



IMPLEMENTATION

I.1.1. Technical Courses- 168 units

- Mathematics: 26 units
- Natural/Physical Sciences: 12 units
- Basic Engineering Sciences: 21 units
- Allied Courses: 44 units
- Professional Courses: 53 units
- Technical Electives: 12 units
- On-the-job Training



BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING (BSEE)
CMO No. 87, S. of 2017
Effective A.Y 2020-2021

| First Semester | | | | | | |
|----------------|--|-----|-----|-------|---------------|--|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite | |
| MATH 111 | Calculus 1 | 5 | 0 | 5 | None | |
| ES 133 | Computer-aided Drafting | 0 | 2 | 2 | None | |
| GE Math | Mathematics in the Modern World | 5 | 0 | 5 | None | |
| GE USelf | Understanding the Self | 3 | 1 | 4 | None | |
| CHEM 121 | Chemistry for Engineers | 3 | 0 | 3 | None | |
| IC 102 | Introduction to Electrical Engineering | 3 | 0 | 3 | None | |
| PE 1 | Physical Fitness & Health | 2 | 0 | 2 | None | |
| NSTP 1 | National Service Training Program 1 | 3 | 0 | 3 | None | |
| Sub- Total | | 24 | 3 | 27 | | |

| Second Semester | | | | | | |
|-----------------|-------------------------------------|-----|-----|-------|---------------------------------|--|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite | |
| Math 112 | Calculus 2 | 5 | 0 | 5 | Math 111 | |
| Phys 122 | Physics for Engineers | 3 | 1 | 4 | Math 111; Co-requisite Math 112 | |
| GE Entrep | The Entrepreneurial Mind | 3 | 0 | 3 | None | |
| GE IT | Living in the IT Era | 3 | 0 | 3 | None | |
| CPE 143 | Computer Programming | 0 | 1 | 1 | None | |
| GE Rizal | Life and Works of Rizal | 3 | 0 | 3 | None | |
| GE PurCom | Purposive Communication | 3 | 0 | 3 | None | |
| PE 2 | Rhythmic Activities | 2 | 0 | 2 | None | |
| NSTP 2 | National Service Training Program 2 | 3 | 0 | 3 | NSTP 1 | |
| Sub- Total | | 27 | 1 | 27 | | |

| First Semester | | | | | | |
|----------------|---------------------------|-----|-----|-------|--------------------|--|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite | |
| Math 113 | Differential Equations | 3 | 0 | 3 | Math 112 | |
| EE 201 | Electrical Circuits 1 | 3 | 1 | 4 | Phys 122; Math 112 | |
| ES 255 | Engineering Mechanics | 3 | 0 | 3 | Phys 122 | |
| Math 114 | Engineering Data Analysis | 3 | 0 | 3 | Math 111 | |
| ES 302 | Fluid Mechanics | 2 | 0 | 2 | Phys 122 | |
| GE ArtApp | Art Appreciation | 3 | 0 | 3 | None | |
| GE EnviSci | Environmental Science | 3 | 0 | 3 | None | |
| PE 3 | PE 3 | 2 | 0 | 2 | None | |
| Sub- Total | | 22 | 1 | 23 | | |

| Second Semester | | | | | | |
|-----------------|---|-----|-----|-------|--------------------|--|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite | |
| Math 161 | Engineering Mathematics for EE | 3 | 0 | 3 | Math 113 | |
| EE 202 | Electrical Circuits 2 | 3 | 1 | 4 | EE 201 | |
| ECE 201 | Electronic Circuits: Devices and Analysis | 3 | 1 | 4 | EE 201 | |
| ES 262 | Basic Thermodynamics | 2 | 0 | 2 | Phys 122 | |
| ES 137 | Engineering Economics | 3 | 0 | 3 | Math 114 | |
| ECE 252 | Electromagnetics | 4 | 0 | 4 | Phys 122; Math 113 | |
| GE Eth | Ethics | 3 | 0 | 3 | None | |
| PE 4 | PE 4 | 2 | 0 | 2 | None | |
| Sub- Total | | 23 | 2 | 25 | | |

| First Semester | | | | | | |
|----------------|---|-----|-----|-------|-----------------|--|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite | |
| EE 301 | Numerical Methods and Analysis | 2 | 1 | 3 | Math 161 | |
| ECE 371 | Logic Circuits and Switching Theory | 3 | 1 | 4 | ECE 201 | |
| ES 246 | Environmental Science and Engineering | 3 | 0 | 3 | None | |
| GE STS | Science, Technology and Society | 3 | 0 | 3 | None | |
| EE 311 | Industrial Electronics | 3 | 1 | 4 | ECE 201 | |
| EE 312 | Fundamentals of Electronic Communications | 3 | 0 | 3 | ECE 201 | |
| EE 302 | Electrical Machines 1 | 2 | 0 | 2 | ECE 252; EE 202 | |
| ES 261 | Fundamentals of Deformable Bodies | 2 | 0 | 2 | ES 255 | |
| Sub- Total | | 21 | 3 | 24 | | |

