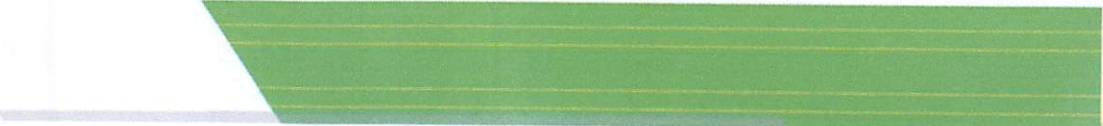


2. *Include the Electrical Engineering Technology subjects in the curriculum for 1st year to 3rd so that the students in Electrical Engineering will qualify to take NC2 in TESDA as well as Registered Master Electrician (RME) administered by PRC.*





BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING (BSEE)

CMO No. 87. S. of 2017
Effective A.Y 2020-2021

| First Year | | | | | |
|-------------------|--|-----------|----------|-----------|---------------|
| 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 | | 24 | 2 | 27 | |

| Second Year | | | | | |
|-------------------|---------------------------|-----------|----------|-----------|--------------------|
| 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 | |

| Third Year | | | | | |
|-------------------|---|-----------|----------|-----------|-----------------|
| 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 |

| 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 | 264 | 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 |
| EE Review 2 | | 2 |
| Sub-Total | | 6 |
| Grand Total | | 188 |

Prepared by:

ENGR. JOSELITO BALDAPAN, PEE
Program Chair, BSEE

Noted by:

CARLOS H. DONOSO, EdD
Campus Director, Surigao City Campus

Checked and Reviewed by:

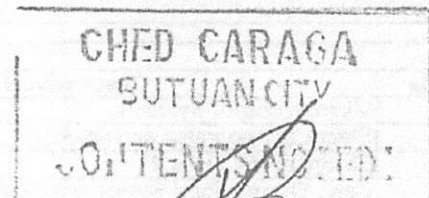
ENGR. ROBERT R. BACARRO, MECE, MBA
Dean, CEIT

Recommended by:

EMMYLOU A. BORJA, EdD
VP for Academic Affairs

Approved by:

GREGORIO Z. GAMBOA, JR., EdD
College President





July 15, 2022 **BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING (BSEE)**

Based on CMO No. 88, s. 2017
Effective A.Y 2022-2023

MR. RAMEL E. JAMEN

| First Year | | | | | |
|-----------------------|-------------------------------------|-----------|----------|-----------|---------------|
| First Semester | | | | | |
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite |
| MATH 110 | Basic Engineering Mathematics | 0 | 1 | 1 | None |
| MATH 111 | Calculus 1 | 4 | 0 | 4 | None |
| ES 133 (ES 101) | Computer-aided Drafting | 0 | 1 | 1 | None |
| GE Math | Mathematics in the Modern World | 3 | 0 | 3 | None |
| GE PurCom | Purposive Communication | 3 | 0 | 3 | None |
| CHEM 121 (CHEM 101) | Chemistry for Engineers | 3 | 1 | 4 | None |
| PE 1 (PATHFit 1) | Movement Competency Training or MCT | 2 | 0 | 2 | None |
| NSTP 1 | National Service Training Program 1 | 3 | 0 | 3 | None |
| Sub- Total | | 18 | 3 | 21 | |

| Second Semester | | | | | |
|---------------------|-------------------------------------|-----------|----------|-----------|---------------------------------|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite |
| Math 112 | Calculus 2 | 4 | 0 | 4 | Math 111 |
| Phys 122 (Phys 102) | Physics for Engineers | 3 | 1 | 4 | Math 111; Co-requisite Math 112 |
| GE Entrep | The Entrepreneurial Mind | 3 | 0 | 3 | None |
| GE LITE | Living in the IT Era | 3 | 0 | 3 | None |
| CPE 143 (CPE 101) | Computer Programming | 0 | 1 | 1 | None |
| GE USelf | Understanding the Self | 3 | 0 | 3 | None |
| PE 2 (PATHFit 2) | Exercise-based Fitness Activities | 2 | 0 | 2 | None |
| NSTP 2 | National Service Training Program 2 | 3 | 0 | 3 | NSTP 1 |
| Sub- Total | | 21 | 2 | 23 | |

