Department of Electronics Engineering

B. Tech. 1st Semester Course Structure

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NECC101	Introduction to Electronics Engineering	3-0-0	Theory	3
3	DSC2	NECC102	Introduction to Electronics Engineering Lab	0-0-2	Practical	1
4	ESC1	NEEE101	Electrical Devices and Circuits	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

B. Tech. 2nd Semester Course Structure

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits
1	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
2	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NECC103	Digital Circuits and System Design	3-0-0	Theory	3
5	DSC4	NECC104	Digital Circuits and System Design Lab	0-0-2	Practical	1
6	ESC2	NCSE102	Introduction to Algorithms	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

B. Tech. 3rd Semester Course Structure

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits
1	DC3	NECC201	Electronic Devices	3-1-0	Theory	4
2	DC4	NECC202	Signals and Networks	3-1-0	Theory	4
3	DC5	NECC203	Microprocessors and Microcontrollers	3-1-0	Theory	4
4	DP3	NECC204	Signals and Networks Laboratory	0-0-2	Practical	1
5	DP4	NECC205	Microprocessors and Microcontrollers Laboratory	0-0-2	Practical	1
6	ESC3	NECE201	Measurement and Instrumentation	3-0-0	Theory	3
7	AEC4	NECA201	Digital System Design using HDL	3-0-0	Theory	3
						20

B. Tech. 4th Semester Course Structure

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits
1	DC6	NECC206	Analog Circuits	3-1-0	Theory	4
2	DC7	NECC207	Electromagnetic Theory	3-1-0	Theory	4
3	DC8	NECC208	Principles of Communication Systems	3-1-0	Theory	4
4	DP5	NECC209	Electronic Devices and Circuits Laboratory	0-0-2	Practical	1
5	DP6	NECC210	Communication System Laboratory	0-0-2	Practical	1
6	ESC4	NCSE202	Object Oriented Programming using Java	3-0-0	Theory	3
7	SEC4	NECS201	Circuit Simulation with SPICE	3-0-0	Theory	3
						20

B. Tech. 5th Semester Course Structure

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits
1	DC9	NECC301	Digital Communication	3-1-0	Theory	4
2	DC10	NECC302	Microwave Engineering	3-1-0	Theory	4
3	DE1		*To be chosen from the pool.*	3-0-0	Theory	3
4	DP7	NECC303	Digital Communication Laboratory	0-0-2	Practical	1
5	DP8	NECC304	Microwave Engineering Laboratory	0-0-2	Practical	1
6	HSSE1		*To be chosen from the HSS pool. HSS department to contribute courses to the pool below.*	3-0-0	Theory	3
7	DC1 (Minor)/ DC1 (Hons)			3-1-0	Theory	4
8	SDC1 (Minor)/ DP1 (Hons)			0-0-3	Practical	1.5
						21.5

B. Tech. 6th Semester Course Structure

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits
1	DC11	NECC305	Digital Signal Processing	3-1-0	Theory	4
2	DC12	NECC306	Control Systems	3-1-0	Theory	4
3	DE2		*To be chosen from the pool.*	3-0-0	Theory	3
4	DP9	NECC307	Digital Signal Processing Laboratory	0-0-2	Practical	1
5	HSSE2		*To be chosen from the HSS pool. HSS department to contribute courses to the pool below.*	3-0-0	Theory	3
6	DC2 (Minor)/ DC2 (Hons)			3-1-0	Theory	4
7	SDC2 (Minor)/ DP2 (Hons)			0-0-3	Practical	1.5
						20.5

B. Tech. 7th Semester Course Structure

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits
1	DE3		*To be chosen from the pool.*	3-0-0	Theory	3
2	DE4		*To be chosen from the pool.*	3-0-0	Theory	3
3	DC3 (Minor)/ DC3 (Hons)			3-1-0	Theory	4
4	SDC3 (Minor)/ DP3 (Hons)			0-0-3	Practical	1.5
5	Project	NECC401	Project - I	8-0-0	Project	8
6	Internship	NECS401	Internship	0-0-0	Internship	4
						23.5

