Item No. 3
Course Restructuring

Computer Science Engineering

1st Sem	2nd Sem
1. Engineering Foundation-I (Computer Programming) (L-T-P: 2-0-4) 2. Engineering Mathematics-I (Calculus and Transform) (L-T-P: 4-0-0) 3. Environmental Studies (L-T-P: 2-0-2) 4. Engineering Drawing & Visualization (L-T-P: 0-0-4) 5. Physics-I (L-T-P: 3-0-2) 6. Chemistry-I (L-T-P: 3-0-2) 7. English in Practice (Non-Credit) (L-T-P: 2-0-2) **Total Credit: 21**	1. Engineering Foundation-II (Data Structure) (L-T-P: 3-0-2) 2. Product Realization (L-T-P: 0-0-4) 3. Engineering Mathematics-II (Probability and Statistics) (L-T-P: 4-0-0) 4. Principles of Economics (L-T-P: 2-0-0) 5. Physics-II/ Chemistry-II/ Biology (L-T-P: 3-0-2) 6. Introduction to Electronics (L-T-P: 2-0-2) **Total credit: 19**
3rd Sem	**4th Sem**
1. Digital Logic and Systems Design (L-T-P: 3-0-2) 2. Engineering Foundation-III (Artificial Intelligence) (L-T-P: 3-0-0) 3. Humanities and Social Sciences (L-T-P: 2-0-0) 4. Linear Algebra (L-T-P: 3-1-0) 5. Programming Languages (L-T-P: 3-0-2) 6. Discrete Mathematical Structures (L-T-P: 3-1-0) **Total Credits: 21**	1. Computer Architecture (L-T-P: 3-0-2) 2. Professional Practice & Ethics (L-T-P: 1-0-2) 3. Object Oriented Programming (L-T-P: 2-0-2) 4. DBMS (L-T-P: 3-0-2) 5. Design and Analysis of Algorithms (L-T-P: 3-1-0) 6. Computer Graphics/DIP (BE1) (L-T-P: 3-0-0) 7. Optional Course* (Numerical Methods in ECE to be made available) **Total Credits: 20**

5th Sem	6th Sem
1. Theory of Computation (L-T-P: 3-1-0) 2. Machine Learning (L-T-P: 3-0-2) 3. Operating Systems (L-T-P: 3-0-2) 4. Computer Networks (L-T-P: 3-0-2) 5. Elective (L-T-P: 3-0-2) 6. Optional Course * **Total Credits: 20**	1. Compiler Design (L-T-P: 3-0-2) 2. Technical Writing (L-T-P: 2-0-0) 3. Software Engineering (L-T-P: 3-1-0) 4. Computer Vision (BE2) (L-T-P: 3-0-0) 5. Introduction to Cyber threats (BE3) (L-T-P: 3-0-0) 6. Elective/Independent Study (L-T-P: 3-0-0) **Total Credits: 19**
7th Sem	**8th Sem**
1. Project (Engineering Specific) (Credits: 6) 2. Deep Learning/Game Theory (BE4) (L-T-P: 3-0-2) 3. Master Core 1 (L-T-P: 3-0-0) 4. Master Core 1 (L-T-P: 3-0-0) 5. Master Specialization- I (L-T-P: 3-0-0) **Total Credits: 19**	See the table below for MS/M.Tech **Total credits: 15**

9th Sem	10th Sem
See the table below MS/M.Tech	See the table below MS/M.Tech
Total credits: 15	Total credits: 15

Semester	Coursework for SoE Programme for M.Tech. (CSE/ RF/VLSI) (45 credits)
8th	Project/Independent Study 3 Credits Master Specialization- II 3 Credits Master Specialization- III 3 Credits Master Specialization- IV 3 Credits Master Specialization- V 3 Credits Total 15 Credits
9th	Dissertation On-campus /in-Industry (Credits: 15)*
10th	Dissertation On-campus /in-Industry (Credits: 15)* * Student needs to find a qualified Industry option himself/herself for the dissertation at industry. *Dean SoE/Project coordinator needs to approve the Dissertation at Industry based on the Company profile and the work profile given to the student. Only after approval student is allowed to go for industry dissertation.* *The choice of student in 9th semester will continue in 10th semester for the dissertation place (Academia or Industry).*

Semester	Coursework for M.S. and other Programme offered by a School/Center in JNU (45 credits)

8th	Master Specialization- II
	3 Credits
	Master Specialization- III
	3 Credits
	Master Specialization- IV
	3 Credits
	Master Specialization- V
	3 Credits
	Master Specialization-VI
	3 Credits

	Total 15 Credits
9th	Master Specialization-VII
	3 Credits
	Master Specialization-VIII
	3 Credits
	Dissertation 9 Credits
	Total 15 Credits
10th	Dissertation (15 credits)