| Second Semester | | | | | | |
|-----------------|--|-----|-----|-------|-------------------------------|--|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite | |
| CpE 371 | Microprocessor Systems | 3 | 1 | 4 | ECE 371 | |
| EE 304 | Electrical Apparatus and Devices | 2 | 1 | 3 | EE 202 | |
| EE 303 | Electrical Machines 2 | 3 | 1 | 4 | EE 302 | |
| ES 301 | Basic Occupational Safety and Health | 3 | 0 | 3 | 3rd year standing | |
| ES 138 | Technopreneurship | 3 | 0 | 3 | 4 th year standing | |
| EE 305 | EE Law, Codes, and Professional Ethics | 2 | 0 | 2 | GE Eth | |
| ECE 357 | Feedback and Control Systems | 3 | 0 | 3 | Math 161; ECE 201 | |
| GE ConWorld | Contemporary World | 3 | 0 | 3 | None | |
| Sub- Total | | 22 | 3 | 25 | | |

| Summer | | | | | | |
|-------------|---------------------|-----|-----|-------|-------------------|--|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite | |
| Practicum | On-the-Job Training | 3 | 240 | 2 | 4th Year Standing | |
| Sub- Total | | 3 | 240 | 2 | | |

| Fourth Year First Semester | | | | | | |
|-------------------------------|--|-----|-----|-------|-------------------------------|--|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite | |
| ES 142 | Materials Science and Engineering | 3 | 0 | 3 | CHEM 121; ES 261 | |
| EE 401 | Electrical Standards and Practices | 0 | 1 | 1 | EE 305 | |
| EE 402 | Electrical Systems and Illumination Engineering Design | 3 | 2 | 5 | EE 303 | |
| EE 481 | Power Systems - Generation and Transmission | 3 | 0 | 3 | 4 th year standing | |
| EE 164 | Management of Engineering Projects | 2 | 0 | 2 | ES 137 | |
| ES 140 | Research Methods | 0 | 1 | 1 | Math 114; GE PurCom | |
| EE 403 | Instrumentation and Control | 2 | 1 | 3 | ECE 357 | |
| IC 105 | EE REVIEW 1 | 2 | 0 | 2 | 4 th year standing | |
| Sub- Total | | 15 | 5 | 20 | | |

| Second Semester | | | | | | |
|-----------------|--|-----|-----|-------|-------------------------------|--|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite | |
| EE 431 | Power Systems Analysis | 3 | 1 | 4 | EE 401 | |
| EE 432 | Fundamentals of Power Plant Engineering Design | 0 | 1 | 1 | Co-requisite: EE 431 | |
| EE 433 | Distribution Systems and Substation Design | 2 | 1 | 3 | Co-requisite: EE 431 | |
| EE 482 | Power Systems - Distribution System and Supply | 3 | 0 | 3 | EE 481 | |
| EE 422 | Research Project or Capstone Design Project for EE | 0 | 1 | 1 | ES 142 | |
| ES 484 | Seminars/Colloquia & Field Trips | 0 | 1 | 1 | 4 th year standing | |
| IC 106 | EE REVIEW 2 | 2 | 0 | 2 | 4 th year standing | |
| GE Hist | Readings in Philippine History | 3 | 0 | 3 | NONE | |
| Sub- Total | | 13 | 5 | 18 | | |
| Grand Total | | 165 | 254 | 188 | | |

| SUMMARY | UNITS |
|---|-------|
| I. Technical Courses | |
| A. Mathematics | 16 |
| B. Natural/Physical Sciences | 8 |
| C. Basic Engineering Sciences | 11 |
| D. Allied Courses | 39 |
| E. Professional Courses | 52 |
| F. Electives | 6 |
| Sub-Total | 132 |
| II. Non-Technical Courses | |
| A. GE Core Courses | 24 |
| B. Electives | 9 |
| C. Mandated Courses | 3 |
| D. Physical Education | 8 |
| E. NSTP | 6 |
| Sub-Total | 50 |
| III. Institutional Courses | |
| A. Introduction to Electrical Engineering | 2 |
| B. EE Review 1 | 2 |
| C. EE Review 2 | 2 |
| Sub-Total | 6 |
| Grand Total | 188 |

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