B. Tech. 8th Semester Course Structure

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits
1	DC4 (Minor)/ DC4 (Hons)			3-1-0	Theory	4
2	DC5 (Minor)/ DC5 (Hons)			3-1-0	Theory	4
3	SDC4 (Minor)/ DP4 (Hons)			0-0-3	Practical	1.5
4	Project	NECC402	Project - II	8-0-0	Project	8
						17.5

POOLS/TABLES

MINOR TABLE

Title of Minor	Drone Electronics						
Sl.	**Course Type**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credits**	**Semester**
1	DC1 (Minor)	NECC203	Microprocessors and Microcontrollers	3-1-0	Theory	4	5
2	DC2 (Minor)	NECC204	Signals and Networks Laboratory	0-0-2	Practical	1	5
3	DC3 (Minor)	NECC301	Digital Communication	3-1-0	Theory	4	5
4	DC4 (Minor)	NECC302	Microwave Engineering	3-1-0	Theory	4	5
5	DC5 (Minor)	NECC303	Digital Communication Laboratory	0-0-2	Practical	1	5
6	DC6 (Minor)	NECC304	Microwave Engineering Laboratory	0-0-2	Practical	1	5
7	SDC1 (Minor)	NECC305	Digital Signal Processing	3-1-0	Theory	4	6
8	SDC2 (Minor)	NECC306	Control Systems	3-1-0	Theory	4	6
9	SDC3 (Minor)	NECC307	Digital Signal Processing Laboratory	0-0-2	Practical	1	6
10	SDC4 (Minor)	NECC308	Control Systems Laboratory	0-0-2	Practical	1	6
						30	

MINOR TABLE

Title of Minor	Electronics Engineering					
Sl.	**Course Type**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credits**
1	DC1 (Hons)	NECC202	Signals and Networks	3-1-0	Theory	4
2	DC2 (Hons)	NECC204	Signals and Networks Laboratory	0-0-2	Practical	1
3	DC3 (Hons)	NECC301	Digital Communication	3-1-0	Theory	4
4	DC4 (Hons)	NECC302	Microwave Engineering	3-1-0	Theory	4
5	DC5 (Hons)	NECC303	Digital Communication Laboratory	0-0-2	Practical	1
6	DC6 (Hons)	NECC304	Microwave Engineering Laboratory	0-0-2	Practical	1
7	SDC1 (Hons)	NECC305	Digital Signal Processing	3-1-0	Theory	4
8	SDC2 (Hons)	NECC306	Control Systems	3-1-0	Theory	4
9	SDC3 (Hons)	NECC307	Digital Signal Processing Laboratory	0-0-2	Practical	1
10	SDC4 (Hons)	NECC308	Control Systems Laboratory	0-0-2	Practical	1
						30

2	SDC1 (Minor)	NECM301	Microprocessor Laboratory	0-0-3	Practical	1.5	5
3	DC2 (Minor)	NECC208	Principles of Communication Systems	3-1-0	Theory	4	6
4	SDC2 (Minor)	NECM302	Communication Laboratory	0-0-3	Practical	1.5	6
5	DC3 (Minor)	NECM401	UAV Sensors	3-1-0	Theory	4	7
6	SDC3 (Minor)	NECM402	Drone Electronics Laboratory	0-0-3	Practical	1.5	7
7	DC4 (Minor)	NECC306	Control Systems	3-1-0	Theory	4	8
8	DC5 (Minor)	NECM403	Embedded Systems	3-1-0	Theory	4	8
9	SDC4 (Minor)	NECM404	Embedded System Laboratory	0-0-3	Practical	1.5	8
						26 - Minor	

