Agenda 45th Meeting of the Senate
to be held online on August 06, 2020 at 02.00 pm

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Senate/45/01	**Overview Report of the Chairperson**

Overview report will be presented by the Chairperson Senate during the meeting.

Senate/45/02	**Confirmation of Minutes of the 44th meeting of the Senate held on May 23, 2020**

Minutes of the 44th meeting of the Senate were circulated to the members (**Annexure I**). No comments were received.

The Senate is requested to confirm the Minutes.

Senate/45/03	**Action taken report on the decision of the Senate vide 44th meeting of the Senate held on May 23, 2020**

Action taken report on the 44th meeting of the Senate is attached herewith as **Annexure II**.

Senate/45/04	**Academic performance report for the last semester (Semester II, 2019-20)**

Last semester students and faculty faced lots of problem due to pandemic. However, with the support of the faculty and students the semester was completed successfully. APEC report for the last semester will be placed during the Senate meeting.

Senate/45/05	Start of next semester and finalization of Academic calendar

As per academic calendar the coming semester was supposed to start from August 03, 2020. However, due to CoVID the last semester and admissions have been delayed. In view of the same, it is proposed to start the coming semester in phases:

1. Old UG students (batch 2019 and prior batches), II year M.Tech., M.Des. (all batches) and Ph.D. (all batches) – August 17, 2020 onwards (registration on August 14, 2020)
2. M.Tech. (2020 batch) – September 14, 2020 (Registration September 11, 2020)
3. B.Tech. and B.Des. (2020 batch) – November 02, 2020 (Registration October 31, 2020)

Registration and start of classes for B.Tech., B.Des. and M.Tech. 2020 batch will depend on the admission through CSAB, UCEED and CCMT respectively. Chairperson Senate is authorized to modify the dates based on the prevailing situations.

For smooth running of the semester it is proposed that:

1. The classes for the coming semester will held online till the Government does not permit for the opening of the Institute physically.
2. The semester will be divided into four blocks of one month each.
3. Accordingly, the syllabus will be divided in four modules containing 25% syllabus.

4. Each module will be completed within one month and will be evaluated separately. The content for the evaluation will be syllabus corresponding to the particular block only not the full syllabus.
5. a) Lab and project work will be completed in case the Institute is opened and students are allowed in campus.
   b) In case (a) is not possible the credits for the courses containing lab work will be reduced based on prorate basis.
6. In case of 5(b), it will be tried to cover the lab work in following semester or during the vacation period.
7. It is proposed to run DS302 Engineering Design in the modified form (1L+8P). This semester will have the design part of the project.
8. Towards the end of the semester, performance of all the four blocks will be evaluated and grading will be done.
9. The option for "SS" grade will not be available in this semester.
10. In case a student has some problem due to poor connectivity or electricity, etc., he may drop the whole semester and this semester will be considered as void.

Academic calendar for various batches has been modified and attached as Annexure III for the approval of the Senate.

The Senate is requested to discuss the proposal and approve the same.

Senate/45/06	**Revised curriculum effective from August 2020**

It is proposed to implement the new curriculum from the session starting from August 2020. Following are salient featured of the proposed curriculum:

1. New credit formula:
   a. 1 Lecture hour per week – 1 Credit
   b. 1 lab hour per week – 0.5 credit
   c. 1 tutorial per week – 0.5 credit
   d. Credits will be sounded to whole number only
   e. Maximum credit for any course will be 4 credits
   f. All open electives will be 3 credit courses
2. The distribution of the credits will be
   a. Natural Sciences core courses (NS): 5 nos, 18 credits
   b. Engineering Sciences core courses (ES): 4 nos, 12 credits
   c. Discipline core courses (CS/DS/EC/ME): 10 nos, 37 credits
   d. Humanities core courses (HS): 3 nos, 7 credits
   e. Open Electives (OE): 12 nos, 36/42 credits
   f. Project based courses (PR): 3 nos, 20/14 credits
   g. Professional Development Courses (PC): 4 nos, 4 credits
   h. Hands on practice on software tools (IT Workshop): 4 nos, 8 credits
   i. Design and fabrication project: 8 credits
3. Minimum credit for the award of the degree will be 150 credits for the batch of 2020.
4. Credits for the 2019 batch are mapped to 151 credits
5. For the batch 2018 and prior the credit counting system will remain unchanged and accordingly their credit requirement will be 160 credits each.

6. It is proposed to revise the UG curriculum from August 2020. The curriculum will be effective for all the batches irrespective of the year of admission
7. PBI of 16 credits can be run either in VII or VIII Semester depending on the availability of the internship
8. PBI will have one internal mentor from the discipline. The mentor will submit a report every 15 days about the progress of the student in consultant with the external mentor.
9. In case a students did not get PBI offer they can opt for BTP of 10 Credits along with 6 credits through open elective.
10. The BTP should be Product oriented with expected output of one patent. For CSE discipline it will be in the form of software development.
11. All the labs other than IT workshop will be attached to the courses.
12. It is also proposed that one and two credit courses may run in block:
    a. 1 credit course (10-12 hours) to be completed in 2-3 weeks with one evaluation
    b. 2 credit courses (20-24 hour) to be completed in 6-8 weeks with two evaluations
    c. Other courses to run for the full semester with four evaluations.

The template for the revised curriculum is as follows:

2020 Batch

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7/8	Semester 8/7
NS1 (3L+2T, 4C) I course on Mathematics	NS3 (3L+2T, 4C) Mathematics II	Discipline Core (DC) DC2	DC7	DP1 (1L+6P, 4C) DS302 Engineering Design	DP2 (8P, 4C) Fabrication Project	Open E8 (3L, 3C)	Project-based Internship (16C) *(PBI: Optional in 7th semester)* OR BTP (10C) + 2 OEs (3-0-0-3) (Total: 6C)
NS2 (3L+1T+2P, 4C) Physics I	NS4 (3L+1T+2P, 4C) NS104 Physics II	DC3	DC8	Open E1 (3L, 3C)	Open E4 (3L, 3C)	Open E9 (3L, 3C)	
HS1a (1L+2T, 2C) HS101 Effective Communications OR HS1b Alternate	HS3 (2L+2T, 3C) HS102 Indian Culture, Ethics and Human Values	DC4	DC9	Open E2 (3L, 3C)	Open E5 (3L, 3C)	Open E10 (3L, 3C)	
ES1 (2L+3P, 3C) Introduction to Programming	ES3 (2L+3P, 3C) DS101 Engineering Graphics	DC5	DC10	Open E3 (3L, 3C)	Open E6 (3L, 3C)	Open E11 (3L, 3C)	
Prof DC1/ SM1 (1L, 1C) Introduction to Profession	ES4 (3L+2P, 4C) ES101 Basic Electronics	DC6	DC11	HS3 (2L, 2C) Ecology and Environment	Open E7 (3L, 3C)	Open E12 (3L, 3C)	
	NS5 (2L, 2C) Biology for Engineers						
		IT Workshop I (3P, 2C)	IT Workshop II (3P, 2C)	IT Workshop III (3P, 2C)	IT Workshop IV (3P, 2C)		
ES2 Innovation Theory and Practice (1L+2P, 2C)		PR1 Discipline Project (2C)		PR2 Discipline Project (2C)			
PC1 Professional Development Course (1C)		PC1 Professional Development Course (1C)		PC3 Professional Development Course (1C)		PC4 Professional Development Course (1C)	
Total Credits	14 23	20	23	17	21	16	16
Credits per year	37	43		38		32	
Total Degree Credits		150					

Note:

1. *The credits of Projects (Innovation, Discipline projects) and PDC are allotted/counted in the end of even semester.*

2. *Discipline core courses/ Open Elective can be of any one of the following structures 3-0-2, 2-2-2, 3-0-0, 3-1-0, 3-1-2 with credit count limit on credit counts.*

2019 Batch

Semester 1		Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7/8	Semester 8/7
NS1 (3L+1T, 4C) NS101: Mathematics I		NS3 (3L+1T, 4C) Mathematics II	**Discipline Core (DC) DC1**	**DC6**	**DP1** (1L+6P, 4C) DS302 Engineering Design	**DP2** (8P, 4C) Fabrication Project	**Open E8** (3L, 3C)	Project-based Internship (16C) *(PBI: Optional in 7th semester)* **OR** BTP (10C) + 2 OEs (3-0-0-3) (Total: 6C)
NS2 (2L+1T+2P, 4C) NS102: Engineering Mechanics		NS4 (3L+1T+2P, 5C) NS104 Electrodynamics and Optics	**DC2**	**DC7**	**Open E1** (3L, 3C)	**Open E4** (3L, 3C)	**Open E9** (3L, 3C)	
HS1 (2L+1D, 2C) HS101 Effective Communications Skills		**HS2** (2L+1GD, 2C) HS102 Culture and Human Values	**DC3**	**DC8**	**Open E2** (3L, 3C)	**Open E5** (3L, 3C)	**Open E10** (3L, 3C)	
ES1 (3L+2P, 5C) Fundamental of Electrical and Electronics Engg.		**DS1** (1L+3P, 3C) DS101: Engineering Graphics	**DC4**	**DC9**	**Open E3** (3L, 3C)	**Open E6** (3L, 3C)	**Open E11** (3L, 3C)	
ES2 (2L+2P, 4C) **ES102:** Fundamental of Computing		**ES3** (3L+2P, 5C) ES103 Data Structure and Algorithm	**DC5**	**DC10**	**HS3** (2L, 2C) Ecology and Environment	**Open E7** (3L, 3C)	**Open E12** (3L, 3C)	
			IT Workshop I (3P, 2C)	IT Workshop II (3P, 2C)	IT Workshop III (3P, 2C)	IT Workshop IV (3P, 2C)		
Optional Project, 2C			**PR1 Discipline Project (2C)**		**PR2 Discipline Project (2C)**			
			PC1 Professional Development Course (1C)		**PC3 Professional Development Course (1C)**		**PC4 Professional Development Course (1C)**	
Total Credits	19	19	22	23	17	21	16	16
Credits per year	38		43		38		32	
Total Degree Credits			**151**					

2018 Batch

Semester 1		Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7/8	Semester 8/7
NS1 (3L+1T, 4C) NS101: Mathematics I		NS3 (3L+1T, 4C) Mathematics II	**Open E1** (3L+1T, 4C)	ES5 (3L, 4C) ES205: Fundamental of Robotics	**DP1** (1L+6P, 5C) DS302 Engineering Design	**DP2** (8P, 5C) Fabrication Project	**Open E3** (4C)	Project-based Internship (15C) *(PBI: Optional in 7th semester)* **OR** BTP (7C) + 2 OEs (8C)
NS2 (2L+1T+2P, 4C) NS102: Engineering Mechanics		NS4 (3L+1T+2P, 5C) NS104 Electrodynamics and Optics	ES4 (3L, 4C) ES205: Digital Electronics	MS1 (3L, 4C) MS201: Management Concept and Technology	**DC6** (4C)	**DC10** (4C)	**Open E4** (4C)	
HS1 (2L+1D, 2C) HS101 Effective Communications Skills		**HS2** (2L+1GD, 2C) HS102 Culture and Human Values	**MN1** (2L+2P, 4C) Manufacturing Processes	**DC3** (3L+1T, 4C)	**DC7** (4C)	**Open E1** (4C)	**Open E5** (4C)	
ES1 (3L+2P, 5C) Fundamental of Electrical and Electronics Engg.		**DS1** (1L+3P, 3C) DS101: Engineering Graphics	**DC1** (3L+2P, 5C)	**DC4** (3L, 4C)	**DC8** (4C)	**Open E2** (4C)	**Open E6** (4C)	
ES2 (2L+2P, 4C) **ES102:** Fundamental of Computing		**ES3** (3L+2P, 5C) ES103 Data Structure and Algorithm	**DC2** (2L, 2C)	**DC5** (2L, 2C)	**DC9** (4C)	**HS3** (2L, 3C) Ecology and Environment	**Open E7** (4C)	
				PL1 (3P, 2C)	IT Workshop I (3P, 2C)	IT Workshop II (3P, 2C)		
Optional Project, 2C			**Optional Project (2C)**		**Optional Project (2C)**			
			PC1 Professional Development Course (1C)		**PC2 Professional Development Course (1C)**		**PC3 Professional Development Course (1C)**	
Total Credits	19	19	19	21	23	23	20	16
Credits per year	38		40		46		36	
Total Degree Credits			**160**					

2017 Batch

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7/8	Semester 8/7
NS1 (3L+1T, 4C) NS101: Mathematics I	NS3 (3L+1T, 4C) Mathematics II	Open E1 (3L+1T, 4C)	ES5 (3L, 4C) ES205: Fundamental of Robotics	DS1 (2L+4P, 5C) DS302 Engineering Design	HS3 (3L, 4C) HS Open elective	Open E4 (4C)	Project-based Internship (15C) *(PBI: Optional in 7th semester)* OR BTP (7C) + 2 OEs (8C)
NS2 (2L+1T+2P, 4C) NS102: Engineering Mechanics	NS4 (3L+1T+2P, 5C) NS104 Electrodynamics and Optics	ES4 (3L, 4C) ES205: Digital Electronics	MS1 (3L, 4C) MS201: Management Concept and Technology	DC6 (4C)	HS4 (2L, 3C) Ecology and Environment	Open E5 (4C)	
HS1 (2L+1D, 2C) HS101 Effective Communications Skills	HS2 (2L+1GD, 2C) HS102 Culture and Human Values	MN1 (2L+2P, 4C) Manufacturing Processes	DC3 (3L+1T, 4C)	DC7 (4C)	DC9 (4C)	Open E6 (4C)	
ES1 (3L+2P, 5C) Fundamental of Electrical and Electronics Engg.	DS1 (1L+3P, 3C) DS101: Engineering Graphics	DC1 (3L+2P, 5C)	DC4 (3L, 4C)	DC8 (4C)	Open E2 (4C)	Open E6 (4C)	
ES2 (2L+2P, 4C) ES102: Fundamental of Computing	ES3 (3L+2P, 5C) ES103 Data Structure and Algorithm	DC2 (2L, 2C)	DC5 (2L, 2C)	Open E1 (2L,2C)	Open E3 (4C)	Open E7 (4C)	
			PL1 (3P, 2C)	PL2 (3P, 2C)	PL3 (3P, 2C)	Open E8 (4C)	
Optional Project, 2C		Optional Project (2C)		Optional Project (2C)			
		PC1 Professional Development Course (1C)		PC2 Professional Development Course (1C)		PC3 Professional Development Course (1C)	
Total Credits: 19	19	19	21	21	22	24	15
Credits per year: 38		40		43		39	
Total Degree Credits: 160							

Credit requirement for M.Tech./ M.Des. and Ph.D. will be modified as per the table below:

	M.Tech.	M.Des.	Ph.D. in Engg [after ME/ MTech/ MDes]	Ph.D. in NS [after M.Sc./ MA]	Ph.D. in Engg. [after B.Tech./ B.E./]
Minimum total number of credits[$]	52	68	56	62	74
Minimum number of credits through the course work	21	45	12	18	30
Maximum duration to complete the course work	3 semesters	3 semesters	2 semesters	3 semesters	4 semesters
Minimum number of credits through Graduate/Progress Seminar	04	04	06	06	06
Credits through Teaching Work*	--	--	02	02	02
Credits through Summer Internship	-	02	-	-	-
Minimum number of credits through thesis research[&]	24	15	36	36	36
Professional Communication Skills course (proficiency base)[!]	02	02	02	02	02

[$] Minimum credit requirement in a semester will be 12.

