. **Relative Weightage:** CWS 25 PRS 0 MTE 25 ETE 50 PRE 0
5. **Credits:** 4
6. **Semester/ Programme:** M.Tech. I semester
7. **Subject Area:** DEC
8. **Pre-requisite:** Calculus and Linear Algebra
9. **Objectives:** Student should be able to understand different supervised, unsupervised and Reinforcement Learning algorithms and apply the concepts to develop real world intelligent solutions.
10. **Content of the course:**

S.No.	Content	Contact Hours
1	<b>Introduction to Machine Learning:</b> Overview of classification, regression, clustering, concept of information theory and decision trees.	4 Hrs
2	<b>Supervised Learning:</b> Linear Regression, Logistic regression, Nearest Neighbours, Linear classifiers and kernels, Support Vector Machines, Neural Networks, Ensemble methods such as Random Forest and Ada Boost	10 Hrs
3	<b>Unsupervised Learning:</b> K-Means Clustering, Expectation Maximisation, Dimensionality Reduction, PCA, LDA, ICA, Manifold learning	10 Hrs
4.	<b>Reinforcement Learning:</b> Value iteration, Policy Iteration, Q-Learning	8 Hrs
5	<b>Machine learning strategy:</b> regularization, model selection and cross validation, empirical risk minimization, ablative analysis, bias vs variance, Performance Evaluation Parameters.	10 Hrs
	<b>Total</b>	42 Hrs

**Course Outcomes:**

**CO1:** Develop an appreciation for what is involved in Learning models from data

**CO2:** Understand a wide variety of learning algorithms

**CO3:** Understand how to evaluate models generated from data

**CO4:** Apply the algorithms to a real problem, optimize the models learned and report on the expected accuracy that can be achieved by applying the models

**Reference Books List:**

1. Mitchell T, Machine Learning, McGraw-Hill, 1997
2. S. Rogers and M. Girolami, A first course in Machine Learning, CRC Press, 2011
3. C. Bishop, Pattern Recognition and Machine Learning, 2007.

**Decision :** The Academic Council considered and deferred the agenda. It was advised to place the matter again in the next meeting after consulting the concerned departments who are offering similar courses.



**Agenda 31.18 : Matter for Ratification :**

- (i) **Enrolment of students of 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year B.Tech students in a Compulsory Audit Course (non-credit course) on Community Engagement (Mentoring School Students).**

It was submitted to the Academic Council that the Competent Authority has approved the proposal wherein students of 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year are to be enrolled in their respective UG programmes in a Compulsory Audit Course (non-credit course) on Community Engagement (Mentoring School Students) w.e.f. year 2021-22 as recommended by the committee constituted for this purpose. The detailed course content and method of class conduction are as under:

<b>Subject Code</b>	
<b>Subject Name</b>	Compulsory Audit Course
<b>Contact Hours</b>	1 hour per week
<b>Examination Duration</b>	Outcome based continuous evaluation
<b>Credit</b>	Non-credit
<b>Semester</b>	From 3 <sup>rd</sup> to 8 <sup>th</sup> semester (continuous)
<b>Subject Area</b>	This course will enable students (Mentors) to mentee the class 9 <sup>th</sup> to 12 <sup>th</sup> students of schools of Delhi in carrier counselling, problem-solving, innovative work and critical thinking.
<b>Pre-requisite</b>	Nil
<b>Objective</b>	i. To guide and support school students in academics. ii. To apply classroom knowledge of courses to field realities and thereby improve quality of learning. iii. To counsel students for selection of career exploration. iv. To learn about holistic development.

**Syllabus:**

1. Every student (Mentor) will be allotted up to 4 to 6 mentees (Students from Delhi Schools).
2. The mentor is expected continuously contributes for the counselling of the mentee in selecting their Career Exploration, help him/her in achieving the goals, academic guidance and support, help in problem solving, inculcate critical thinking and help in developing skill, life-long learning projects, innovation etc.

**Decision :**      **The Academic Council ratified the above action taken of the University.**

**Agenda 31.19 : Any other item with the permission of the Chair.**

It was submitted to the Academic Council that presently external examiners are paid remuneration at the rate of Rs.50 per student in the Minor Project Evaluation. In some programmes fewer number of students appear in the Minor Project/Practical Examinations. As a result, external examiners remuneration is very less though he/she has to spend adequate time for perfect evaluation. To compensate the external examiner, it was proposed that a minimum amount of Rs. 3000 be fixed as remuneration for minor project evaluation/practical examinations. The matter was placed before the Academic Council for its consideration.