2	DP1 (Hons)	NECM303	Signals and Electronic Networks Laboratory	0-0-3	Practical	1.5	
3	DC2 (Hons)	NECC206	Analog Circuits	3-1-0	Theory	4	
4	DP2 (Hons)	NECM304	Electronic Circuits Laboratory	0-0-3	Practical	1.5	
5	DC3 (Hons)	NECC203	Microprocessors and Microcontrollers	3-1-0	Theory	4	
6	DP3 (Hons)	NECM301	Microprocessor Laboratory	0-0-3	Practical	1.5	
7	DC4 (Hons)	NECC306	Control Systems	3-1-0	Theory	4	
8	DC5 (Hons)	NECC305	Digital Signal Processing	3-1-0	Theory	4	
9	DP4 (Hons)	NECM405	Signal Processing and Simulation Laboratory	0-0-3	Practical	1.5	
						26 - Minor	

POOL of ESC (except MS & HSS)

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits	Semester
1	ESC3	NECE201	Measurement and Instrumentation	3-0-0	Theory	3	3
2	ESC4	NECE202	Analog Interface Electronics	3-0-0	Theory	3	4

POOL of AEC (except HSS)

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits
1	AEC	NECA201	Digital System Design using HDL	3-0-0	Theory	3
2	AEC			3-0-0	Theory	3

POOL of SEC (except HSS)

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits	Semester
1				3-0-0	Theory	3	3
2	SEC	NECS201	Circuit Simulation with SPICE	3-0-0	Theory	3	4

HONORS TABLE

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits	Semester
1	DC (Hons)	NECH301	Optical Engineering	3-1-0	Theory	4	5
2	DP (Hons)	NECH302	Optical Engineering Laboratory	0-0-3	Practical	1.5	5
3	DC (Hons)	NECH303	VLSI Technology and Design	3-1-0	Theory	4	6
4	DP (Hons)	NECH304	VLSI Design Laboratory	0-0-3	Practical	1.5	6
5	DC (Hons)	NECH401	Industrial Instrumentation	3-1-0	Theory	4	7
6	DP (Hons)	NECH402	Industrial Instrumentation Laboratory	0-0-3	Practical	1.5	7
7	DC (Hons)	NECH403	Machine Learning and AI	3-1-0	Theory	4	8
8	DC (Hons)	NECH404	Wireless Communication	3-1-0	Theory	4	8
9	DP (Hons)	NECH405	Wireless Communication Laboratory	0-0-3	Practical	1.5	8
						26 - Hons.	

POOL of UG DE course

Sl.	Course Type	Course Code	Course Name	L-T-P	Course Category	Credits	Level of Course
1	DE	NECD301	Optoelectronic Devices	3-0-0	Theory	3	**3**
2	DE	NECD302	MEMS and its Applications	3-0-0	Theory	3	**3**
3	DE	NECD303	Fiber Optics and Laser Instrumentation	3-0-0	Theory	3	**3**
4	DE	NECD304	Introduction to Nanoelectronics	3-0-0	Theory	3	**3**
5	DE	NECD305	EDA for VLSI Design	3-0-0	Theory	3	**3**
6	DE	NECD306	Biomedical Instrumentation	3-0-0	Theory	3	**3**
7	DE	NECD307	Computer Networks	3-0-0	Theory	3	**3**
8	DE	NECD308	Power Electronics	3-0-0	Theory	3	**3**
9	DE	NECD309	Stochastic Methods in Data Science	3-0-0	Theory	3	**3**
10	DE	NECD401	Antenna and Wave Propagation	3-0-0	Theory	3	**4**
11	DE	NECD402	Computer Vision and Image Processing	3-0-0	Theory	3	**4**
12	DE	NECD403	EMI/EMC	3-0-0	Theory	3	**4**
13	DE	NECD404	Information Theory & Coding Theory	3-0-0	Theory	3	**4**
14	DE	NECD405	Semiconductor Device Modeling and Simulation	3-0-0	Theory	3	**4**
15	DE	NECD406	Communication Satellites	3-0-0	Theory	3	**4**
16	DE	NECD407	Fiber Optic Sensors	3-0-0	Theory	3	**4**
17	DE	NECD408	Embedded Systems and its Application	3-0-0	Theory	3	**4**
18	DE	NECD409	Fundamentals of UAV Sensors	3-0-0	Theory	3	**4**