*A student can register for teaching credits on completion of comprehensive examination. The student must have completed a course on teaching pedagogy course through SWAYAM before registering for the teaching credits.

&Thesis work will be in the blocks of 3 credits each.

!Professional Communication Skill will be approved based on the proficiency of the candidate in speaking and writing skills in English. It will be over and above the minimum credit requirement for the completion of program.

Senate/45/07	**Modifications in the guidelines for the Masters and Ph.D. programs**

In order to streamlining the Ph.D. comprehensive and thesis submission and evaluation process modification in the guidelines are proposed:

Clause Number	Existing Clause	Modified Clause
7.10.8	Procedure of Comprehensive Examination of Doctoral students: i) Students registered in the Doctoral programme must pass a Comprehensive Examination designed to test the overall comprehension of the student in various subjects relevant for his/her field of specialization. A student can appear in the Comprehensive Examination only after he/she has completed the minimum course requirements and satisfied the minimum specified CPI requirement. ii) Students may appear in the Comprehensive Examination at the earliest at the end of the first semester but latest by the end of fourth semester from the admission and registration in the Doctoral programme. The above time limits are exclusive of the period of sanctioned leave, if any. iii) The Comprehensive Examination shall be conducted as written and oral. iv) The Comprehensive Examination Board of a Doctoral student shall be same as his/her RPC. The thesis supervisor of the student shall be the Convener of the Comprehensive Examination Board. The thesis supervisor(s) will send the Comprehensive Examination Board with the date of written and oral examination to the Dean (Academic) through DPGC for approval.	Procedure of Comprehensive Examination of Doctoral students: i) Students registered in the Doctoral programme must pass a Comprehensive Examination designed to test the overall comprehension of the student in various subjects relevant for his/her area of research. A student can appear in the Comprehensive Examination only after he/she has completed the minimum course requirements and satisfied the minimum specified CPI requirement. ii) Students must appear for the comprehensice examination within 4 months after the completion of the course work. Any deviaiton from this will require special approval from the Chairperson Senate on recommendation of Convener DPGC and Dean Academic. iii) The Comprehensive Examination will consists of both written and oral examinations. iv) The Comprehensive Examination Board of a Doctoral student shall be same as his/her RPC. The thesis supervisor of the student shall be the Convener of the Comprehensive Examination Board. The thesis supervisor(s) will send the Comprehensive Examination Board to the Dean (Academic) through Convener DPGC for approval. The dates for written and oral examiantion will be decided by the committee.

	v) The Comprehensive Examination Board will float atleast 6 subjects in the direction of the student research work. The student will opt two courses from the floated courses for written examination.	v) The Comprehensive Examination Board will float at the most 6 subjects in the direction of the student research work. The student will opt two courses from the floated courses for written examination in consultation with Supervisor. Final decision will be taken by the Supervisor. vi) (New Clause) The weightage of written exam and oral exam will be 70% and 30% respectively.
	vi) After written examination, the student is allowed for oral examination.	vi) After written examination, the student is allowed for oral examination. Oral examination will be conduced openally.
	vii) A student shall be considered to have passed the Comprehensive Examination if all members of the Board, except at the most one member, are satisfied with student's performance in the examination. The convener of the Comprehensive Examination Board shall be responsible to send the report of the Comprehensive Examination to the Dean, Academic for approval through Convener, DPGC.	vii) A student shall be considered to have passed the Comprehensive Examination if he scores 60% marks in each of the written and oral examinations. ~~all members of the Board, except at the most one member, are satisfied with student's performance in the examination.~~ The convener of the Comprehensive Examination Board shall be responsible to send the report of the Comprehensive Examination to the Dean, Academic for approval through Convener, DPGC.
	viii)If a student fails in the Comprehensive Examination in his/her first attempt, a second Comprehensive Examination shall be conducted by the same Board that was constituted earlier unless otherwise changed by Dean Academic on the recommendation of the DPGC. A student shall be recommended for termination if he/she fails to pass the Comprehensive Examination even after two attempts. All such cases shall be brought to the notice of the Senate.	viii) If a student fails in the Comprehensive Examination in his/her first attempt, a second Comprehensive Examination shall be conducted by the same Board that was constituted earlier unless otherwise changed by Dean Academic on the recommendation of the DPGC. A student shall be recommended for termination if he/she fails to pass the Comprehensive Examination even after two attempts. All such cases shall be brought to the notice of the Senate.
	ix) After the comprehensive examination, Doctoral Student needs to register for progress seminar in every semester till she/he appears for the open seminar.	ix) After the comprehensive examination, Doctoral Student needs to register for progress seminar in every semester till she/he appears for the open seminar.
	x) After the completion of	x) After the completion of

	comprehensive examination, Doctoral Student needs to register total teaching credits of two (2) in two different semesters.	comprehensive examination, Doctoral Student needs to register total teaching credits of two (2) in two different semesters.
7.10.9 (to be renumbered as 7.10.10)	Thesis submission for evaluation by postgraduate students: ➢ □A Doctoral candidate shall be allowed to submit the thesis within the stipulated time after successfully completion of the open seminar. ➢ □It will be duty of the student submitting the thesis to check the thesis against possible plagiarism. ➢ □Master's thesis for evaluation shall be submitted to the Convener DPGC or nominee through supervisor. Date of thesis submission will be considered as the date on which thesis is received by the Convener DPGC. ➢ □Doctoral thesis for evaluation shall be submitted to the Dean Academic or nominee through supervisor. The thesis should be forwarded by the Convener DPGC. Date of thesis submission will be considered as the date on which thesis is received by the Dean Academic.	a) Thesis submission for evaluation by Doctoral Candidates: ➢ A Doctoral candidate shall be allowed to submit the thesis within the stipulated time after successfully completion of the open seminar. ➢ □It will be duty of the student submitting the thesis to check the thesis against possible plagiarism. A plagiarism report from a well known software must be added in the thesis for the purpose. The report must be signed by the student and supervisor(s) both. ➢ □Doctoral thesis for evaluation shall be submitted to the Dean Academic or nominee through the supervisor. The thesis should be forwarded by the Convener DPGC. ➢ Date of thesis submission will be considered as the date on which thesis is received in eform/ hardcopy by the office of the Dean Academic along with the panel of examiners. b) Thesis submission for evaluation by Master's students: ➢ □Master's thesis for evaluation shall be submitted to the Convener DPGC or nominee through supervisor. Date of thesis submission will be considered as the date on which thesis is received by the Convener DPGC or nominee.
7.10.10 (to be renumbered as 7.10.9)	Open Seminar by Doctoral Students i) Before proceeding to finalize the thesis, each Doctoral student shall be required to deliver an Open Seminar. ii) A student shall become eligible to give open seminar after completion of all academic requirements for the Doctoral Programme including thesis work. iii) The seminar, which will be	Open Seminar by Doctoral Students i) Before proceeding to finalize the thesis, each Doctoral student shall be required to deliver an Open Seminar. ii) A student shall become eligible to give open seminar after completion of all academic requirements for the Doctoral Programme including thesis work. iii) The seminar, which will be

	delivered to the faculty and students of the concerned discipline(s), shall deal with research work done by the Doctoral candidate with the objective of obtaining comments and criticism, if any, which may be incorporated in his/her thesis before its submission. iv) The student required to submit a draft of thesis to the academic office before the open seminar. v) The thesis supervisor/ programme coordinator shall constitute a committee for open seminar. The committee shall comprise of ➢ RPC members of the student ➢ One nominee of the Dean Academic. The thesis supervisor/programme coordinator shall act as the Convener of the committee. The committee shall be approved by the Dean Academic.	delivered to the faculty and students of the Institute and shall deal with research work done by the Doctoral candidate with the objective of obtaining comments and criticism, if any, which may be incorporated in his/her thesis before its submission. The final decision of incorporation of the suggestion will be decided by the open seminar committee. iv) A draft copy of the thesis should be submitted by the student through his/her supervisor to the academic office before the approval for the open seminar. v) The thesis supervisor/ programme coordinator shall constitute a committee for open seminar. The committee shall comprise of ➢ RPC members of the student ➢ One nominee of the Dean Academic. The thesis supervisor/programme coordinator shall act as the Convener of the committee. The committee shall be approved by the Dean Academic.
7.10.11	Thesis evaluation for the Master's students shall be coordinated by the head of discipline (Convener DPGC) or her/his nominee. Thesis evaluation for the Doctoral students shall be coordinated by the Dean Academic or her/his nominee.	Thesis evaluation for the Master's students shall be coordinated by the head of discipline (Convener DPGC) or her/his nominee. ~~Thesis evaluation for the Doctoral students shall be coordinated by the Dean Academic or her/his nominee.~~
7.10.12	Defense of the Master's student shall be carried out by a defense board consists of PGPC of the student, one external examiner and a member other than the discipline, and shall be approved by the Dean Academic. The details for the evaluation of thesis are given below ➢Three experts for a group of 4-8 students depending on area of research/specialization wise will be proposed by Head/programme coordinator and approved by the Dean, Academic. ➢□□The thesis and synopsis of 6-8 pages (after the approval of Supervisor and convener DPGC) will be submitted in discipline on or before 1st July and the Viva-voice will be scheduled	Defense of the Master's student shall be carried out by a defense board consisting of PGPC of the student, and one external examiner ~~and a member other than the discipline,~~ and shall be approved by the Convener DPGC. The name of the external examiner will be selected from a list of experts already approved by the Dean Academic. The details for the evaluation of thesis are given below ➢□The thesis and synopsis of 6-8 pages will be submitted by the supervisor in the discipline office on or before the due date in soft copy form. The thesis can be submitted either between June 16-30, 2020 or December 16-31, 2020. In between submission will not be considered.

	between 01st July to 15th July. ➢□□All communications to the external expert and arrangement of viva-voice will be done by Head/programme coordinator/Head nominee of the Discipline and he/she will submit the final grade to the academic office. ➢□□Only synopsis will be sent to external expert for reference. ➢□□The final thesis after viva-voice will be submitted by the student in the academic office (one hard copy and soft copy). ➢□□Students, those could not submit their theses before the registration of next semester, are required for the registration in next semester. ➢□□The evaluation of thesis through viva-voice will be done through letter grades (S, X and F). In case of F, the student has to register in the next semester.	➢A list of ~~Three experts for a group of 4-8 students~~ experts depending on the areas of research/specialization of the discipline will be proposed by the Head/ programme coordinator and approved by the Dean, Academic. ➢□□The Convener DPGC will contact the expert(s) as possible examiner and seek his/ her consent alongwith possible defense date. For the purpose synopsis of thesis will be sent to the examiner. ➢□On receiving the consent the Convener DPGC will send the thesis to the examiner alongwith the evaluation form. ➢□□All communications to the external expert and arrangement of viva-voice will be done by Head/programme coordinator/Head nominee of the Discipline and he/she will submit the final grade to the academic office. ➢□□~~Only synopsis will be sent to external expert for reference.~~ ➢□□The final thesis after viva-voice will be submitted by the student through supervisor and Convener DPGC in the academic office (one hard copy and soft copy). ➢□□Those students who could not submit their thesis before the due date are required to register in the next semester. ➢□□The final evaluation of the thesis will have 50% component of supervisor marks and 50% component of external examiner marks. (approved in the 43rd meeting of the senate) ➢□□In case CPI of a students falls below 6.5 minimum requirement for Masters degree, the program of the student will be extended by one semester and whole evaluation of the thesis will be repeated. (approved in the 43rd meeting of the senate)
7.10.12	Thesis evaluation for the Doctoral students shall be coordinated by the Dean Academic or her/his nominee.	7.10.13 Thesis evaluation for the Doctoral students shall be coordinated by the Dean Academic or her/his nominee.
7.10.13	Defense of the Doctoral students shall be carried out by a defense board proposed by the supervisor of the student and consisting of RPC of the	Within three months of the successful completion of open seminar, the the student will submit the thesis for evaluation to the Dean Academic

	student and one external examiner, and shall be approved by the Dean Academic. Along with the thesis, the student shall submit a synopsis of 6-7 pages. A pannel of experts (six from India and six from abroad) shall proposed by the supervisor to the Dean academic through the convener, DPGC. The panel will go to chairperson Senate for approval. The thesis will be sent to three experts (atleast one from India) for evaluation.	through the Convener DPGC and his/her supervisor. Following are required to be submitted alongwith the thesis: 1. A synopsis of 6-7 pages 2. Soft copy of the thesis 3. A softbound hard copy of the thesis 4. A pannel of experts (six from India and six from abroad) proposed by the supervisor to the Dean academic through the convener, DPGC. The Times/ QS ranking of affiliating institute of the examiner must be mentioned in the panel. The panel will go to chairperson Senate for approval. The thesis will be sent to three experts (atleast one from India) for evaluation. The Chairperson Senate may add new name from the related field in the pannel.
7.10.14	Reports of Doctoral thesis evaluation from the examiners, received in the Academic Section of the Institute, shall be placed before Dean Academic who shall categorize them in one of the following three categories: i) CategoryI If an examiner suggests corrections regarding punctuation, grammar, spelling or language, the report shall be considered of Category I. In such a case, thesis supervisor(s) may use his/her/their discretion regarding incorporation of such suggestions. ii) Category II If an examiner points out minor technical mistakes, raises some queries or suggests modifications but does not imply that the acceptance of the thesis is subject to removal of these defects to the examiner's satisfaction, the report shall be considered Category II. In such a case, the supervisor shall send the student's response to the queries raised to the Dean, Academic and the same shall be incorporated in the thesis to the satisfaction of the Thesis Defense Board. The examiner(s) concerned shall be informed by Dean Academic of the changes made on the basis of his/her/ their suggestions.	Reports of Doctoral thesis evaluation from the examiners, received in the Academic Section of the Institute, shall be placed before Dean Academic who shall categorize them in one of the following three categories: i) Category I If an examiner suggests corrections regarding punctuation, grammar, spelling or language, the report shall be considered of Category I. In such a case, thesis supervisor(s) may use his/her/their discretion regarding incorporation of such suggestions. ii) Category II If an examiner points out minor technical mistakes, raises some queries or suggests modifications but does not imply that the acceptance of the thesis is subject to removal of these defects to the examiner's satisfaction, the report shall be considered Category II. In such a case, the supervisor shall send the revised thesis alongwith the student's response to the queries raised to the RPC of the student. On receivng consent from the RPC, the revised thesis alongwith the responses to the queries will be sent to the Dean Academic.

	iii) Category III If an examiner raises technical points or suggests modifications which must be answered/ carried out to the examiner's satisfaction before the thesis is accepted the report shall be considered of Category III. In such a case, the supervisor shall send the student's response to the queries raised to the Dean, Academic and, along with the examiner's comments which will be sent to the examiner with a request to respond within six weeks. If the examiner's response is not received within this period, a reminder shall be sent and if no reply is received within six weeks, further action will be initiated. 7.10.15 If one of the examiners outright rejects the thesis, the matter shall be referred to the Chairperson Senate for deciding the further course of action. If two or more examiners reject the thesis, the thesis shall be out rightly rejected.	iii) Category III If an examiner raises technical points or suggests modifications which must be answered/ carried out to the examiner's satisfaction before the thesis is accepted the report shall be considered of Category III. In such a case, the supervisor shall send the student's response to the queries raised by the examiner to the Dean Academic along with the revised thesis within three months from the communiction received from the Dean Academic. This will be sent to the examiner with a request to respond within six weeks. If the examiner's response is not received within this period, a reminder shall be sent and if no reply is received within six weeks of the reminder, further action will be initiated. iv) Category iv: If one of the examiners outright rejects the thesis, the matter shall be referred to the Chairperson Senate for deciding the further course of action. If two or more examiners reject the thesis, the thesis shall be out rightly rejected and the program of the student will be terminated without awarding the degree.
7.10.16	The defense of a thesis shall be required to be necessarily conducted within six months from the date of receiving of all the examiners' report. If the concerned student fails to appear for the defense within this period, her/ his programme would be deemed to have been terminated.	The defense of a thesis shall be required to be necessarily conducted within six months from the date of receiving of all the examiners' report. If the concerned student fails to appear for the defense within this period, her/ his programme would be deemed to have been terminated.
		Defense of the Doctoral students shall be carried out by a defense board proposed by the supervisor of the student and consisting of RPC of the student and one external examiner, and shall be approved by the Dean Academic. The board will be proposed by the thesis supervisor through Convener DPGC. The name of the external examiner will be approved by the Chairperson Senate on the recommendation of the Dean Academic.