**Decision : The Academic Council approved the proposed remuneration amount of Rs. 3000 for conducting Minor Project Evaluation/ Practical Examinations.**

**Supplementary : Approval for extension of time span to old students to complete their B.Tech degree.**  
**Agenda 31.20**

It was submitted to the Academic Council that as per the Regulations of DTU - The duration of the B. Tech. Program is 4 years i.e. 8 semesters. The enrolment of a student will stand cancelled at the end of 7 years from the date of initial.

Few students of old scheme (2009 to 2014) who could not complete their B.Tech. degree in the maximum span period of 7 years, have submitted application regarding extension of span period. The details of such students are mentioned as under: -

<b>Sr. No.</b>	<b>Name &amp; Roll No.</b>	<b>Odd Semester</b>	<b>Even Semester</b>	<b>Credits earned by students</b>
1	Nitin Sain (2K13/EN/029)	EN401	AM101, EN403	216/240
2	Harsh Yadav (2k14/ME/65)	ME119 ME301 ME302 ME303 ME304 ME305 ME306 ME307 ME308 ME309 ME401 ME402 ME4033 ME4044 ME405 ME406 ME407 ME408	ME 211 ME214 ME311 ME313 ME315 ME319 ME411 ME4141 ME416 ME416 ME417 ME4133 ME41217 ME4157	181/240

3	Jitesh Yadav (2K13/MC/032)	AM101 MC201 MC202 MC203 MC205 MC303	AM111, EE105, MC211, MC212, MC213, MC311, MC312, MC313, MC314, MC411	176/240
4	Nitesh Meena (2K13/AE/055)	AM101 AC104 EE105 IT106 AE202 AE203 AE204 AE304 AE4039	AE211 AE213 AE214 AE216 AE311 AE4127	182/240
5	Vishal Raj (2K14/MC/097)	AM101, MC202 MC203, MC301	-	224/240

Young students and citizen of our county can contribute gainfully if they allowed to complete their degree. They have already spent 7 precious years of their life and would leave university without being a graduate. Thereby looking at their future prospects, the academic Council considered their applications as special case to grant mercy chance sympathetically to complete their degree.

**Decision : The Academic Council considered and approved extension of time span to the students of old scheme to complete their B.Tech degree in one more chance of Odd and Even semester. It was also decided to engage a mentor to each student and examination fee will be charged at the rate of Rs. 5000/- per paper.**

The meeting ended with a vote of thanks to all the members and special invitees.

  
**(Prof. Madhusudan Singh)**  
 Registrar

No. F.DTU/Org/AC/Meeting/01(1)/10/Vol-XIV

Dated :

Copy to:

1. Pr. Secretary to Hon'ble Lt. Governor (Delhi), 6, Raj Niwas, Civil Lines, Delhi.
2. PA to V.C. for kind information of the Vice Chancellor, DTU.
3. All Deans, DTU.
4. Prof. J.P. Saini, Vice Chancellor, Netaji Subhash University of Technology, Sector 3, Dwarka, Delhi 110078
5. Prof. Neharika Vohra, Vice Chancellor, Delhi Skill & Entrepreneurship University, Dwarka, Delhi.
6. Prof. D.P. Goyal, Director, Indian Institute of Management, Shilong.

7. Prof. B.R. Chahar, Professor, Civil Engineering, Indian Institute of Technology, Delhi
8. Prof. Bhim Singh, Electrical Engineering Department, Indian Institute of Technology, Delhi
9. Sh. Rajesh Mathur, C-2/27, Mangal Apartment, 16, Vasundhara Enclave, Delhi 110096.
10. All Heads of Department, DTU.
11. Prof. Reeta Wattal, Professor, Mechanical Engineering Department
12. Prof. V.K. Minocha, Professor, Civil Engineering Department
13. Prof. Pragati Kumar, Professor, Electrical Engineering Department
14. Sh. Rajesh Birok., Associate Professor, Electronics and Communication Engineering Department
15. Dr. M. Jayasimhadri, Assistant Prof., Applied Physics Department.
16. Controller of Examinations.
17. Registrar, DTU

  
(Prof. Madhusudan Singh)  
Registrar