| Second Year | | | | | |
|-------------------|---|-----------|----------|-----------|--------------------|
| First Semester | | | | | |
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite |
| Math 113 | Differential Equations | 3 | 0 | 3 | Math 112 |
| EE 201 (EE 102) | Electrical Circuits 1 | 3 | 1 | 4 | Phys 122; Math 112 |
| Math 114 | Engineering Data Analysis | 3 | 0 | 3 | Math 111 |
| IC 104 | Review in Mathematics | 3 | 0 | 3 | None |
| GE Hist | Readings in Philippine History | 3 | 0 | 3 | None |
| GE Rizal | Life and Works of Rizal | 3 | 0 | 3 | None |
| GE STS | Science, Technology and Society | 2 | 0 | 2 | None |
| PE 3 (PATHFit 3) | Choice of Dance, Sports, Martial Arts, Group Exercise Outdoor and Adventure Activities | 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 (EE 103) | Electrical Circuits 2 | 3 | 1 | 4 | EE 201 |
| ECE 201 (ECE 101) | Electronic Circuits: Devices and Analysis | 3 | 1 | 4 | EE 201 |
| ES 262 (ES 102) | Basic Thermodynamics | 2 | 0 | 2 | Phys 122 |
| GE ArtApp | Art Appreciation | 0 | 1 | 1 | None |
| GE ConWorld | Contemporary World | 3 | 0 | 3 | None |
| ES 255 | Engineering Mechanics | 3 | 0 | 3 | Phys 122 (Phys 102) |
| PE 4 (PATHFit 4) | Choice of Dance, Sports, Martial Arts, Group Exercise Outdoor and Adventure Activities | 2 | 0 | 2 | None |
| Sub- Total | | 19 | 3 | 22 | |

| Third Year | | | | | |
|-------------------|---|-----------|----------|-----------|---------------------|
| First Semester | | | | | |
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite |
| EE 301 (104) | Numerical Methods and Analysis | 2 | 1 | 3 | Math 161 |
| ECE 371 (ECE 102) | Logic Circuits and Switching Theory | 2 | 0 | 2 | ECE 201 |
| ES 261 (ES 104) | Fundamentals of Deformable Bodies | 3 | 0 | 3 | Math 114, GE PurCom |
| ES 302 (ES 105) | Fluid Mechanics | 2 | 0 | 2 | ES 262 |
| ES 137 (ES 106) | Engineering Economics | 3 | 0 | 3 | 3rd year standing |
| ECE 252 (ECE 103) | Electromagnetics | 2 | 0 | 2 | None |
| EE 311 (EE 105) | Industrial Electronics | 3 | 1 | 4 | ECE 201 |
| EE 312 (EE 106) | Fundamentals of Electronic Communications | 3 | 0 | 3 | ECE 201 |
| EE 302 (EE 107) | Electrical Machines 1 | 1 | 1 | 2 | ECE 252, EE 202 |
| Sub- Total | | 21 | 3 | 24 | |

| Second Semester | | | | | |
|-------------------|--|-----------|----------|-----------|-------------------|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite |
| CpE 371 | Microprocessor Systems | 2 | 0 | 2 | ECE 371 |
| ES 140 (107) | Research Methods | 0 | 1 | 1 | 3rd year standing |
| EE 304 (EE 108) | Electrical Apparatus and Devices | 2 | 1 | 3 | EE 202 |
| EE 303 (EE 109) | Electrical Machines 2 | 3 | 1 | 4 | EE 302 |
| ES 301 (ES 108) | Basic Occupational Safety and Health | 3 | 0 | 3 | 3rd year standing |
| ES 246 (109) | Environmental Science and Engineering | 2 | 0 | 2 | Chem 121 |
| EE 305 (EE 110) | EE Law, Codes, and Professional Ethics | 2 | 0 | 2 | GE Eth |
| ECE 357 | Feedback and Control Systems | 2 | 0 | 2 | Math 161; ECE 201 |
| GE Eth | Ethics | 3 | 0 | 3 | None |
| Sub- Total | | 19 | 3 | 22 | |