		Once the board is approved, the constitution of the board will be communicated to the thesis supervisor by Dean Academic. The supervisor will contact the external examiner and will fix up the date of the defense. Once the date is finalized the defense date and time will be communicated to the dsicipline office, academic office for record and an invitation will be sent to all the faculty and students with title of the thesis and abstract. This communication will be done by the discipline office.
7.10.17	If a thesis is rejected along with a recommendation for resubmission after incorporating any modifications/ corrections suggested by the Thesis Defense Board, defense of the re-submitted thesis shall be conducted by the originally constituted Board, unless a different Board is approved by the Chairperson Senate. If the re-submitted thesis is also rejected, the matter shall be reported to the Senate for an appropriate action.	If a thesis is rejected along with a recommendation for resubmission after incorporating any modifications/ corrections suggested by the Thesis Defense Board, defense of the re-submitted thesis shall be conducted by the originally constituted Board, unless a different Board is approved by the Chairperson Senate. If the re-submitted thesis is also rejected, the matter shall be reported to the Senate for an appropriate action.
7.10.18	Final thesis submission: After successful defense, the student will submit an abstract, a hard bound copy and a soft copy of the final thesis to the library after incorporating changes suggested by the committee, if any and approval of the chairperson Senate. The thesis supervisor shall authenticate that all the suggestions of the Thesis Defense Board have been incorporated in the revised copy.	Final thesis submission: After successful defense, the student will submit an abstract, a hard bound copy and a soft copy of the final thesis to the library after incorporating changes suggested by the committee, if any and approval of the chairperson Senate through Convener DPGC and Dean Academic. The thesis supervisor shall authenticate that all the suggestions of the Thesis Defense Board have been incorporated in the revised copy.
		The process of the thesis evaluation will remain confidential. However, the Dean Academic may share the report (hiding the information of the examiner) received from the examiners on regular interval to the supervisor of the student so that student make necessary changed in the thesis, if any and reposnse to the query raised by the examiner. The name and affiliation of the examiner will remain confidential till thesis defense board is approved.

The Senate is requested to approve the modifications.

Senate/45/08	Modified SWAYAM policy and guidelines

The policy for offering the SWAYAM courses to the students is enclosed herewith as Annexure IV. The Senate is requested to approve the same.

Senate/45/09	Modification in the policy for Academic Dishonesty

It is proposed to modify the policy for the academic dishonesty. The same will be placed during the Senate meeting.
The Senate is requested to approve the modifications.

Senate/45/10	Confirmation of Degree for the next convocation

The list of eligible candidates for the award of the degree will be placed during the Senate meeting.
The Senate is requested to recommend the same to the Board of Governors.

Senate/45/11	Change of grading pattern for the Ph.D.

Presently Ph.D. students are graded as A,B,C,D and F while UG and Master's students are graded as A+, A, B+, B, C+, C, D+, D and F. It is proposed to adopt the uniform grading pattern for all the students i.e. A+, A, B+, B, C+, C, D+, D and F.

The Senate is requested to approve the same.

Senate/45/12	Modified Provisional Degree Certificate

It is proposed to modify the provisional degree certificate. The modification includes:

1. Removal of name of the father, and
2. Adding the validity of the certificate as "The certificate will be valid till the award of the degree to the candidate".

The revised sample of the certificate is attached herewith as **Annexure V.**
Senate is requested to approve the same.

Senate/45/13	Ratification of approvals accorded by the Chairperson Senate

From time to time, the Chairperson Senate, for smooth running of the academic activities, accords approvals. A list of approvals is attached herewith as **Annexure VI.**
Senate is requested to ratify the approvals accorded by the Chairperson Senate.

Senate/45/14	Any other item with the permission of the Chair

ANNEXURE-I

Pandit Dwarka Prasad Mishra
Indian Institute of Information Technology, Design & Manufacturing, Jabalpur

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Minutes of 44th Meeting of the Senate held on May 23, 2020 from 11.00 am onwards

The 44th meeting of the Senate was held using online platform (on Zoom). Minutes are presented here.

The following members were present:

Prof. Sanjeev Jain , Director	Chairman
Prof. Aparajita Ojha , Professor	Member
Prof. Vijay Kumar Gupta , PIC, Academic	Member
Prof. P. N. Kondekar , PIC, P&D	Member
Dr. Prashant Kumar Jain, PIC, Students	Member
Dr. Dinesh K. Vishwakarma, PIC, R&D	Member
Prof. Puneet Tandon, Professor & Head, Mechanical Discipline	Member
Prof. Tanuja Sheorey , Professor	Member
Dr. Subir Singh Lamba, Head Natural Science	Member
Dr. Prabir Mukhopadhyay , Head, Design Discipline	Member
Dr. Prabin Kumar Padhy , Head, Electronics and Communication	Member
Dr. Atul Gupta , Head Computer Science & Engineering	Member
Prof. B. K. Chakravarthy, Professor, IIT Bombay	Member
Prof. Sushil Kumar, Professor, IIM Lucknow	Member
Shri C. M. Venugopalan , Vice President, BOSCH Ltd.	Member
Smt. Swapnali D. Gadekar, Acting Registrar	Member Secretary

The leave of absence was granted to the following members as they expressed their inability to attend the meeting due to their prior commitments:
Prof. K. K. Biswas
Shri Jitendra Chaddha

Senate/44/01	**Overview Report of the Chairperson**

Chairperson, Senate welcomed all the members of the Senate and thanked all the members including external members for attending the meeting in online mode. He briefed the members about the progress of the Institute. He informed the members:

- Despite the difficult situation, faculty members are taking the online classes
- The Institute has conducted two rounds of admission for PhD programme through the rolling advertisement and another round of admission is in progress and will be conducted in online mode in next two weeks

- 4 out of 7 institute teams have qualified for the final round of the Smart India Hackathon (SIH) 2020 software round.
- To fight with COVID, faculty members have submitted the proposal to different agencies.

Senate/44/02	**Confirmation of Minutes of the 43rd meeting of the Senate held on January 08, 2020**

The Senate confirmed the minutes with following modifications:

Senate/43/14 Proposal to map the Swayam result with the Institute Grade:

Last line to be read as "Less than 40" in place of "Greater less than 40"

Senate/43/21.2 Part Time M.Tech. Program for persons employed in defense establishments:

Last line to be modified as .

"The Senate recommended the same to the Board of Governors with change in the name of the program as Part Time M.Tech. (or Ph.D.) program for working professionals in place of "Part Time M.Tech. (or Ph.D.) program for defense establishments".

Senate/44/03	**Action taken report on the decision of the Senate vide 43rd meeting of the Senate held on January 08, 2020**

The Professor Incharge Academics apprised the Senate about the action taken report on the resolutions of the last senate.

Senate/44/04	**Policy for the classes and evaluation of current and next semester in view of COVID-19.**

The senate discussed the agenda in depth and considered the difficulties faced by the students in the current scenario. In order to safeguard the interest of the students in this tough and stressing condition, without compromising the academic standard of the Institute, the Senate decided the following:

1. Completion of the Current Semester:
   A. Current even semester will run in online mode without return of the students to the campus.
   B. Theory Subjects
      For the current semester classes for all the theory subjects to be completed by June 07, 2020.
   C. Labs and Projects
      a. Wherever possible the labs to be conducted using existing Vlabs (vlabs.co.in),

or

convert the labs to simulation based labs

or

convert them to design (or similar type) projects

b. For the labs involving hardware, labs will be limited to design-aspects and project based only. Design part to be completed and evaluated.

D. Examination

a. End Semester examination will start from June 15, 2020 and to be completed in 12 days in online mode. Online mode here includes the proctored, unproctored and takes home examinations to be submitted in online mode.

b. The end semester will contain only the portion after the mid semester taught online.

E. Evaluation of the courses

a. Will be done based on 70% weightage to the evaluation made till mid semester and remaining 30% using a suitable on-line mode. The course for this evaluation will be course coverage after Lockdown declared by the institute.

b. For those students who have missed any evaluation before mid semester due to some genuine reason online evaluation will be conducted by the instructor.

c. It is expected that the instructor will generallly be lenient, however, the final decision will remain with the instructor only.

d. Courses for all semester where the in-semeser evaluation is inadequate or not conducted, the course will be dropped and removed from the credit requirement for the pre-final and final year. This means that suppose in a course having 2 credits, the evaluations are inadequate, the course will be dropped and overall credit requirement for completion of degree will be 158 in place of 160 credits.

e. For first and second year students a committee will review all aspects about reducing the overall credit requirement or completing the course in coming semesters. The Senate authorized the Chairperson Senate to form the committee and take final decision on behalf of the Senate.

f. In case inadequate portion is a lab as part of a course and a proportion of the credit may be reduced based on pro-rata basis.

g. For such courses as mentioned in point (d) to (f) above, the instructor will submit a request to the Dean Academic through DUGC/DPGC and Head of the respective discipline by May 31, 2020.

h. However, due efforts will be placed to consider all aspects towards grading each course.

F. Special Provisions for the benefit of the students due to COVID:

a. The students will be given one time waiver in requirement of 75% attendance.

b. An option will be given to the students to drop a course by May 31, 2020 in case they feel that they are unable to cope with the studies due to difficult circumstances (poor network, electricity and other similar problems). However, the credit requirement for the award of degree will not be relaxed

in this case, the student need to complete the course in the remaining period of his/her programme.

c. Introduction of Special Satisfactory (SS) Grade:
    i. If a student finds that his performance is not truly reflected due to network and other reasons, he can opt for conversion of his awarded grade to "SS" (Special satisfactory grade) within three days of display of grades by the faculty members by Email with a copy to Dean Academic office.
    ii. Those students who could not appear in online end sem exam due to network problem can also opt "SS" grade. This will only be considered if the student reports to the instructor immediately but not later than one hour of completion of that exam with a copy to Dean Academic office.
    iii. This "SS" grade will be considered as notionally pass. This will contribute in total credits but will not be used for calculation of SPI and CPI.
    iv. The student(s) opted for the "SS" grade will be given ONE CHANCE later to convert the "SS" grade to letter grade.
    v. For conversion of the "SS" grade to the letter grade, the student has to appear in an exam of 100 marks in offline mode (i.e. once he returns to the campus).
    vi. The ONE CHANCE will be course specific not student specific i.e. the instructor will be announcing the date for the exam with intimation to Dean Academic office and student need to appear for the exam on the date specified by the instructor. Efforts must be made to conduct the exam as early as possible but not later than
        - One month from the instruction received to open the institute for the students for the present final year students and
        - One semester for all other students.
    vii. Intimation of such exam as in (vi) will be sent to academic office through head of the discipline. The exam will be scheduled on Saturday and Sunday so that regular semester classes are not disturbed.
    viii. In such case, Grading will be done solely based on the 100 marks exam and the student need to accept the same. The letter grade awarded will be counted in calculation of SPI and CPI.
    ix. If a student does not appear for this ONE CHANCE, the grade "SS" will remain the same.
    x. A student may choose to either accept the letter grade awarded based on ONE CHANCE exam or "SS" grade.
    xi. The sole purpose of "SS" grade is to provide an opportunity to the student due to emergent situation of COVID-19. This is a one-time measure and cannot be quoted as precedence.

d. An instructor can conduct makeup exam for the course in case of emergent situation due to network, electricity or other condition with intimation to the Dean Academic through the Head of the concerned discipline.
e. Wherever possible, the students may be given a mock exam.

G. Results for the B. Tech Final year to be declared by June 30, 2020.
H. All other results will declared by July 15, 2020

2. Conduction of the next semester i.e. Semester I, 2020-21.

The Senate discussed the agenda for running of classes in the next semester. The Senate discussed the three probable plans A, B and C.

- **Plan A: Everything becomes normal and Government allows opening of institute without restriction:**
  - The semester to be run as per the academic calendar
- **Plan B: In case Government allows with restriction, following preference will be given:**
  - 2017 batch (final year) may join in August
  - 2018 batch may join in September or later
  - 2019 batch may join in October or later
  - 2020 batch may join as and when the admission process is complete by the admission agency and accordingly semester will be extended for the batch only.
  - Even for the students allowed to join the Institute, classes may run in the classroom and as well be broadcasted to other classroom or hostel room in order to maintain the social distancing as per the guidelines of the Government.
  - Online classes and evaluation may run in order to complete the semester.

- **Plan C: In case Government's restrictions are stricter:**
  - In such case, only a set of students will be allowed in the campus.
  - For the purpose, all students will be divided in batches. Students of a batch may be allowed to come to campus to complete the lab work and projects.
  - The same will be repeated for all batches.
  - Online classes and evaluation may run in order to complete the semester.
  - Labs may run with the help of Vlabs or may be converted to online labs and completed.

The Senate empowered Chairperson Senate to take final decision of choosing the plan or any other decision, keeping in view the emerging situation in future.

Senate/44/05	**Online conduction of Seminars for masters' and Ph.D. students**

The Senate approved the proposal of online conduction of Masters' and Ph.D. seminars due to COVID 19.

Following decisions are taken:

- Various seminars for the Master's students (graduate seminar) and Ph.D. students (comprehensive exam, research seminar, progress seminar, and open seminar) will be conducted in online mode.
- Those masters' students who are in the second year, where possible, thesis work may be converted to simulation or theoretical work to finish it in time. First round of M.Tech. defense examination will be conducted in online mode and be finished by July 15, 2020 so that students may join their job or higher studies. Depending upon the situation Head of the concerned discipline may plan the remaining defense examination. In such situation, the period for completion of degree will be extended by two months without scholarship.
- All Ph.D. research and progress seminars to be conducted by June 25, 2020.
- For the Ph.D. students in their sixth year, three months extension will be given for completion of degree without assistantship.
- Defense examination for the Ph.D. student may be conducted in online mode by the defense examination committee with the approval of Director.