Electronics and Communication Engineering

1st Sem	2nd Sem
1. Engineering Foundation-I (Computer Programming) (L-T-P: 2-0-4) 2. Engineering Mathematics-I (Calculus and Transform) (L-T-P: 4-0-0) 3. Environmental Studies (L-T-P: 2-0-2) 4. Engineering Drawing & Visualization (L-T-P: 0-0-4) 5. Physics-I (L-T-P: 3-0-2) 6. Chemistry-I (L-T-P: 3-0-2) 7. English in Practice (Non-Credit) (L-T-P: 2-0-2) **Total Credit: 21**	1. Engineering Foundation-II (Data Structure) (L-T-P: 3-0-2) 2. Product Realization (L-T-P: 0-0-4) 3. Engineering Mathematics-II (Probability and Statistics) (L-T-P: 4-0-0) 4. Principles of Economics (L-T-P: 2-0-0) 5. Physics-II/ Chemistry-II/ Biology (L-T-P: 3-0-2) 6. Introduction to Electronics (L-T-P: 2-0-2) **Total credit: 19**
3rd Sem	**4th Sem**
1. Digital Logic and Systems Design (L-T-P: 3-0-2) 2. Engineering Foundation-III (Artificial Intelligence) (L- T-P: 3-0-0) 3. Humanities and Social Sciences (L-T-P: 2-0-0) 4. Linear Algebra (L-T-P: 3-1-0) 5. Network Analysis & Synthesis (L-T-P: 3-0-2) 6. Semiconductor Devices & Synthesis (L-T-P: 3-0-2) **Total Credits: 21**	1. Computer Architecture (L-T-P: 3-0-2) 2. Professional Practice & Ethics (L-T-P: 1-0-2) 3. Signal and Systems (L-T-P: 3-0-2) 4. Engineering Foundation-IV Numerical Methods (L-T-P: 3-0-2) 5. Engineering Foundation -V Analog Electronics (L-T-P: 3-1-0) 6. Principal of Communications (BE1) (L-T-P: 3-0-2) 7. Optional Course **Total Credits: 20**

5th Sem

1. Principle of Communication (L-T-P: 4-0-0)
2. EMFT (L-T-P: 4-0-0)
3. Control Systems (BE2) (L-T-P: 3-0-2)
4. Digital Signal Processing (L-T-P: 3-0-2)
5. Microprocessors (L-T-P: 3-0-2)
6. Optional Course *

Total Credits: 20

6th Sem

1. Introduction to VLSI design (L-T-P: 3-0-2)
2. Technical Writing (L-T-P: 2-0-0)
3. Antenna and Wave Propagation (BE3) (L-T-P: 4-0-0)
4. Microwave Devices and Circuits (L-T-P: 3-0-2)
5. Wireless Communication (L-T-P: 3-0-2)
6. Project Oriented Course/Independent Study (L-T-P: 3-0-0)
7. Optional Course*

Total Credits: 19

7th Sem

1. Project (Engineering Specific) (Credits: 6)
2. Fibre Optic Communication/Embedded Systems (BE4) (L-T-P:3-0-2/L-T-P: 4-0-0)
3. Master Core 1 (L-T-P: 3-0-0)
4. Mater Core 2 (L-T-P: 3-0-0)
5. Master Specialization 1 (L-T-P: 3-0-2)

Total Credits: 19

8th Sem

See the table below for MS/M.Tech

Total credits: 15

9th Sem	10th Sem
See the table below MS/M.Tech	See the table below MS/M.Tech
	Total credits: 15
Total credits: 15	

Semester	**Coursework for SoE Program for M.Tech (CSE/ RF/VLSI) (45 credits)**
8th	Project/Independent Study 3 Credits Master Specialization- II 3 Credits Master Specialization- III 3 Credits Master Specialization- IV 3 Credits Master Specialization- V 3 Credits Total 15 Credits
9th	Dissertation On-campus /in-Industry (Credits: 15)*
10th	Dissertation On-campus /in-Industry (Credits: 15)* Student needs to find a qualified Industry option himself/herself for the dissertation at industry. *Dean SoE/Project coordinator needs to approve the Dissertation at Industry based on the Company profile and the work profile given to the student. Only after approval student is allowed to go for industry dissertation.* *The choice of student in 9th semester will continue in 10th semester for the dissertation place (Academia or Industry).*

Semester	Coursework for M.S. and other Program offered by a School/Center in JNU (45 credits)
8th	Master Specialization- II 3 Credits Master Specialization- III 3 Credits Master Specialization- IV 3 Credits Master Specialization- V 3 Credits Master Specialization-VI 3 Credits

	Total 15 Credits
9th	Master Specialization-VII 3 Credits Master Specialization-VIII 3 Credits Dissertation 9 Credits Total 15 Credits
10th	Dissertation (15 credits)