| Summer | | | | | |
|-------------|---------------------|--------------|-------|-------------------|--|
| Course Code | Descriptive Title | No. of Hours | Units | Pre-requisite | |
| Practicum | On-the-Job Training | 240 | 2 | 4th Year Standing | |
| Sub- Total | | 240 | 2 | | |

| Fourth Year | | | | | |
|-----------------|--|-----|-----|-------|-------------------|
| First Semester | | | | | |
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite |
| ES 142 (ES 110) | Materials Science and Engineering | 2 | 0 | 2 | CHEM 121; ES 261 |
| EE 401 (EE 111) | Electrical Standards and Practices | 0 | 1 | 1 | EE 305 |
| EE 402 (EE 112) | Electrical Systems and Illumination Engineering Design | 3 | 2 | 5 | EE 303 |
| EE 481 (EE 113) | Professional Elective 1(Power Systems Protection) | 3 | 0 | 3 | 4th year standing |
| EE 164 (EE 114) | Management of Engineering Projects | 2 | 0 | 2 | ES 137 |
| EE 422 (EE 115) | Research Project or Capstone Design Project for EE | 0 | 1 | 1 | ES 142 |
| EE 403 (EE 116) | Instrumentation and Control | 2 | 1 | 3 | ECE 357 |
| IC 105 | EE REVIEW 2 (General Engineering Review) | 0 | 1 | 1 | 5th year standing |
| Sub- Total | | 12 | 6 | 18 | |

| Second Semester | | | | | |
|-----------------|--|-----|-----|-------|---------------------|
| Course Code | Descriptive Title | Lec | Lab | Units | Pre-requisite |
| EE 431 (EE 117) | Power Systems Analysis | 3 | 1 | 4 | EE 401 |
| EE 432 (EE 118) | Fundamentals of Power Plant Engineering Design | 0 | 1 | 1 | Co-requisite EE 431 |
| EE 433 (EE 119) | Distribution Systems and Substation Design | 2 | 1 | 3 | Co-requisite EE 431 |
| EE 482 (EE 120) | Professional Elective 2 (Electrical Audit Evaluation) | 3 | 0 | 3 | EE 481 |
| ES 138 (ES 111) | Technopreneurship | 3 | 0 | 3 | 4th year standing |
| ES 484 | Seminars/Colloquia & Field Trips | 0 | 1 | 1 | 4th year standing |
| IC 105 | EE REVIEW 3 | 0 | 1 | 1 | 4th year standing |
| GE EnviSci | Environmental Science | 3 | 0 | 3 | None |
| Sub- Total | | 14 | 5 | 19 | |
| Grand Total | | | | 174 | |

| SUMMARY | UNITS |
|----------------------------------|-------|
| I. Technical Courses | |
| A. Mathematics | 14 |
| B. Natural/Physical Sciences | 8 |
| C. Basic Engineering Sciences | 10 |
| D. Allied Courses | 31 |
| E. Professional Courses | 51 |
| F. Electives | 6 |
| H. Institutional Courses | 6 |
| Sub-Total | 126 |
| II. Non-Technical Courses | |
| A. GE Education Courses | 22 |
| B. GEC Elective/Mandated Cour | 12 |
| C. Physical Education | 8 |
| D. NSTP | 3 |
| Sub-Total | 45 |
| Grand-Total | 174 |



Prepared by:

 ENGR. VICENTE Z. DELANTE, MEng'g
 Program Chair, BSEE

Checked and Reviewed by:

 ENGR. ROBERT R. BACARRO, MECE, MBA
 Dean CEIT

Noted by:

 RONITA E. TALINGTING, PhD
 Campus Director, City Campus

Recommended by:

 EMMYLOU A. BORJA, EdD
 VP - Academic Affairs

Approved by:
 GREGORIO Z. GAMBOA, JR., EdD
 SUC President III