Senate/44/06	**Summer Term to clear the backlog**

The Senate discussed the matter and decided that:

A. Summer term for the Final year to be completed by July 15, 2020.
B. For the batches of 2017, 2018 and 2019, following two options (a and b) will be given to the students and student may choose any one of the following:
    a. Summer Term during June 30 to August 31, 2020:
        i. Summer term will only be running for the students having backlogs (F grade), drop subject or to improve the grades "D" and "D+".
        ii. The course to be run during summer term must be available online preferably on SWAYAM or related platforms.
        iii. There are multiple electives such as professional elective, open electives, HS electives, etc. A few common electives will be running to reduce the number of courses in the summer term.
        iv. For the courses having lab components, either lab may run using Vlabs or they can be converted to design and simulation mode or a crash lab course will be run for a week once the situation becomes normal.
        v. There will be a course instructor for every course, who will mentor the students every week through Zoom and help them in systematic learning. The instructor will evaluate the course based on assignment, online quiz, mid sem (online) and end sem (online or offline depending on the situation).
        vi. Students are required to pay the summer term fees for registering in the course.
        vii. A separate summer term schedule will be floated by the academic office
    b. The students may be allowed to register in SWAYAM course in the next two semesters and participate in all evaluations. Such students will submit the SWAYAM result to the discipline.

Senate/44/07	**Relaxation in eligibility condition for admission under Special Masters and Ph.D. program for the working professionals**

The Senate approved the proposal of relaxation of education qualification only for the persons employed in Defense Organization. The Senate formed following committee to scrutinize the case(s):

1. Director – Chairperson
2. Dean Academic/ PIC Academic – Member
3. Head(s) of the respective domain

The Senate authorized Chairperson Senate to approve the recommendation of the committee.

Senate/44/08	**Enhancement in Seats for the Ph.D. programmes**

The Senate approved the proposal for enhancement of seats for the PhD programme in various disciplines and recommended the same to the Board of Governors.

The Senate also approved the proposal to rename the Ph.D. in 'English Literature' to Ph.D. in 'English' from this session.

Senate/44/09	**Intake of PhD candidates in Design through QIP**

The Senate approved the proposal to carry out admission in PhD in Design discipline through QIP. A proposal for admission to 04 seats in Design under QIP scheme will be sent to the respective agency along with the proposal to increase intake in other disciplines under QIP as in Agenda item Senate/44/14.6.

Senate/44/10	**Intake of PhD candidates with Master's Degree in Fine Arts, Drawing and Painting, Psychology, Home Science with NET or similar National Eligibility Test qualifications for pursuing PhD in Design.**

The Senate discussed the matter in detail and resolved that candidates with Masters' degree in Fine Arts, Drawing, Painting and Architecture with NET or similar National Eligibility Test qualification may be admitted to the Ph.D. in Design. However, such candidates must hold Bachelors' degree in Design/Engineering/Technology/Architecture.

Senate/44/11	**Proposal for Curriculum revision**

The Senate considered the curriculum for B.Tech. in Smart Manufacturing submitted by the committee. Following observations are made on the proposed curriculum:

- There is a need to include environmental issues related to smart manufacturing
- Sustainable Manufacturing may be included as part of the curriculum
- From the course name "Advanced" word may be removed and the course may be renamed

- All electives are open electives so term "Open elective" to be used instead of "Professional Elective"
- The core courses name and contents to be finalized in discussion with the concerned discipline. However, the contents already suggested by the committee as per the need of the program will be part of the core courses.

The Senate in principle approved the proposed structure and authorized Chairperson Senate to approve the same based on the recommendation of the committee.

The Senate also discussed the need for the revision of curriculum that is to be implemented for all batches irrespective of year of admission as discussed and authorized Chairperson to form a committee for the same. The committee must submit revisions according to the need of the hour by June 15, 2020. The same will be discussed with the internal members of the Senate and will also be circulated to external members for their suggestions/ advice. The Senate authorized Chairperson Senate to approve the proposal for all batches of B.Tech. and B.Des. It is also recommended to combine the Theory and its practical as one subject in all discipline.

Senate/44/12	**Proposal of Collaborative Dual Degree (B.Tech. + M.Tech.) Degree**

The Senate did not consider the proposal received from IIIT Allahabad. However, the Senate in principle approved the proposal for introduction of Dual Degree (B.Tech. + M.Tech.) for the students of the Institute and recommended the same to the Board of Governors. This option will be available for the students who are presently in third year. A detailed proposal will be prepared for execution of the same.

Senate/44/13	**Ratification of approvals accorded by the Chairperson Senate**

The Senate ratified the decision of the Chairperson

Senate/44/14	**Any other item with the permission of the Chair**

14.1 Grading of course DS302

The Senate approved the recommendation of the committee constituted in the matter to award grades in the DS302 course based on project work only without any decrease of the grade for any student.

14.2 Courses on Environmental Science and Engineering

The Senate decided that the course be dropped in the current semester and students be allowed to take Swayam course with maximum overlap of course content as will be suggested by the PIC Academics or nominee in next semester. The course credits will be 2 credits in place of 4 credits. The Senate also decided to drop the courses, which could not run in the current semester because of the non-arrival of external faculty due to

travel restrictions. The committee as in Senate/44/04 part e of E of 1 will decide whether the credits will be dropped or students need to do the course in near future except for the present final year and pre final year.

14.3 Use of CPDA for procuring tools and software

The Senate recommended the proposal to the Board of Governors to allow faculty to use their CPDA also for procurement of systems, laptop, software and other tools to augment their capabilities for better preparedness of online classes, lectures etc. The senate added that additional cost on patent filing (early examination, early publication) might also be paid under this category.

14.4 Upgradation of labs and lab content

The Senate recommended that each discipline should come up with at least two new experimental set ups in each lab every year. For this, if they want enhancement in the lab facility, they can submit the proposal to the Director for approval with a maximum amount of 20 Lacs.

14.5 Regarding setting of High Performance Computing Lab in CSE as a central facility.

The senate discussed the urgent requirement of the high performance computing lab and it is recommended to establish HPC lab with latest configuration as central facility in CSE or other department/Center as per direction of the Director.

14.6 Development of online course content

The Senate recommended the proposal to the Board of the Governors regarding development of online courses by faculty in line with SWAYAM, NPTEL, etc. for generation of revenue. The Senate proposed the 75% of the revenue generated by such courses will be reimbursed to the faculty and the Institute as overhead cost will take 25%.

14.7 Enhancement of seats under QIP seats.

The Senate approved the proposal to enhance the PhD seats under QIP scheme from present 02 to 04 each in Computer Science and Engineering, Electronics and Communication Engineering, and Mechanical Engineering as in agenda Senate/44/09. A proposal for the same to be sent to the respective agency for approval in this regard.

The meeting ended with thanks to Chair.

(Swapnali D. Gadekar)
Acting Registrar & Secretary (Senate)
23/5/2020

Prof. Sanjeev Jain
Chairperson, Senate

ANNEXURE- II

Action taken report on the decision of the Senate (44th Meeting) dated May 23, 2020

Sl. No.	Agenda Item	Action taken
Senate/44/04	Policy for the classes and evaluation of current and next semester in view of COVID-19.	Implemented and communicated vide email dated May 25, 2020
Senate/44/05	Online conduction of Seminars for masters' and Ph.D. students	Implemented and communicated vide email dated May 25, 2020
Senate/44/06	Summer Term to clear the backlog	Implemented and communicated vide email dated May 25, 2020
Senate/44/07	Relaxation in eligibility condition for admission under Special Masters and Ph.D. program for the working professionals	Implemented
Senate/44/08	Enhancement in Seats for the Ph.D. programmes	Recommended to the Board of Governors
Senate/44/09	Intake of PhD candidates in Design through QIP	Decision of the Senate is communicated to the QIP coordinator for further action vide IIITDMJ/AR(Acad.)/2020/07/2362 dated July 29, 2020
Senate/44/10	Intake of PhD candidates with Master's Degree in Fine Arts, Drawing and Painting, Psychology, Home Science with NET or similar National Eligibility Test qualifications for pursuing PhD in Design.	Notified vide IIITDMJ/AR(Acad.)/2020/07/2362 dated July 29, 2020
Senate/44/11	Proposal for Curriculum revision	The proposed revised curriculum is an agenda item in this Senate meeting
Senate/44/12	Proposal of Collaborative Dual Degree (B.Tech. + M.Tech.) Degree	Recommended to the Board of Governors
Senate/44/14-14.1	Grading of course DS302	Implemented and the revised result is communicated to the students
Senate/44/14-14.2	Courses on Environmental Science and Engineering	Implemented and course is running presently.
Senate/44/14-14.3	Use of CPDA for procuring tools and software	Recommended to the Board of Governors
Senate/44/14-14.4	Upgradation of labs and lab content	Recommended to the Board of Governors
Senate/44/14-14.5	Regarding setting of High Performance Computing Lab in CSE as a central facility	Recommended to the Board of Governors

Senate/44/14-14.6	Development of online course content	Recommended to the Board of Governors
Senate/44/14-14.7	Enhancement of seats under QIP seats	Decision of the Senate is communicated to the QIP coordinator for further action vide IIITDMJ/AR(Acad.)/2020/07/2362 dated July 29, 2020

ANNEXURE - III

Academic Performance of the Students Sem II 2019-20

BTech/BDes 2016 Batch for SEM-II						
Sno	CPI RANGE	No. of Students	CSE	ECE	ME	BDes
1	0 - 4.0	0	0	0	0	0
2	4.1 - 4.5	0	0	0	0	0
3	4.6 - 5.0	1	0	0	1	0
4	5.1 - 5.5	2	0	0	2	0
5	5.6 - 6.0	24	13	5	4	2
6	6.1 - 6.5	32	10	8	9	5
7	6.6- 7.0	49	15	10	21	3
8	7.1 - 7.5	55	14	23	11	7
9	7.6 - 8.0	48	17	16	14	1
10	8.1 - 8.5	39	18	6	13	2
11	8.6 - 9.0	12	6	2	0	4
12	9.1 - 9.4	5	4	0	1	0
Total No. of register students:		**267**	**97**	**70**	**76**	**24**

Btech/BDes 2017 Batch for SEM-II						
Sno	CPI RANGE	No. of Students	CSE	ECE	ME	B.Des
1	0 - 4.0	0	0	0	0	0
2	4.1 - 4.5	0	0	0	0	0
3	4.6 - 5.0	1	0	0	1	0
4	5.1 - 5.5	15	6	6	3	0
5	5.6 - 6.0	22	4	6	11	1
6	6.1 - 6.5	45	21	16	7	1
7	6.6- 7.0	53	17	16	20	0
8	7.1 - 7.5	55	16	11	24	4
9	7.6 - 8.0	52	15	19	11	7
10	8.1 - 8.5	30	6	8	12	4
11	8.6 - 9.0	20	11	6	2	1
12	9.1 - 9.4	5	4	0	0	1
Total No. of register students		**298**	**100**	**88**	**91**	**19**

BTech/BDes 2018 Batch for SEM-II						
Sno	CPI RANGE	No. of Students	CSE	ECE	ME	B.Des
1	0 - 4.0	1	0	1	0	0
2	4.1 - 4.5	1	0	1	0	0
3	4.6 - 5.0	6	0	4	2	0
4	5.1 - 5.5	15	3	6	5	1
5	5.6 - 6.0	29	10	12	7	0
6	6.1 - 6.5	41	11	13	15	2
7	6.6- 7.0	42	11	12	15	4
8	7.1 - 7.5	58	21	16	18	3
9	7.6 - 8.0	44	19	8	15	2
10	8.1 - 8.5	32	12	9	8	3
11	8.6 - 9.0	22	8	6	2	6
12	9.1 - 9.3	7	5	1	0	1
Total No. of register students:		298	100	89	87	22

BTech/BDes 2019 Batch for SEM-II						
Sno	CPI RANGE	No. of Students	CSE	ECE	ME	BDes
1	0 - 4.0	6	1	2	3	0
2	4.1 - 4.5	6	3	2	1	0
3	4.6 - 5.0	10	3	2	4	1
4	5.1 - 5.5	12	2	3	6	1
5	5.6 - 6.0	16	2	7	7	0
6	6.1 - 6.5	38	8	12	14	4
7	6.6- 7.0	69	17	22	27	3
8	7.1 - 7.5	68	28	18	16	6
9	7.6 - 8.0	67	19	23	21	4
10	8.1 - 8.5	58	26	14	14	4
11	8.6 - 9.0	27	10	11	4	2
12	9.1 - 10.0	8	4	2	0	2
Total No. of register students:		385	123	118	117	27

ANNEXURE - IV

SWAYAM Policy and Guidelines

Procedures and guidelines for opting for grades to be earned through SWAYAM courses.

1. Basic purpose of allowing Summer course to the students is to facilitate the students. This will not substitute the normal teaching.
2. Swayam courses will be allowed to UG students for the following purposes:
   i. For obtaining minor degree
   ii. To clear backlogs
   iii. To earn extra credits over and above the curriculum requirements
3. SWAYAM courses can not substitute the core courses of the disciplines. Core courses are the courses which a student is supposed to clear as per the curriculum.
4. A student who has already done a course with more than 25% of the course content (syllabus) overlapping is not allowed to opt for the course. However, academically deficient students can opt for such courses to complete their backlog courses.
5. Students can do some open electives (within the specified limits) as per the requiremetn of curriculum from SWAYAM. However, they are free to earn extra credits over and above the requirements of curriculum from SWAYAM. The limits are:
   a. Students of ME and ECE discipline can opt for maximum 20% of electives in a semester to be cleared through SWAYAM.
   b. Students of CSE and Design discipline where sufficient faculty is not available, students can opt for maximum 40% of elective in a semester to be cleared through SWAYAM. This will be reviewed time to time based on the availablity of the faculty in the discipline.
   c. For the courses over and above minimum requirement of the curriculum, there will not be any restriction on the type/area of course to be taken on SWAYAM. However, the discipline should decide the level (I Year, II Year, III Year or Final year) of the course to help student(s) choose the course according to his/her level.
6. The mapping of credits for the SWAYAM courses will be:
   8 weeks course: 1 Credit
   16 week course: 2 Credits
   Maximum credits for the SWAYAM courses will be 2 credits.
   However, for clearing of the backlog courses, the credits will be mapped to the Institute course credits on recommendation of the discipline. Course names will also be mapped and the SWAYAM course will be considered as a "substitute course". The final decision for sustitute course will be taken by the Discipline.
7. Procedure for registereing SWAYAM course in the Institute will be as follows:
   a. Each discipline would appoint one SWAYAM Discipline coordinator and would notify to the students.
   b. The Discipline will decide a list of courses the students can opt and circulate to the students.
   c. In case a student wish to register for a course other than the courses offered by discipline, he will send request to the discipline coordinator giving details of the course including syllabus.

d. The SWAYAM coordinator of the discipline will approve or reject the request within one week and inform the student about the decision.
e. Once SWAYAM courses are decided, the students will register for the courses on the SWAYAM portal and send the registration details to the SWAYAM coordinator of the discipline within a week of the registration on the SWAYAM platform. In case, the student fails to send the registration details to the SWAYAM coordinator of the discipline within a week of registration, he will not be allowed to register at a later stage.
f. It will be responsibility of student to submit all evaluation at the SWAYAM portal and get himself/ herself evalauted. The Institute will not take any responsibility for any evalaution missed or any evalaution not condcuted by SWAYAM.
g. A declaration regarding point (e) need to be signed by the student and submitted to the discipline coordinator at the time of registration.
h. After the course is completed on SWAYAM, the student will submit the marks/ grade to SWAYAM coordinator of the Discipline.
i. It will be responsibility of the student to submit the final result within one week of result declaration on SWAYAM to the discipline coordinator, failing which the course will be automatically dropped.
j. The Discipline coordinator will map SWAYAM result submitted by the student to the Institute grade and a consolidate list will be sent to the academic office in the following format:

S.No.	Roll No. of the student	Name of the Student	SWAYAM Course code	SWAYAM Course name	SWAYAM score/grade	Mapped Institute Grade

k. The result received form the discipline will be added to the semester result.
l. In case the course result(s) is delayed and result of semester is declared, the course will be added to the next semester.

