USHA MITTAL INSTITUTE OF TECHNOLOGY
SNDT Women's University
Faculty : Technology (Undergraduate Course) -BTech
Subject : Syllabus for Electronics Engineering

Proposed in 2020

Semester III

Category	Course Title	Hours/Week			Cr	D	TP	TW	P/V	Total
		L	T	P						
EE	**Electronic Devices***	3	-	-	3	2.5	75	25	-	100
EE	**Electronic Devices Lab***	-	-	2	1	-	25	25	P&V	50
EE	**Digital System Design***	3	-	-	3	2.5	75	25	-	100
EE	**Digital System Design Lab***	-	-	2	1	-	25	25	P&V	50
EE	**Signals and Systems***	3	-	-	3	2.5	75	25	-	100
EE	**Computer Architecture ***	3	-	-	3	2.5	75	25	-	100
BSC	**Applied Mathematics***	3	1	-	4	2.5	75	25	-	100
MC	**Constitution of India*#$**	1	-	-	0	-	25	25	-	50
HSMC	**HSMC-02 *$(MOOC)**	1	-	-	1	-	-	50	-	50
PS	**Data Structure and Algorithms Lab***	-	-	2	1	-	25	25	P&V	50
	Total	17	1	6	20					750

- This subject is non-credit but Passing in this subject is Mandatory. A total of 16 hours needs to be completed.

* - Common for Electronics and Communication Course

$ This course can be an online MOOC/ Swayam /course designed by the institute or affiliated institutes. Courses on the following can be done. Certificate has to be provided by individual students to get evaluated.

HSMC-02	Women Law
	Economics for Engineer

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Semester IV

Category	Course Title	Hours/Week			Cr	D	TP	TW	P/V	Total
		L	T	P						
EE	**Electromagnetic Waves***	3	-	-	3	2.5	75	25	-	100
EE	**Electromagnetic Waves Labs***	-	-	2	1	-	25	25	P&V	50
EE	**Analog Circuits***	3	-	-	3	2.5	75	25	-	100
EE	**Analog Circuits Lab***	-	-	2	1	-	25	25	P&V	50
EE	**Microcontrollers***	3	-	-	3	2.5	75	25	-	100
EE	**Microcontrollers Lab***	-	-	2	1	-	25	25	P&V	50
EE	**Probability Theory and Stochastic Processes***	3	-	-	3	2.5	75	25	-	100
EE	**Network Theory ***	3	-	-	3	2.5	75	25	-	100
HSMC	**HSMC-03*$**	2	-	-	2	-	25	25	-	50
PS	**Object Oriented Programming***	-	1	2	2	-	50	50	P&V	100
	Total	17	1	8	22					800

**- This subject is non-credit but Passing in this subject is Mandatory. A total of 16 hours needs to be completed.**

* - Common for Electronics Communication Course

$ **Humanities Elective: MOOC/ Swayam based courses on the following lines have to be completed. Certificate has to be provided by individual students to get evaluated. Evaluation marking given above.**

HSMC-03	**Creating and Managing IPR**
	Professional Ethics
	Critical Thinking
	Fundamentals of Management for Engineers

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Semester V

Category	Course Title	L	T	P	Cr	D	TP	TW	P/V	Total
		Hours/Week								
EE	**Analog and Digital Communication***	3	-	-	3	2.5	75	25	-	100
EE	**Analog and Digital Communication Lab***	-	-	2	1	-	25	25	P&V	50
EE	**Digital Signal Processing***	3	-	-	3	2.5	75	25	-	100
EE	**Digital Signal Processing lab***	-	-	2	1	-	25	25	P&V	50
EE	**Control Systems***	3	-	-	3	2.5	75	25	-	100
EE	**Electronics Measurement Lab***	-	-	2	1	-	25	25	P&V	50
EEL	**EEL-I**	3	-	-	3	2.5	75	25	-	100
EEL	**EEL-I Lab**	-	-	2	1	-	25	25	P&V	50
HSMC	**Effective Technical Communication ***	3	-	-	3	1.5	50	-	-	50
HSMC	**Effective Technical Communication Lab ***	-	-	2	1	-	-	50	-	50
MC	**Essence of Indian Traditional Knowledge*[#$] (MOOC)**	1	-	-	0	-	25	25	-	50
MD	**Minor Degree Subject 1**	3	-	2	4					
	Total	16 @3	@1	10	20 @4					750 @

[#] **This subject is non-credit but Passing in this subject is Mandatory. A total of 16 hours needs to be completed.**

