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| Sem | | Course Code Course Name (L-T-P)C | | | | | | | | | | | | | | | | | | | | | Value Added Courses | | GP Courses | | Community Service | | Lecture Courses | | L | | P | | Weekly Contact\Total | Credits |
| I | | ASL 121  Engg. Phy. (3-0-2)4 | | | ASL101  Engg. Maths I (3-0-2)4 | | | CSL150  C Prog  (1-0-4)3 | | | ECL110 BEEE  (3-0-2)4 | | | CSP100 Problem Solv. and design thinking (1-0-2)2 | | | CLL101 Eff Comm. I(1-0-2)2 | | |  | | |  | | ECR107 Gen.Prof  (0-1-0)1 | |  | | 5 | | 12 | | 14 | | 26 | 20 |
| II | | ASL128 Engg. Materials  (2-0-2)3 | | | ASL102 Engg.Maths-II  (3-0-2)4 | | | MEL140  Elementsof M.E.  (2-0-2)3 | | | CSL213  Elementary Data Struc  (2-0-2)3 | | | ECP100 Intro to Engg. Design  (0-0-2)1 | | | MEP130 Engg. Pr.  (0-0-4)2 | | | CLL102 Eff Comm. II  (1-0-2)2 | | |  | | ECR108 Gen.Prof  (0-1-0)1 | |  | | 5 | | 10 | | 16 | | 26 | 19 |
|  | ECT106: In House Training for Minor Projects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |  | |  | 01 |
| III | | ECL201 NT  (3-0-2)4 | ECL203 A E  (3-0-2)4 | | | | ECL205 FAW  (3-0-0)3 | | | ASL201/220  Maths Elective  (3-0-2)4 | | | | CSL204/213  CS Elective  (3-0-2) 4 | |  |  | | |  | | | EEV201 Tech-VA I  (0-0-2)1 | | ECR207 Gen.Prof  (0-1-0)1 | |  | | 5 | | 15 | | 10 | | 25 | 21 |
| IV | | ECL200 DE  (3-0-2)4 | ECL202 ACS  (3-0-2)4 | | | | ECL206 S&S  (3-0-2)4 | | | PE-I  (2-0-2)3 | | | | ASL140 Envir. Stds.  (3-0-0)3 | |  |  | | |  | | | EEV202 Tech-VA II (0-0-2)1 | | ECR208 Gen.Prof  (0-1-0)1 | |  | | 5 | | 14 | | 10 | | 24 | 20 |
|  | ECT208: Industrial Training | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |  | |  | 02 |
| V | | ECL301 AWP  (3-0-2)4 | ECL303 DCS  (3-0-2)4 | | | | ECL305 ICA  (3-0-2)4 | | | | | FLC  (2-0-2)3 | | PE-II  (2-0-2)3  (Includes IBM Course) | |  | CLP120  Creative Writing (0-0-2)1 | | |  | EEV301  Tech-VA III  (Project based)  DSD (1-0-2)2 | | | | ECR307 Gen.Prof  (0-1-0)1 | |  | | 5 | | 14 | | 12 | | 26 | 22 |
| VI | | ECL350 DSP  (3-0-2)4 | ECL310  MP&MC  (3-0-2)4 | | | | PEIII  (2-0-2)3 (Includes IBM Course) | | | | | PE-IV  (2-0-2)3 | | OC-I  (2-0-2)3 | |  | ECD306 ET based.Project  (0-0-2)1 | | | | CLP310  (0-0-2)1  CTC | | | | ECR308 Gen.Prof  (0-1-0)1 | |  | | 5 | | 12 | | 14 | | 26 | 20 |
|  | ECT308: Industrial Training | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |  | |  | 03 |
| VII | | PE-V  (2-0-2)3 (Includes IBM Course) | | PE VI  (2-0-2)3 | | HM Elective 1  (2-0-2)3 | | | OC II  (2-0-2)3 | | | | HM Elective II (2-0-2)3 | | ECD405 Major Project (A) (0-0-4)2 | | | ECC407 Seminar  (0-0-1)1 |  | | |  | | ECR407 Gen.Prof  (0-1-0)1 | | ECS 401  Part-1  (70 HRS)  S/NS Course | | 5 | | 10 | | 11 | | 21 | | 20 | |
| VIII | | PE-VII (2-0-2)3 | | PE - VIII  (2-0-2)3 | | PE-IX  (2-0-2)3 | | |  | | | | CLL120  HVPE  (2-0-0)2 | | ECD406 Major Project (B)(0-0-8)4 | | |  |  | | |  | | SEG400  GATE  (0-2-0)2 | | ECS 402  Part-2  (70 HRS)  2 Credit | | 4 | | 8 | | 6 | | 14 | | 18 | |
|  | | Total Credits | | | | | | | | | | | | | | | | | | | | | | |  | |  | |  | |  | |  | |  | 166 |

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|  | Sem IV | Sem V | Semester VI | | Semester VII | | Semester VIII | | |
| TRACK | PE-I | PE-II | PE-III | PE-IV | PEV | PE-VI | PE-VII | PE-VIII | PE-IX |
| TRACK I: Circuits and VLSI | ECL308 Semicond. Devices | **ECL322 Comp. Architect. Org** | ECL304  Into. to VLSI | ECL313  Adv. Digital System Design | **ECL315 Analog CMOS Circuit Design** | **ECL419 VLSI fabrication Tech.** | **ECL417 Verification using system verilog** | ECL402  Microcontr. Interfac. and Appl | ECL404  MEMS and microsystems |
| TRACK II: Communication Engg. | ECL309 Information Theory and Coding | ECL302  Data Comm. and Networks | ECL314 Telecom Switching | ECL312  Microwave and Radar | ECL316  Wireless and Mobile Comm. | ECL411 Optical Comm./ ECL416  Image Processing | ECL401  Satellite & TV/ ECL 422 Stat. Signal Proc. | **ECL428 Mobile Computing**/ECL415 Speech Proc. | ECL426 Adv. Wireless Comm. Sys/CSL326 Network Sec. and Cryp |
| TRACK III: Internet of things | CSL 315  Intro. to DBMS | ECP311 Foundn course in Cloud Comp  (1-0-4)3 | **ECL323 Biomedical Electronics** | **ECL 324 Wireless sensor networks** | ECP322 Fndn in Big Data Analytics (1-0-4)3 | **ECL 413 Machine Learning** | ECP421 IoT based App dev. (1-0-4)3 | ECL402  Microcontr. Interfac. and Appl | **ECL427 Robotics** |
| Other Electives |  | **ECL319 Digital Marketing** | MAL104 Linear Algebra |  | ECL410 Artificial Neural Networks |  | ECL420  Fuzzy Sets and Appl. | ECL440  Optimization Techniques | ECL430  Genetic Algorithm |
|  |  |  |  | Selected Topics in ECE course | Selected Topics in ECE course | Selected Topics in ECE course |  |  | ECL352N Design for IOT |

PROGRAM ELECTIVE COURSES

**Note:**

**1. Tracks are only suggested. Students are free to choose electives as per their choices.**

**2. Selected topics in ECE will includes the latest and current technological courses offered and content will be decided by subject expert.**

**\*Open Course electives will include two subjects: 1. IPR and 2. Science, technology and law to be offered by Law department.**

**\*Suitable online courses from reputed Universities/Organizations may be offered as electives as per NCU policies.**