8. For PG students, it will be for the new learning and can be taken as audit courses only.

ANNEXURE-V

पं. द्वारका प्रसाद मिश्र
भारतीय सूचना प्रौद्योगिकी,
अभिकल्पन एवं विनिर्माण संस्थान जबलपुर
(संसदीय अधिनियम द्वारा स्थापित राष्ट्रीय महत्व का संस्थान)

Pt. Dwarka Prasad Mishra
Indian Institute of Information Technology, Design & Manufacturing, Jabalpur
(An Institute of National Importance established by an Act of Parliament)

Rizwan Ahmed
Assistant Registrar (Academic)

IIITDMJ/AR(Acad.)/2019/1712106
July 18, 2019

PROVISIONAL CERTIFICATE FOR THE DEGREE OF MASTER OF TECHNOLOGY

This is to certify that **Ms. NIDHI SAJWAN**, Roll No. 1712106 has completed all the requirements for degree programme of **Master of Technology** (M.Tech) in **Electronics & Communication Engineering (Microwave and Communication Engineering)** of the Institute & secured a CPI of **8.3** out of the maximum CPI of 10.0 in July 2019.

The degree shall, however, be conferred at the coming convocation subject to the ratification by the Senate and Board of Governor of the Institute.

This certificate will be valid till she receives the degree in the Convocation.

(Rizwan Ahmed)

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URL: www.iiitdmj.ac.in

स्वच्छ भारत
एक कदम स्वच्छता की ओर

पं. द्वारका प्रसाद मिश्र
भारतीय सूचना प्रौद्योगिकी,
अभिकल्पन एवं विनिर्माण संस्थान जबलपुर
(संसदीय अधिनियम द्वारा स्थापित राष्ट्रीय महत्व का संस्थान)

Pt. Dwarka Prasad Mishra
Indian Institute of Information Technology,
Design & Manufacturing, Jabalpur
(An Institute of National Importance established by an Act of Parliament)

Rizwan Ahmed
Assistant Registrar (Academic)

IIITDMJ/AR(Acad.)/2020/2016301
July 21, 2020

PROVISIONAL CERTIFICATE FOR THE DEGREE OF BACHELOR OF TECHNOLOGY

This is to certify that **Mr. RAVI RAJ RAUT**, Roll No. 2016301 has completed all the requirements for the degree programme of **Bachelor of Technology** (B.Tech) in Computer Science & Engineering of the Institute & secured a CPI of **5.7** out of the maximum CPI of 10.0 in July 2020.

The degree shall, however, be conferred at the coming convocation subject to the ratification by the Senate and Board of Governor of the Institute.

This certificate will be valid till he receives the degree in the Convocation.

(Rizwan Ahmed)

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स्वच्छ भारत
एक कदम स्वच्छता की ओर

ANNEXURE - VII

PDPM

Indian Institute of Information Technology, Design & Manufacturing, Jabalpur

Summary of the B.Tech. Degree

S. No.	Discipline	No of registered Students	Passing out Students
1.	Computer Science & Engineering	97	94
2.	Electronics & Communication Engineering	70	68
3.	Mechanical Engineering	76	72
4.	Design (B.Des)	24	24
	Total	**267**	**258**

List of degree awardees

1. Bachelor of Technology (B.Tech.)

a. Computer Science and Engineering

S. No	Roll No	Name	Discipline
1.	2016002	A JYOTHI SWAROOP	Computer Science & Engineering
2.	2016005	ABHAY GUPTA	Computer Science & Engineering
3.	2016006	ABHILASH GUPTA	Computer Science & Engineering
4.	2016007	ABHINAV SINGH	Computer Science & Engineering
5.	2016009	ADITYA ABHISHEK	Computer Science & Engineering
6.	2016011	ADITYA VERMA	Computer Science & Engineering
7.	2016013	AKANKSHA BANTHWAN	Computer Science & Engineering
8.	2016017	ALOK BHARTI	Computer Science & Engineering
9.	2016019	AMAN CHAUHAN	Computer Science & Engineering
10.	2016025	AMIRTHY TEJESHWAR RAO	Computer Science & Engineering
11.	2016026	AMISH KUMAR NAIDU	Computer Science & Engineering
12.	2016032	ANJALI SRIVASTAVA	Computer Science & Engineering
13.	2016040	ANUJ KUMAR GAUTAM	Computer Science & Engineering
14.	2016041	ANURAG BISHT	Computer Science & Engineering
15.	2016042	ANVIKSHA KHUNTETA	Computer Science & Engineering
16.	2016047	ARIHANT KUMAR JAIN	Computer Science & Engineering
17.	2016048	ARJUN SINGH	Computer Science & Engineering
18.	2016054	ASHVINI MEENA	Computer Science & Engineering
19.	2016059	AYASKANT PANIGRAHI	Computer Science & Engineering
20.	2016061	BABLI YADAV	Computer Science & Engineering
21.	2016062	BANALA SIVARAMA KRISHNA	Computer Science & Engineering
22.	2016069	BUDDHA GOUTHAM HIMA	Computer Science & Engineering
23.	2016070	CHATLA HARISHWAR	Computer Science & Engineering

24.	2016074	DEEPANSH JAIN	Computer Science & Engineering
25.	2016081	DHAVAL TAUNK	Computer Science & Engineering
26.	2016097	GUNTI SRINIVAS	Computer Science & Engineering
27.	2016098	GURPREET SINGH VIRDI	Computer Science & Engineering
28.	2016107	HIMANI NARAIN	Computer Science & Engineering
29.	2016108	ISHA AGRAWAL	Computer Science & Engineering
30.	2016109	JADAV CHANDRAKANTH	Computer Science & Engineering
31.	2016110	JAGADAM SAI SMARAN	Computer Science & Engineering
32.	2016111	JAGRITI	Computer Science & Engineering
33.	2016115	KANIKA DHIMAN	Computer Science & Engineering
34.	2016116	KANIKA PAHILWANI	Computer Science & Engineering
35.	2016117	GARIMA KARNWAL	Computer Science & Engineering
36.	2016118	KARTIK KATAHRE	Computer Science & Engineering
37.	2016119	KASA SHIVA	Computer Science & Engineering
38.	2016124	KETHAVATH HARISHANKER	Computer Science & Engineering
39.	2016134	KUNDUR TEJASWI	Computer Science & Engineering
40.	2016135	KUSHDEEP MITTAL	Computer Science & Engineering
41.	2016142	MAHAJAN REVATI PRAVIN	Computer Science & Engineering
42.	2016145	MANDRU CHAITANYA	Computer Science & Engineering
43.	2016152	MEGA RAMAKRISHNA	Computer Science & Engineering
44.	2016154	MEHUL GUPTA	Computer Science & Engineering
45.	2016157	MOHAMMAD AKRAM	Computer Science & Engineering
46.	2016159	MOHIT SINGH RAJPUT	Computer Science & Engineering
47.	2016162	MUDIT JOSHI	Computer Science & Engineering
48.	2016167	NAVNEET KUMAR CHAURASIYA	Computer Science & Engineering
49.	2016169	NIDHI GUPTA	Computer Science & Engineering
50.	2016175	NUTANAKALUVA SHAIK MOHAMMED INAMUL HASSAN	Computer Science & Engineering
51.	2016179	PAPOLU MADHUBABU	Computer Science & Engineering
52.	2016181	PATIL DHANSHREE ANIL	Computer Science & Engineering
53.	2016182	PIYUSH KARIRA	Computer Science & Engineering
54.	2016184	PRAKARSH JAIN	Computer Science & Engineering
55.	2016185	PRAKASH NIDHI VERMA	Computer Science & Engineering
56.	2016189	PRATEEK MITTAL	Computer Science & Engineering
57.	2016190	PRATYUSH GARG	Computer Science & Engineering
58.	2016192	PREM PRAKASH HANSDA	Computer Science & Engineering
59.	2016193	PRIYANSHI MAHAUR	Computer Science & Engineering
60.	2016195	PYDIMARRI VENKATA ANANTHA	Computer Science & Engineering
61.	2016197	RAHUL JAIN	Computer Science & Engineering
62.	2016200	RAJAT KUMAR	Computer Science & Engineering
63.	2016213	RIYA KAUSHAL	Computer Science & Engineering
64.	2016215	ROHIT KUMAR	Computer Science & Engineering
65.	2016217	ROUNAK AGARWAL	Computer Science & Engineering
66.	2016218	SAAKET KUMAR CHAWALI	Computer Science & Engineering
67.	2016222	SAMA ROHITH REDDY	Computer Science & Engineering
68.	2016223	SAMARTH DUBEY	Computer Science & Engineering
69.	2016224	SAMYAK JAIN	Computer Science & Engineering

70.	2016226	SANJEEV SINGH	Computer Science & Engineering
71.	2016231	SATYA PRAKASH BHARTI	Computer Science & Engineering
72.	2016237	SAURAV KUMAR	Computer Science & Engineering
73.	2016238	SAYALI SAWARKAR	Computer Science & Engineering
74.	2016242	SHARMA NITINKUMAR RAJESH	Computer Science & Engineering
75.	2016246	SHIVAM GARG	Computer Science & Engineering
76.	2016247	SHIVANGI KATIYAR	Computer Science & Engineering
77.	2016248	SHIVANI ASHOK KUMAR	Computer Science & Engineering
78.	2016251	SHIVENDRA PRATAP SINGH	Computer Science & Engineering
79.	2016254	SHRIPRIYA MAHESHWARI	Computer Science & Engineering
80.	2016255	SHUBHAM DIXIT	Computer Science & Engineering
81.	2016257	SHUBHAM KUMAR	Computer Science & Engineering
82.	2016260	SHUBHANGI KORI	Computer Science & Engineering
83.	2016264	SIMRAN SRIVASTAVA	Computer Science & Engineering
84.	2016265	SOMYA JAIN	Computer Science & Engineering
85.	2016269	SUMIT ANAND	Computer Science & Engineering
86.	2016270	SUMIT CHAUHAN	Computer Science & Engineering
87.	2016275	TARUN KUMAR MEENA	Computer Science & Engineering
88.	2016278	TIDKE PRAJWAL NARENDRA	Computer Science & Engineering
89.	2016280	TUSHAR SRIVASTAVA	Computer Science & Engineering
90.	2016282	UPDESH YADAV	Computer Science & Engineering
91.	2016283	UPPULA HARSHITH	Computer Science & Engineering
92.	2016284	UTHARAPALLY SAI SHIVA	Computer Science & Engineering
93.	2016288	VARANASI SAI ANURAG	Computer Science & Engineering
94.	2016301	RAVI RAJ RAUT	Computer Science & Engineering

b. Electronics and Communication Engineering

S No.	Roll No.	Name	Discipline
1.	2016018	AMAN ANAND	Electronics & Communication Engineering
2.	2016022	AMAN SRIVAS	Electronics & Communication Engineering
3.	2016024	AMBATI NAVEEN REDDY	Electronics & Communication Engineering
4.	2016033	ANKIT RAJ	Electronics & Communication Engineering
5.	2016034	ANKIT YADAV	Electronics & Communication Engineering
6.	2016036	ANSHUMAN MISHRA	Electronics & Communication Engineering
7.	2016037	ANUBHAV DUTTA CHOUDHURY	Electronics & Communication Engineering
8.	2016045	APPARI DIVYA MANIKANTA	Electronics & Communication Engineering
9.	2016053	ASHUTOSH VISHNOI	Electronics & Communication Engineering
10	2016056	ATUL KUMAR	Electronics & Communication Engineering
11	2016063	BANDARU SAI KUMAR	Electronics & Communication Engineering
12	2016067	BHUPENDRA MEENA	Electronics & Communication Engineering
13	2016068	BONTHU RAJASEKHARA REDDY	Electronics & Communication Engineering
14	2016071	CHITIKELA HEMA SAI LATHA	Electronics & Communication Engineering
15	2016079	DEVENDRA SHARMA	Electronics & Communication Engineering
16	2016080	DEVESH VISHWAKARMA	Electronics & Communication Engineering
17	2016082	DHEEKONDA VENKATASAI RAO	Electronics & Communication Engineering