* **- Common for Electronics and Communication Engineering Course**

[$] **Humanities Elective: $MOOC/ Swayam based courses on the following lines have to be completed. Certificate has to be provided by individual students to get evaluated. Evaluation marking given above.**

Program Elective

Sr.No	EEL-I
1	**Speech and Audio Processing**
2	**Scientific Computing**
3	**VLSI Design**

Semester VI

Category	Course Title	Hours/Week			Cr	D	TP	TW	P/V	Total
		L	T	P						
EE	Power Electronics	3	-	-	3	2.5	75	25	-	100
EE	Power Electronics Lab	-	-	2	1	-	25	25	P&V	50
EE	VLSI	3	-	-	3	2.5	75	25	-	100
EE	VLSI lab	-	-	2	1	-	25	25	P&V	50
EE	Mini Project*	-	-	4	2	-	25	25	V	50
EEL	EEL-II	3	-	-	3	2.5	75	25	-	100
OE	OE-I	3	-	-	3	2.5	75	25	-	100
OE	OE-I Lab	-	-	2	1	-	25	25	P&V	50
OE	OE-II	3	-	-	3	2.5	75	25	-	100
PS	Web Technology Lab/ Tutorial*	-	1	2	2	-	25	25	P&V	50
MD	Minor Degree Subject 2	3	-	2	4					
	Total	15@3	1	12@2	22 @4					750@ 100

**This subject is non-credit but Passing in this subject is Mandatory. A total of 16 hours needs to be completed.**

* - Common for Electronics and Communication Engineering Course

$ **Humanities Elective: $MOOC/ Swayam based courses on the following lines have to be completed. Certificate has to be provided by individual students to get evaluated. Evaluation marking given above.**

Program Elective

Sr. No	EEL-II
1	Introduction to Hybrid and Electrical Vehicles
2	CMOS Design

Open Elective List

Sr.No	OE-I	OE-II
1	Antennas and Propagation	Radar
2	Information Theory and Coding	Wireless and Mobile Communication

Semester VII

Category	Course Title	Hours/Week			Cr	D	TP	TW	P/V	Total
		L	T	P						
EEL	EEL-III	3	-	-	3	2.5	75	25	-	100
EEL	EEL-IV	3	-	-	3	2.5	75	25	-	100
EEL	EEL-V	3	-	-	3	2.5	75	25	-	100
OE	OE-III	3	-	-	3	2.5	75	25	-	100
OE	OE-IV	3	-	-	3	2.5	75	25	-	100
OE	OE-IV Lab	-	-	2	1	-	25	25	P&V	50
OE	OE-V	3	-	-	3	2.5	75	25	-	100
EEP	Major Project – I	-	-	-	2	-	50	50	V	100
HSMC	Disaster Management*$	1	-	-	1	-	-	50	-	50
MD	Minor Degree Subject 3	3	-	2	4					
	Total	19@3	@1	-	22@4					800@

* - Common for Electronics and Communication Engineering Course

$ Humanities Elective: $MOOC/ Swayam based courses on the following lines have to be completed. Certificate has to be provided by individual students to get evaluated. Evaluation marking given above.

Program Elective

Sr. No	EEL-III	EEL-IV	EEL-V
1	Renewable Energy Sources	Robotics	HDL
2	Consumer Electronics	Mechatronics	Nano Electronics

Sr. No.	OE-III	OE-IV	OE-V
1	Cryptography	Machine Learning	Cyber Security and Forensic
2	Artificial Intelligence	Wireless Sensor Network	Cloud Computing

Semester VIII

Category	Course Title	Hours/Week			Cr	D	TP	TW	P/V	Total
		L	T	P						
ESC	**Design Thinking and Visualization*$**	1	-	-	1	-	-	50	-	50
EEP	**Internship^**	-	-	-	4	-	50	50	V	100
EEP	**Major Project – II****	-	-	-	14	-	200	200	V	400
MD	**Minor Degree subject 4 and 5**	-	-	-	8	-	-	-		
	Total	1	-	-	19@8					550@

* - Common for Electronics and Communication Engineering Course
@- honours Courses
^ Under Internship the student should pursue an Internship Program (of min 8 weeks and max 6 months) with a company or in-house under the college and/or agency Supervisor. The students undergoing such a program include compulsory industrial training or in-house training in college of 4 credits, by the end of the eighth semester. The student will have to submit the attendance record , a detailed report and presentation by the end of semester along with completion certificate.
**** -Under Major Project the student/students will have to complete a working simulation/prototype with a detailed report and evaluations .**
$- MOOC Course from Swayam /NPTEL or any agency on Design Thinking , Data Visualization with regular assignments and one presentation in College.