18	2016085	DURGAM PRADEEPKUMAR	Electronics & Communication Engineering
19	2016088	GALI SHRAVYA SHREE	Electronics & Communication Engineering
20	2016089	GAURAV KUMAR SHARMA	Electronics & Communication Engineering
21	2016092	GAYATRI MECH	Electronics & Communication Engineering
22	2016095	GONE ARUN KUMAR	Electronics & Communication Engineering
23	2016100	GYANESH KUMAR CHAUBEY	Electronics & Communication Engineering
24	2016101	HARENDRA PARIHAR	Electronics & Communication Engineering
25	2016103	HARSH SRIVASTAVA	Electronics & Communication Engineering
26	2016104	HARSHIT PANT	Electronics & Communication Engineering
27	2016112	JAY MANAK BOHRA	Electronics & Communication Engineering
28	2016127	KOLLIPARA DEVI ATHULYA	Electronics & Communication Engineering
29	2016128	KOMAL KUMAR	Electronics & Communication Engineering
30	2016129	KOPPOLU DHEERAJ	Electronics & Communication Engineering
31	2016130	KOTA MOHITH	Electronics & Communication Engineering
32	2016131	KRISHNA KUMAR	Electronics & Communication Engineering
33	2016137	LAKSHIT SAGAR	Electronics & Communication Engineering
34	2016146	MANISH PRADHAN	Electronics & Communication Engineering
35	2016149	MANTHENA AAKASH	Electronics & Communication Engineering
36	2016166	NAVNEET KUMAR	Electronics & Communication Engineering
37	2016173	NUKATHOTI ROSE BABU	Electronics & Communication Engineering
38	2016174	NULU LOKESH	Electronics & Communication Engineering
39	2016176	OJASW MATHUR	Electronics & Communication Engineering
40	2016180	PARTH BATRA	Electronics & Communication Engineering
41	2016183	PRAGATI MEHROTRA	Electronics & Communication Engineering
42	2016186	PRAKHAR KUMAR SINGH	Electronics & Communication Engineering
43	2016199	RAHUL SONI	Electronics & Communication Engineering
44	2016204	RAVI KANT	Electronics & Communication Engineering
45	2016205	RAVI KUMAR MEENA	Electronics & Communication Engineering
46	2016209	RISHABH SINGH TOMAR	Electronics & Communication Engineering
47	2016219	SAHDEO KUMAR	Electronics & Communication Engineering
48	2016220	SALADI TARUN VENKAT	Electronics & Communication Engineering
49	2016225	SANDEEP KUSHWAHA	Electronics & Communication Engineering
50	2016229	SANYA	Electronics & Communication Engineering
51	2016230	SARANSH MARAVI	Electronics & Communication Engineering
52	2016232	SATYAM KUMAR DUBEY	Electronics & Communication Engineering
53	2016233	SAURABH CHAURASIA	Electronics & Communication Engineering
54	2016235	SAURABH KUMAR	Electronics & Communication Engineering
55	2016236	SAURABH TIWARI	Electronics & Communication Engineering
56	2016256	SHUBHAM KHATRI	Electronics & Communication Engineering
57	2016258	SHUBHAM SHARMA	Electronics & Communication Engineering
58	2016259	SHUBHAM VATS	Electronics & Communication Engineering
59	2016271	SUNIL KUMAR	Electronics & Communication Engineering
60	2016272	SURENDRA REDDY POLURI	Electronics & Communication Engineering
61	2016273	TADIKONDA KUNDANA RASI	Electronics & Communication Engineering
62	2016274	TANAY KANAUJIA	Electronics & Communication Engineering
63	2016279	TOGARATI VENKATA HARIHARAN	Electronics & Communication Engineering
64	2016287	VADITHE ANANTHA LAKSHMAN	Electronics & Communication Engineering

65	2016290	VEMPATI SRI VATSAVA	Electronics & Communication Engineering
66	2016291	VENNAMPALLY VIGNAN	Electronics & Communication Engineering
67	2016294	VISHAL PANT	Electronics & Communication Engineering
68	2016299	YAMMANUR KRISHNA PARAG	Electronics & Communication Engineering

c. Mechanical Engineering

S. No.	Roll No.	Name	Discipline
1.	2016008	ADARSH KUMAR SINGH	Mechanical Engineering
2.	2016010	ADITYA KUMAR PRASAD	Mechanical Engineering
3.	2016012	AGNI ASHOK MALVIY	Mechanical Engineering
4.	2016023	AMAN VERMA	Mechanical Engineering
5.	2016027	AMIT KUMAR MEENA	Mechanical Engineering
6.	2016028	AMIT TAPRIA	Mechanical Engineering
7.	2016030	ANIKET MISHRA	Mechanical Engineering
8.	2016035	ANSHU RAJ	Mechanical Engineering
9.	2016038	ANUJ KUMAR	Mechanical Engineering
10.	2016039	ANUJ KUMAR	Mechanical Engineering
11.	2016044	APOORV VERMA	Mechanical Engineering
12.	2016049	ARPAN TARKAS	Mechanical Engineering
13.	2016050	ARVIND SINGH	Mechanical Engineering
14.	2016051	ASHISH BANSAL	Mechanical Engineering
15.	2016052	ASHOK BAWRI	Mechanical Engineering
16.	2016055	ATUL DWIVEDI	Mechanical Engineering
17.	2016076	DEV VERMA	Mechanical Engineering
18.	2016078	DEVANSHU VERMA	Mechanical Engineering
19.	2016084	DILKHUSH MEENA	Mechanical Engineering
20.	2016086	DURGANSHU MISHRA	Mechanical Engineering
21.	2016090	GAURAV SINGH	Mechanical Engineering
22.	2016093	GHANSHYAM MEENA	Mechanical Engineering
23.	2016099	GURRALA SAI PREM REDDY	Mechanical Engineering
24.	2016105	HEERESH KUMAR	Mechanical Engineering
25.	2016106	HEMANT KUMAR AGNIHOTRI	Mechanical Engineering
26.	2016113	JAYANT KUMAR MEENA	Mechanical Engineering
27.	2016120	KATTA VINOD BABU	Mechanical Engineering
28.	2016121	KATYAYANI TRIVEDI	Mechanical Engineering
29.	2016123	KESHAV YADAV	Mechanical Engineering
30.	2016125	KHANDELWAL AYUSH DILIP	Mechanical Engineering
31.	2016126	KODIGENAHALLI NARASIMHA REDDY	Mechanical Engineering
32.	2016132	KSHITIJ RAJ	Mechanical Engineering
33.	2016133	KULDEEP THAKUR	Mechanical Engineering
34.	2016138	LALIT KUMAR	Mechanical Engineering
35.	2016139	LAVISH NAMAN	Mechanical Engineering
36.	2016140	LOKESH BARANGE	Mechanical Engineering
37.	2016141	LOKESH KUMAR GUPTA	Mechanical Engineering

38.	2016143	MAHIMA	Mechanical Engineering
39.	2016144	MALYAJ MISHRA	Mechanical Engineering
40.	2016150	MAYANK JAIN	Mechanical Engineering
41.	2016151	MAYANK PATEL	Mechanical Engineering
42.	2016158	MOHAMMAD FAUZAAN	Mechanical Engineering
43.	2016165	NARESH KUMAR MEENA	Mechanical Engineering
44.	2016168	NAVNEET SRIVASTAVA	Mechanical Engineering
45.	2016170	NIKHIL KUMAR AGARAWAL	Mechanical Engineering
46.	2016172	NITIN SHARMA	Mechanical Engineering
47.	2016177	OM PATTNAIK	Mechanical Engineering
48.	2016178	PAI NAMIT NARASIMHAN	Mechanical Engineering
49.	2016188	PRASHANT MISHRA	Mechanical Engineering
50.	2016196	R SHIVAM MURTHY	Mechanical Engineering
51.	2016201	RAJESH KUMAR YADAV	Mechanical Engineering
52.	2016203	RAUNAK PATEL	Mechanical Engineering
53.	2016206	RHYTHUM GOEL	Mechanical Engineering
54.	2016207	RISHABH BAJPAI	Mechanical Engineering
55.	2016210	RISHABH KUMAR TANTUWAY	Mechanical Engineering
56.	2016211	RITESH SHARMA	Mechanical Engineering
57.	2016212	RITVIZ DOSHI	Mechanical Engineering
58.	2016214	ROHAN KUMAR JUMNANI	Mechanical Engineering
59.	2016227	SANJIV RATHORE	Mechanical Engineering
60.	2016228	SANTOSH KUMAR	Mechanical Engineering
61.	2016239	SHAHZAD AHAMAD	Mechanical Engineering
62.	2016240	SHAIK MOHAMMED SOHAIL	Mechanical Engineering
63.	2016241	SHANTANU SINGH	Mechanical Engineering
64.	2016249	SHIVANSH MEHROTRA	Mechanical Engineering
65.	2016252	SHREYA SRIVASTAVA	Mechanical Engineering
66.	2016261	SHWETA GUPTA	Mechanical Engineering
67.	2016262	SIDDHANT AGRAWAL	Mechanical Engineering
68.	2016263	SIDDHANT MISHRA	Mechanical Engineering
69.	2016276	THODUPUNOORI ANKITH	Mechanical Engineering
70.	2016293	VIKASH KUMAR MEENA	Mechanical Engineering
71.	2016295	VISHU CHAUDHARY	Mechanical Engineering
72.	2016297	VIVEK MEENA	Mechanical Engineering

2. Bachelor of Design (B.Des.)

S. No.	Roll No.	Name	Discipline
1.	2016501	ABHINAV M	Design
2.	2016502	ADITYA DEV SINGH	Design
3.	2016504	AKASH YADAV	Design
4.	2016505	ANANTHAKRISHNAN. M	Design
5.	2016506	ANJAL HADAN E.A	Design
6.	2016507	ANSHULA SINGH	Design
7.	2016508	ANUSHA. T	Design

8.	2016510	AYUS. R	Design
9.	2016511	BHARAT SINGH	Design
10.	2016512	CHANDRIMA BISWAS	Design
11.	2016513	DHANRAJ. R	Design
12.	2016514	KARTIK SINGH	Design
13.	2016515	KARTTIKEYA KUMAR SINGH	Design
14.	2016517	PRANAV MOLASI	Design
15.	2016519	RICHARD YENDREMBAM	Design
16.	2016520	KOLGAONKAR SAHIL MANGESH	Design
17.	2016521	SHIVAM AVINASH GOKHALE	Design
18.	2016524	SOUMIL SINGH PANWAR	Design
19.	2016525	AMGOTH SRINATH NAIK	Design
20.	2016526	SUNKESULA ABHILASH	Design
21.	2016527	TANAI MATHUR	Design
22.	2016528	TANISHQA BOBDE	Design
23.	2016529	UNS JAYA PANDIT	Design
24.	2016530	YASH RAJ KAPOOR	Design

ANNEXURE- VIII A

BTech

Curriculum Structure

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7/8	Semester 8/7
NS1 (3L+2T, 4C) Mathematics I	**NS3** (3L+2T, 4C) Mathematics II	Data Structures using C: 4C	Design and Analysis of Algorithms: 4C	**DS2** (1L+6P, 4C) DS302 Engineering Design	**MN2** (8P, 4C) Fabrication Project	**Open E8** (3L, 3C)	Project-based Internship (15C) *(PBI: Optional in 7th semester)*
NS2 (3L+1T+2P, 4C) Physics I	**NS4** (3L+1T+2P, 4C) NS104 Physics II	Computer Organization and Architecture: 3C	Software Engineering: 4C	**Open E1** (3L, 3C)	**Open E4** (3L, 3C)	**Open E9** (3L, 3C)	
HS1 (1L+2T, 2C) HS101 Effective Communications OR **HS2 Alternate**	**HS3** (2L+2T, 3C) HS102 Indian Culture, Ethics and Human Values	Database Management Systems: 4C	Computer Networks: 4C	**Open E2** (3L, 3C)	**Open E5** (3L, 3C)	**Open E10** (3L, 3C)	**OR**
ES1 (2L+3P, 3C) Introduction to Programming	**ES3** (2L+3P, 3C) DS101 Engineering Graphics	Operating Systems: 3C	Artificial Intelligence: 3C	**Open E3** (3L, 3C)	**Open E6** (3L, 3C)	**Open E11** (3L, 3C)	
Prof C1/ SM1 (1L, 1C) ME101 Introduction to Profession	**ES4** (3L+2P, 3C) ES101 Basic Electronics	Introduction to Data Science: 4C	Cyber Security: 3C	**HS3**(2L, 2C) Ecology and Environment	**Open E7** (3L, 3C)	**Open E12** (3L, 3C)	BTP (9C) + 2 **OEs** (3-0-0-3) (Total: 6C)
	NS5 (2L, 2C) Biology for Engineers						
		IT Workshop I (2P, 2 C) OOPs in Java	IT Workshop II (2P, 2 C) Programming tools and Techniques – Latex, Git, and Git Hub, debugger, program analysis and testing tools	IT Workshop III (2P, 2 C) Web and Mobile App Development	IT Workshop IV (2P, 2 C) HPC using Hadoop, Spark, OpenMP, MPI		
ES2 Innovation Theory and Practice (1L+2P, 2C)		**PR1 Discipline Project (2C)**		**PR2 Discipline Project (2C)**			
PC1 Professional Development Course (1C)		**PC1 Professional Development Course** (1C)		**PC3 Professional Development Course** (1C)		**PC4 Professional Development Course** (1C)	
Total Contact Hours 23	30						3 / 0
11-5-7	16-5-9						

Total Credits	14	22	19	22	19	23	16	15
Credits per year	36		41		42		31	
Total Degree Credits	150							

Note:

1. *The credits of Projects (Innovation, Discipline projects) and PDC are allotted/counted in the end of even semester.*
2. *Discipline core courses s can be of any one of the following structures 3-0-2, 2-2-2, 3-0-0, 3-1-0, 3-1-2 with credit count limit on credit counts.*

CSE Elective Courses:

S. No	Course Code	Course Name	Credits
1	CS421c	Statistical Methods in Computer Science	3L, 3C
2	CS422a	Natural Language Processing	3L, 3C
3	CS422b	Visual Cryptography & Data Hiding	3L, 3C
4	CS422c	Model Thinking	3L, 3C
5	ES406e	Computer Graphics	3L, 3C
6	CS420a	Big Data Analytics	3L, 3C
7	CS420b	Principles of Programming Languages	3L, 3C
8	ES407e	IoT	3L, 3C
9	ES407f	Social network Analysis	3L, 3C
10	NS205b	Analytical Methods in Engineering	3L, 3C
11	NS205d	Applied Probability and Statistics	3L, 3C
12	NS205e	Numerical Methods	3L, 3C
13	NS205f	Optimization	3L, 3C
14	CS310a	Soft Computing	3L, 3C
15	CS310b	Parallel Computing	3L, 3C
16	CS310c	Coding Theory	3L, 3C
17	EC313a	Digital Communication	3L, 3C
18	EC313b	Digital Signal Processing	3L, 3C
19	EC313c	IC Fabrication	3L, 3C
20	CS313a	Image Processing	3L, 3C
21	CS313b	Network Security & Cryptography	3L, 3C
22	CS309	Theory of Computation	3L, 3C

23	CS314a	Wireless and Mobile networks	3L, 3C
24	CS314b	Machine Learning	3L, 3C
25	CS314c	Human Computer Interactions	3L, 3C
26	CS314d	Compiler Design	3L, 3C
27	CS416a	Pattern Recognition	3L, 3C
28	CS416b	Internet Technology	3L, 3C
29		Data Clustering	3L, 3C
30	CS416d	Computational Geometry	3L, 3C
31	CS417a	Advanced Computer Architecture	3L, 3C
32	CS417b	Cloud Computing	3L, 3C
33	CS417c	Object Oriented Analysis and Design	3L, 3C
34	CS418a	Complex Networks	3L, 3C
35	CS418b	Data Mining and Data Warehousing	3L, 3C
36	CS418c	Advanced Algorithms	3L, 3C
37	CS318d	Mesh Free Computations	3L, 3C
38	CS419a	Computer Vision	3L, 3C
39	CS419b	Distributed Systems	3L, 3C
40	CS419c	Quantitative Methods in Software Engineering	3L, 3C
41	CS421a	Image Reconstruction	3L, 3C
42	CS421b	Software testing and Quality Assurance	3L, 3C
43	CS420c	Approximation Algorithms	3L, 3C
44	CS420d	Randomized Algorithms	3L, 3C
45		Hardware modeling using Verilog	3L, 3C
46		Introduction to Haskell programming	3L, 3C
47		Online Learning	3L, 3C
48		Reinforcement Learning	3L, 3C
49		Embedded System Design with ARM	3L, 3C
50		Introduction to Blockchain Technology and Applications	3L, 3C
51		Multi-Core Computer Architecture - Storage and Interconnects	3L, 3C
52		Privacy and Security in Online Social Media	3L, 3C
53		User-Centric Computing for Human-	3L, 3C

		Computer Interaction	
54		Model Checking	3L, 3C
55		ANIMATION	3L, 3C
56		Deep Learning	3L, 3C
57		Recommender Systems	3L, 3C
58		Multimedia Processing	3L, 3C
59		Computer Vision -Algorithms and Applications	3L, 3C
60		Computer Vision with Deep Learning	3L, 3C
61		Biometric Technologies and Applications	3L, 3C
62		Medical Image Analysis	3L, 3C
63		Fundamentals of Digital Image and Video Processing	3L, 3C
64		NoSQL Databases	3L, 3C

ANNEXURE - VIII B1

COURSE CURRICULUM(ELECTRONICS AND COMMUNICATION ENGINEERING)							
Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
NS1 (3L+2T, 4C) Mathematics I	**NS3** (3L+2T, 4C) Mathematics II	DC1 (3L+2P=4C)	DC6 (2L+2P=3C)	**DS2** (1L+6P, 4C) DS302 Engineering Design	**MN2** (8P, 4C) Fabrication Project	Open E10 (3L, 3C)	Project-based Internship (16C) **OR** BTP(10C) + 2 Oes(3-0-03)(Total: 6C) (PBI: Optional in 7thsemester)
NS2 (3L+1T+2P, 4C) Physics I	**NS4** (3L+1T+2P, 4C) NS104 Physics II	DC2(a,b) (2L=2C, 2L=2C)	DC7 (3L+2P=4C)	**Open E1** (3L, 3C)	**Open E4** (3L, 3C)	Open E11 (3L, 3C)	
HS1 (1L+2T, 2C) HS101 Effective Communications **OR HS2 Alternative**	**HS3** (2L+2T, 3C) HS102 Indian Culture, Ethics and Human Values	DC3(a,b) (2L=2C, 2L=2C)	DC8(a,b) (2L=2C, 2L=2C)	**Open E2** (3L, 3C)	**Open E5** (3L, 3C)	Open E12 (3L, 3C)	
ES1 (2L+3P, 3C) Introduction to Programming	**ES3** (2L+3P, 3C) DS101 Engineering Graphics	DC4 (2L+2P=3C)	DC9 (3L=3C)	**Open E3** (3L, 3C)	**Open E6** (3L, 3C)	Open E13 (3L, 3C)	
Prof C1/ SM1 (1L, 1C) EC101 Introduction to Profession	**ES4** (3L+2P, 4C) ES101 Basic Electronics	DC5 (3L=3C)	DC10 (3L+2P=4C)	**HS3**(2L, 2C) Ecology and Envirment	**Open E7** (3L, 3C)	Open E14 (3L, 3C)	
	NS5 (2L, 2C) Biology for Engineers						
		IT Workshop I (2P, 2 C) **Matlab and Simulink,Pspice**	IT Workshop II (2P, 2 C) **CST, Labview**	IT Workshop III (2P, 2 C) **Tanner Tool(Tspice), VHDL and Verilog**	IT Workshop IV (2P, 2 C) **Cadence, Silvaco, Xylink,Sentaurus Tcad**		
ES2 Innovation Theory and Practice (1L+2P, 2C)		**PR1 Discipline Project (2C)**		**PR2 Discipline Project (2C)**			
PC1 Professional Development Course (1C)		**PC1 Professional Development Course** (1C)		**PC3 Professional Development Course** (1C)		**PC4 Professional Development Course** (1C)	
14	23	20	23	17	21	16	16
							150

Discipline Core(DC)					
3rd Semester				4th Semester	
DC1	Digital Electronics and Microprocessor Interfacing	3L+2P=4C	DC6	Analog Integrated Circuit	2L+2P=3C
DC2a	AI and its application	2L=2C	DC7	Control Systems	3L+2P=4C
DC2b	Network Theory(Analysis and synthesis)	2L=2C	DC8a	digital Communications	2L=2C
DC3a	Electronics Devices and Circuits	2L=2C	DC8b	Architecture of Cellular Systems(1G-5G)	2L=2C
DC3b	Instrumentation and Measurement	2L=2C	DC9	VLSI System Design (VLSI IC desien, logic synthesis using VHDL)	3L=3C
DC4	Principle of Analog Communications	2L+2P=3C	DC10	Digital Signal Processing	3L+2P=4C
DC5	Fundamentas of Electromagnetic Theory	3L=3C			
Total		19		Total	19

The Electives are floated as per report of different groups like Mckensy and different industry. It is also consider the feedback of placement cell.

OPEN ELECTIVES					
OPEN ELECTIVES to UG		PG Electives Open to UG		PhD Elective Open to PG/UG	
5th Semester	6th Semester	7th Semester	8th Semester	7th Semester	8th Semester
Biomedical Instrumentation	Optical Communication	Random Variables and Processes	Application of Signal and Image proceessing	Advanced Signal Processing	Fuzzy logic and Neural Networks
Advanced Filter Design and its application	RF and Microwave Engineering	Advanced antena theory design	Radar system and Communication	Advanced Time frequency analysis	RF and Microwave Active Circuits
Radio Frequency Integrated Circuits Design	Satelite communication	Digital VLSI design	Electrical Drives and Control	Advanced Engineering Electromagnetics	Advanced Semiconductor Devices

Computer Networks	Time frequency analysis	Information theory and coading	VLSI Test and Testibility	VLSI Device Modelling	Selected Topics in Wireless Communication
Physics of Semiconductor Devices	VLSI Test and Testability	Power System Engineering	RF MEMS design	Electromagnetics Interference and Compatibility	Optoelectronics Devices and Application
Introduction to machine learning	Antenna Theory & Design	Adaptive technology development	Brain Computer Interface	Simulation of Modern Power Systems	Multidimensional Signal Processing
Image Processing	Wavelet and Filter Bank	Autonomus vehicle and robotics	Internet of Things		
Advanced Control Systems	Wireless Communications	Smart grid and future of energy sector	Energy storage technologies		
IC Fabrication	CMOS Memory Design	Electric vehicles and charging infrastructure	Optimization Techniques for Digital VLSI Design		
Nano photonics and plasmonics	Power Electronics	VLSI Physical Design	Foundations of Cognitive Robotics		
Photovoltaics; fundamentals and application	Introduction to deep learning				
Sensors and Actuators	Multimedia processing				
Numerical Techniques in Electromagnetics	Computer Vision				
Digital System Design	Industrial Microwave and Communication				
Detection and Estimation Theory	Mixed-Mode Circuit Design				

ANNEXURE - VIII B2

Existing 5th Sem	Modified 5th sem	Modified 6th sem	Existing 6th sem	7th Semster	8th semester
DS2 (2L+4P, 5C) DS302: Engineering design (incl design & Fabrication project)	**DS2** (1L+6P, 4C) DS302 Engineering Design	**MN2** (8P, 4C) Fabrication Project	HS3(3L,4C) Open elective2 from HS HS303a,b...	Open E4 (3L, 3C)	Project-based Internship (16C) **OR** BTP(10C) + 2 Oes(3-0-03)(Total: 6C) **(PBI: Optional in 7thsemester)**
Prof C6(3L,4C) EC307: Fundamental of Electromagnetic Theory	Fundamentas of Electromagnetic Theory	**HS3**(2L, 2C) Ecology and Envirment	HS4(3L, 4C), (Core course) HS304: Environmental Science	Open E5 (3L, 3C)	
Prof C 7: EC308:Control Systems	Control Systems	Linear Integrated Circuit	Prof C9(3L,4C) EC312: Linear Integrated Circuit Design	Open E6 (3L, 3C)	
Prof C 8(3L,4C) EC309: Principle of Communication	Principle of Communications	Open E2 Digital Communication Digital Signal Processing	Prof El 2(3L,4C) EC313a,b... Digital Communication Digital Signal Processing	Open E7 (3L, 3C)	
ProfEl 1(2L,2C) EC310a,b... El1: Computer Networks Digital System Design	Open E1 El1: Computer Networks Digital System Design	Open E3 Antenna Theory & Design Wavelet and Filter Bank Biomedical Instrumentation	Prof El3(3L,4C) EC314a,bc... Antenna Theory & Design Wavelet and Filter Bank Biomedical Instrumentation	Open E7(3L, 3C)	
	IT Workshop III (2P, 2 C) **Tanner Tool(Tspice), VHDL and Verilog**	IT Workshop IV (2P, 2 C) **Cadence, Silvaco, Xylink,Sentaurus Tcad**			
	PR2 Discipline Project (2C)				
	PC3 Professional Development Course (1C)			**PC4 Professional Development Course**(1C)	

ANNEXURE-VIII C1

BTech Mechanical Engineering

Curriculum Structure

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7/8	Semester 8/7
NS1 (3L+2T, 4C) Mathematics I	**NS3** (3L+2T, 4C) Mathematics II	**Discipline Core (DC) DC1**	**DC6**	**DS2** (1L+6P, 4C) DS302 Engineering Design	**MN2** (8P, 4C) Fabrication Project	**Open E9** (3L, 3C)	Project-based Internship (16C) *(PBI: Optional in 7th semester)* **OR** BTP (10C) + 2 **OEs** (3-0-0-3) (Total: 6C)
NS2 (3L+1T+2P, 4C) Physics I	**NS4** (3L+1T+2P, 4C) NS104 Physics II	**DC2**	**DC7**	**Open E1** (3L, 3C)	**Open E4** (3L, 3C)	**Open E10** (3L, 3C)	
HS1 (1L+2T, 2C) HS101 Effective Communications OR **HS2 Alternate**	**HS3** (2L+2T, 3C) HS102 Indian Culture, Ethics and Human Values	**DC3**	**DC8**	**Open E2** (3L, 3C)	**Open E5** (3L, 3C)	**Open E11** (3L, 3C)	
ES1 (2L+3P, 3C) Introduction to Programming	**ES3** (2L+3P, 3C) DS101 Engineering Graphics	**DC4**	**DC9**	**Open E3** (3L, 3C)	**Open E6** (3L, 3C)	**Open E12** (3L, 3C)	
Prof C1/ SM1 (1L, 1C) ME101 Introduction to Profession	**ES4** (3L+2P, 4C) ES101 Basic Electronics	**DC5**	**DC10**	**HS3**(2L, 2C) Ecology and Environment	**Open E7** (3L, 3C)	**Open E13** (3L, 3C)	
	NS5 (2L, 2C) Biology for Engineers						
		IT Workshop I (2P, 2C)	IT Workshop II (2P, 2C)	IT Workshop III (2P, 2C)	IT Workshop IV (2P, 2C)		
ES2 Innovation Theory and Practice (1L+2P, 2C)		**PR1 Discipline Project (2C)**		**PR2 Discipline Project (2C)**			
PC1 Professional Development Course (1C)		**PC1 Professional Development Course** (1C)		**PC3 Professional Development Course** (1C)		**PC4 Professional Development Course** (1C)	
Total Contact Hours: 23	30						3 / 0
11-5-7	16-5-9						
Total Credits: 14	23	20	23	17	21	16	16
Credits per year: 37		43		38		32	
Total Degree Credits: 150							

Note:

1. *The credits of Projects (Innovation, Discipline projects) and PDC are allotted/counted in the end of even semester.*
2. *Discipline core courses s can be of any one of the following structures 3-0-2, 2-2-2, 3-0-0, 3-1-0, 3-1-2 with credit count limit on credit counts.*

Semester III

S. No.	Course Number and Name	L-T-P	Credits
1.	DC1 Manufacturing Processes	4	4
2.	DC2 Solid Mechanics	2-2-2	4
3.	DC3 Engineering Materials and Characterization	3-0-0	3
4.	DC4 Engineering Thermodynamics	3-1-0	3
5.	DC5 Kinematics and Dynamics of Machines	3-1-2	4
6.	IT Workshop I (covers contents related to drawing/drafting/modelling and kinematic/ dynamic modelling, e.g., through s/w like SolidWorks and Adams)	0-0-2	2
	Total	14-4-8	20

Semester IV

S. No.	Course Number and Name	L-T-P	Credits
1.	DC6 Manufacturing Technology	3-0-2	4
2.	DC7 Fluid Mechanics and Machines	3-1-2	4
3.	DC8 Design of Mechanical Components	2-2-0	3
4.	DC9 Industrial Internet of Things	2-0-2	3
5.	DC10 Heat Transfer	3-0-2	4
6.	IT Workshop II (covers contents related to solid modelling and manufacturing, e.g., through s/w like CATIA and PowerMill)	0-0-2	1
	Total	13-3-10	20

Semester V

S. No.	Course Number and Name	L-T-P	Credits
1.	IT Workshop III (covers contents related to simulation, e.g., through s/w like Matlab)	0-0-2	1
	Total	0-0-2	2

Semester VI

S. No.	Course Number and Name	L-T-P	Credits
1.	IT Workshop IV (covers contents related to CAE, e.g., through s/w like Ansys/LS-Dyna)	0-0-2	1
	Total	0-0-2	2

List of Open Electives (MED)

UG MECHANICAL ENGINEERING & UG SMART MANUFACTURING

Slots: 3 OEs in 5th sem, 4 in 6th Sem and 5 in 7th Sem (Total 12 OEs)

Code: C: CAD/CAM, D: Design, I: Industrial, M: Manufacturing T: Thermal. No. indicate semester the course is offered

S. No.	Course Number and Name	L-T-P	Credits	Domain	Semester
ME01	Smart Manufacturing	3-0-0	3	C	5
ME02	Computer Aided Design	3-0-0	3	C	5
ME03	Computer Aided Manufacturing	3-0-0	3	C	5
ME04	Computer Integrated Manufacturing Systems	3-0-0	3	C	5
ME05	NC-CNC Machine Tools and Programming	3-0-0	3	C	6
ME06	Computer Aided Process Planning	3-0-0	3	C	6
ME07	Flexible Manufacturing System	3-0-0	3	C	6
ME08	Computer Aided Quality Control	3-0-0	3	C	6
ME09	Computer Aided Service	3-0-0	3	C	6
ME10	Electrical Devices and Drives	3-0-0	3	D	5
ME11	Finite Element Analysis	3-0-0	3	D	5
ME12	Controls	2-0-2	3	D	5
ME13	Vibration of Mechanial systems	3-0-0	3	D	5
ME14	Microcontroller and Practices	1-0-4	3	D	5
ME15	Design Optimization	3-0-0	3	D	6
ME16	Electric Drives and Devices	3-0-0	3	D	6
ME17	Fundamental of Robotics	2-0-2	3	D	6
ME18	Introduction to Bioengineering: Biology for Engineers	3-0-0	3	D	7
ME19	Design of Mechanical Systems	3-0-0	3	D	7
ME20	Engineering Economics	3-0-0	3	I	5
ME21	Business Analytics using R	2-0-2	3	I	5
ME22	Management Concepts and Techniques	3-0-0	3	I	5
ME23	Operations Management	3-0-0	3	I	5
ME24	Quality Design and Control	3-0-0	3	I	5
ME25	Manufacturing Planning and Control	3-0-0	3	I	6
ME26	Material Requirement Planning-I	3-0-0	3	I	6
ME27	Operations Research	3-0-0	3	I	6
ME28	Enterprise Resource Planning	3-0-0	3	I	6
ME29	Material Requirement Planning-II	3-0-0	3	I	7
ME30	Machine Learning	3-0-0	3	I	7
ME31	Maintenance and Reliability	3-0-0	3	I	7
ME32	Synthesis and Innovation	3-0-0	3	M	5
ME33	Materials and Processes in Design	3-0-0	3	M	5
ME34	Industrial Instrumentation & Metrology	3-0-0	3	M	5
ME35	Foundry Technology	3-0-0	3	M	6
ME36	Design for Manufacturing and Assembly	3-0-0	3	M	6
ME37	Machine Tool Design	3-0-0	3	M	6
ME38	Energy Conversion Devices	3-0-0	3	T	5
ME39	Refrigeration and Air Conditioning	3-0-0	3	T	5
ME40	Thermal Engineering Systems	3-0-0	3	T	5
ME41	Fuels and Combustion	3-0-0	3	T	6
ME42	IC Engine	3-0-0	3	T	6
ME43	Power Plant Engineering	3-0-0	3	T	6
ME44	Gas Turbine and Propulsion	3-0-0	3	T	7

Criteria:

1	Prior knowledge acquired to comprehend the new elective
2	Minimal course content overlap among the electives offered in one semester.

ANNEXURE-VIII C2

SMART MANUFACTURING

(4-year Undergraduate Program) Curriculum Structure

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7/8	Semester 8/7
NS1 (3L+2T, 4C) Mathematics I	**NS3** (3L+2T, 4C) Mathematics II	**Discipline Core (DC) DC1**	**DC6**	**DS2** (1L+6P, 4C) DS302 Engineering Design	**MN2** (8P, 4C) Fabrication Project	**Open E8** (3L, 3C)	Project-based Internship (16C) *(PBI: Optional in 7th semester)*
NS2 (3L+1T+2P, 4C) Physics I	**NS4** (3L+1T+2P, 4C) NS104 Physics II	**DC2**	**DC7**	**Open E1** (3L, 3C)	**Open E4** (3L, 3C)	**Open E9** (3L, 3C)	
HS1 (1L+2T, 2C) HS101 Effective Communications OR **HS2 Alternate**	**HS3** (2L+2T, 3C) HS102 Indian Culture, Ethics and Human Values	**DC3**	**DC8**	**Open E2** (3L, 3C)	**Open E5** (3L, 3C)	**Open E10** (3L, 3C)	**OR**
ES1 (2L+3P, 3C) Introduction to Programming	**ES3** (2L+3P, 3C) DS101 Engineering Graphics	**DC4**	**DC9**	**Open E3** (3L, 3C)	**Open E6** (3L, 3C)	**Open E11** (3L, 3C)	
Prof C1/ SM1 (1L, 1C) ME101 Introduction to Profession	**ES4** (3L+2P, 4C) ES101 Basic Electronics	**DC5**	**DC10**	**HS3**(2L, 2C) Ecology and Environment	**Open E7** (3L, 3C)	**Open E12** (3L, 3C)	BTP (10C) + **2 OEs** (3-0-0-3) (Total: 6C)
	NS5 (2L, 2C) Biology for Engineers						
		IT Workshop I (2P, 2C)	IT Workshop II (2P, 2C)	IT Workshop III (2P, 2C)	IT Workshop IV (2P, 2C)		
ES2 Innovation Theory and Practice (1L+2P, 2C)		**PR1 Discipline Project (2C)**		**PR2 Discipline Project (2C)**			
PC1 Professional Development Course (1C)		**PC1 Professional Development Course** (1C)		**PC3 Professional Development Course** (1C)		**PC4 Professional Development Course** (1C)	
Total Contact Hours 23	30						3 / 0
11-5-7	16-5-9						
Total Credits 14	23	20	23	17	21	16	16
Credits per year	37	43		38		32	
Total Degree Credits	150						

Semester III

S. No.	Course Number and Name	L-T-P	Credits
1.	DC1 Manufacturing Processes	3-0-2	4
2.	DC2 Kinematics and Dynamics of Machines	3-1-2	4
3.	DC3 Engineering Materials and Characterization	3-0-0	3
4.	DC4 Solid Mechanics + Design of Mechanical Components	3-1-2	4
5.	DC5 Engineering Thermodynamics + Heat Transfer	3-1-0	4
6.	IT Workshop I (covers contents related to drawing/drafting/modelling and kinematic/ dynamic modelling, e.g., through s/w like SolidWorks and Adams)	0-0-2	2
	Total	15-3-8	20

Semester IV

S. No.	Course Number and Name	L-T-P	Credits
1.	DC6 Cyber Physical Production Systems	2-0-2	3
2.	DC7 Industrial Automation	2-0-2	3
3.	DC7 Additive and Subtractive Manufacturing Processes	2-0-2	3
4.	DC8 Computer Aided Product Development	2-0-2	3
5.	DC9 Control Systems	2-0-2	3
6.	DC10 Advanced Cyber Physical System	2-0-2	3
7.	IT Workshop II (covers contents related to solid modelling and manufacturing, e.g., through s/w like CATIA and PowerMill)	0-0-2	2
8.		12-0-14	20
	Total	13-3-10	20

Semester V

S. No.	Course Number and Name	L-T-P	Credits
1.	IT Workshop III (covers contents related to simulation, e.g., through s/w like Matlab)	0-0-2	1
	Total	0-0-2	2

Semester VI

S. No.	Course Number and Name	L-T-P	Credits
1.	IT Workshop IV (covers contents related to CAE, e.g., through s/w like Ansys/LS-Dyna)	0-0-2	1
	Total	0-0-2	2

BDes 2020: New Course Structure in Tandem with BTech .....

ANNEXURE-VIII D

Semester 1	Semester 2	Semester 3(Core)	Semester 4(Core)	Semester 5(OE)ANY 03	Semester 6(OE)ANY 04	Semester 7	Semester 8
DS 103 (2L+2P, 3C) Design Fundamentals 1	HS3 (2L+2T, 3C) HS102 Indian Culture, Ethics and Human Values	DS 211 (2L+2P,3C) Design Arts and Aesthetics	DS 217 (2L+2P, 3C) Design Research Including User Study	DS 302 (2L+4P, 5C) Engineering Design-Including Design and Fabrication Project	DS 302 (2L+4P, 5C) Engineering Design-Including Design and Fabrication Project	DS 496 (2C) Design Seminar 1	DS 497 (2C) Design Seminar II
DS 104 (1L+3P, 3C) Design Drawing	DS 106 (2L+2P, 3C) Design Fundamentals 2	DS 212 (2L+2P, 3C) Studies in Form	DS 218 (2L+2P, 3C) Packaging Design and Branding	Open Electives any THREE from the list in Design Discipline as well as from Engineering Disciplines	Open Electives any FOUR from the list in Design Discipline as well as from Engineering Disciplines	DS 498 (14C) Design Thesis1	DS 499 (14C) Design Thesis 2
HS1 (1L+2T, 2C) HS101 Effective Communications	DS 107 (2L+2P, 3C) Introduction to Ergonomics in Design	DS 213 (2L+2P,3C) Design Thinking	DS 219 (2L+2P, 3C) Materials and Processes	Open electives in Design :09 (2L+2P, 3C)	Open electives in Design :10 (2L+2P, 3C)		
ES1 (2L+3P, 3C) Introduction to Programming	DS 108 (2L+2P, 3C) Representation Techniques	DS 214 (2L+2P, 3C) Industrial Design 1	DS 220 (2L+2P, 3C) Industrial Design 2				
Prof C1/ SM1 (1L, 1C) DS101 Introduction to Profession	DS 109 (3P, 2C) Software Skills	DS 215 (2L+2P, 3C) Communication Design 1	DS 221 (2L+2P, 3C) Communication Design 2	HS 3 Ecology and Environment 2C			
ES2 Innovation Theory and Practice (1L+2P, 2C)	ES2 Innovation Theory and Practice (1L+2P, 2C)	DS 216 (6P, 3C) Design Project 1	. DS 222 (6P, 3C) Design Project 2	DS 326 (6P, 4C) Design Project 3	Other Engineering Electives		
PC1 Professional Development Course 1C	ES3 (2L+3P, 3C) DS101 Engineering Graphics	Introduction to Data Science(CS) C-3	Design of Mechanical Components DC 4 , - 3(ME)	Other Engineering Electives			
	ES4 (3L+2P, 3C) ES101 Basic Electronics	DC 3aElectronics Devices and Circuits, 2C					
	PC1 Professional Development Course 1C	PC1 Professional Development Course 1C	PC1 Professional Development Course 1C	PC1 Professional Development Course 1C	PC1 Professional Development Course 1C		
Credits :12	23	23	3	20	18	16	16

Total Course Credits: 150

ES 2 and PC the credits are counted at the end of even semesters.

Open Electives Semester 5:

1. DS 323 Service Design(Fjord :Design and Innovation from Accenture, 2020)
2. DS 324 Sustainable Design(Gensler Design Forecast: Gensler Research Institute, USA)
3. DS 325 a Applied Ergonomics(Fjord :Design and Innovation from Accenture, 2020)
4. DS 325 b Visual Ergonomics(Fjord :Design and Innovation from Accenture, 2020)
5. DS Cultural Ergonomics(Gensler Design Forecast: Gensler Research Institute, USA)
6. DS Human Factors Engineering(Fjord :Design and Innovation from Accenture, 2020)
7. DS Lighting Design
8. DS New Media
9. DS Digital Freehand Drawing

Open Electives Semester 6:

1. DS 328 Design Forecasting and Trend Research(MCH Global, Switzerland)
2. DS 329 Design Management(MCH Global, Switzerland)
3. DS 330a Industrial Design(Knoll Workplace Research, 2009, USA)
   10. DS 330b Communication Design(Fjord :Design and Innovation from Accenture, 2020)
4. DS 327 Interface Design
5. DS Human Computer Interaction(MCH Global, Switzerland)
6. DS Application of Renewable Energy Resources in Design
7. DS Advances in Ergonomics for Safety in Manufacturing and Service Industries
8. DS Traditional Media
9. DS Freehand drawing

Source:

Marcus Fairs | 25 October 2018 : in all the above sectors.

Design is a key driver of business success and is "the only way that companies can stand out from the crowd", according to a report by management consultancy McKinsey & Company. Good design is good for business, says McKinsey as it unveils new design division

The report, the first the giant consultancy has conducted into the value of design, says that the discipline can help firms that embrace it holistically rather than seeing it as a tool to make products look pretty. "While design was once largely thought of as a way of making products more attractive, it is now a way of thinking: a creative process driven by the desire to better understand and meet consumer needs" said McKinsey." Findings from the survey suggest that for a business to benefit, it is necessary for top management to accept design and embrace it early in the process." McKinsey claims the report contains "the most extensive and rigorous research undertaken anywhere" to map the business impact of design. It concludes that firms that embrace design generated 32 per cent more revenue and 56 per cent more shareholder returns than rivals over a five-year period. Design right now in no more confined to a product but is moving much beyond and giving rise to sectors like Service Design, Transportation Design, Media Design, Experiential Design and Humanization of Technology and further more into lifestyle design. Focus is now shifting to designing of spaces which are humane and interactive. Design is now going in to the domain of combining the service and experiential attributes of the users and is becoming more user centric.

ANNEXURE-VIII E

Courses from NS Discipline

Semester-I
NS-101- Mathematics -1 (3L+2T, 4C)
NS102- Physics –I (3L+1T+ 2P, 4C)

Semester- II
NS-103a Mathematics-IIa (ODE +PDE) (3L+2T, 4C) (ONLY ECE and ME)
NS-103b Mathematics-IIb (Probability + Linear Algebra) (3L+2T, 4C) (Only CSE)

NS-104 Physics II (3L+1T+2P, 4C)

Electives for 3rd Year

NS-305a Applied Probability and Statistics (Only ECE and ME)
NS-305b Numerical Method
NS-305c Complex and Linear Algebra
NS-305d Optimization
NS-306e Material Science.
NS-305f Modern physics

Semester-I

Subject Code:	NS101	**Course Title**	Mathematics-I
Contact Hours	L-3, T-2, P-0	**Credit**	4
Programme	B.Tech	**Semester**	I
Pre-requisites	NIL		
Evaluation scheme	Quiz I (15%), Mid term (30%), Quiz II (15%), End term (40%)		

Module 1: ***Calculus of Functions of One Variable:*** **[21 H]**

Real Numbers, Functions, Sequences, Limit and Continuity, Differentiation : Review, Successive differentiation, Chain rule and Libnitz Theorem, Rolle's and Mean Value Theorems, Maxima/Minima, Linear and Quadratic approximations, Error estimates, Taylor's Theorem, The Riemann Integrals, Improper Integrals, Infinite series, Tests of convergence, Absolute and Conditional convergence, Taylor and Maclaurin series.

Module 2: ***Calculus of Functions of Several Variables:*** **[14H]**

Scalar fields, Limit and Continuity, Partial derivatives, Chain rules, Implicit differentiation, Directional derivatives, Total differential, Tangent planes and Normals, directional derivative, Maxima/Minima and Saddle points, Constrained maxima and minima, Double Integrals, Change of variables.

Module 3: ***Vector Calculus:*** **[7H]**

Vector fields, Divergence and Curl, Line Integrals, Green's Theorem, Surface Integrals, Divergence Theorem, Stoke's Theorem and applications.

Text/Reference books:

1. Calculus and Analytic Geometry by G.B. Thomas and R.L. Finney,
2. Introduction to Real Analysis by R. G. Bartle and D. R. Sherbert.

Semester-II

Subject Code:	NS103a	**Course Title**	Mathematics-IIa
Contact Hours	L-3, T-2, P-0	**Credit**	4
Programme	B.Tech	**Semester**	II
Pre-requisites	NIL		
Evaluation scheme	Quiz I (15%), Mid term (30%), Quiz II (15%), End term (40%)		

Module 1: ***Ordinary Differential Equations*** **[21 H]**

Introduction to Differential equations, Existence & Uniqueness of solutions, Geometrical interpretation of solutions, First order ODEs; Separation of variables, Exact differential equations, Integrating factors, Linear ODEs, Euler-Cauchy equations, Orthogonal Trajectories, Solution of higher order ODEs with constant & variable coefficients; method of undetermined coefficients, method of variation of parameters, Wronskin, Series solution method, Special function; Legendre Equations, Bessel's equations etc. Solution of system of ODEs, Laplace Transform, Z Transforms.

Module 2: ***Partial Differential Equations*** **[21 H]**

Classification of PDEs, First and Second order PDEs, Fourier series and Fourier Transform, Discrete Time Fourier Transform, Discrete Fourier Transform, Introduction to parabolic (Heat Equation), elliptic(Laplace Equation) and hyperbolic equations(Wave Equation).

Text/Reference books:

1. Advanced Engineering Mathematics by Erwin O. Kreyszig,
2. An elementary Course in PDE by T. Amarnath.
3. E. A. Coddington and N. Levinson, Theory of Ordinary Differential Equations