# Department of Electrical Engineering

## Curriculum Requirements for Enrollees in the Academic Year 111 (Fall 2022)

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|---|---|---|
| Program | Four-year technical college program of the Day Division | |
| Group | None | |
| Class Type | Regular Class | |
| Special Program | None | |
| Curriculum Committee | Department Curriculum | |
| | College Curriculum | |
| | University Curriculum | 111.06.06 |
| | Academic Affairs | 111.06.06 |
| Graduation Credits /Study Duration | At least 128 credits required (normally 4 years). | |
| Credit Load per Semester | Students in Grades 1 and 2 must take no fewer than 16 credits and no more than 28 credits per semester. Students in Grades 3 and 4 must take no fewer than 9 credits and no more than 25 credits per semester. | |

| Required and Elective | Credits | Subject Category | Credits |
|---|---|---|---|
| Required | 75 Credits | General Education | 15 Credits |
| | | Major Required | 60 Credits |
| | | College Major | 0 Credits |
| Elective | 53 Credits | General Education | 6 Credits |
| | | Major Elective | 47 Credits |
| Other Regulations | | | |
| Remarks | "Computer Course" means computer access is required (computer and internet usage fee). | | |

| First Semester, First Year | | | | | Second Semester, First Year | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Course Category | Course Number | Course Name | Credits/ Hours | Notes | Course Category | Course Number | Course Name | Credits/ Hours | Notes |
| General Education | 405021 | Chinese(1) | 2/2 | | General Education | 405022 | Chiness(2) | 2/2 | |
| General Education | 400E00 | English(I) | 2/2 | | General Education | 400F00 | English(II) | 2/2 | |
| General Education | 405081 | Community Service & Learning(1) | 0/1 | | General Education | 405082 | Community Service & Learning(2) | 0/1 | |
| General Education | 400A00 | physical education (1) | 1/2 | | General Education | 400B00 | physical education (2) | 1/2 | |
| General Education | 300A00 | General Courses (I) | 2/2 | | General Education | 300B00 | General Courses (II) | 2/2 | |
| Major Required | 405057 | Human Rights and Legal Education | 2/2 | | Major Required | 405C02 | Physics(2) | 3/3 | |
| Major Required | 405C01 | Physics (1) | 3/3 | | Major Required | 405C08 | Calculus(2) | 3/3 | |
| Major Required | 405C03 | Physics Lab. | 1/2 | | Major Required | 405C06 | Computer Program | 2/3 | Computer Course |
| Major Required | 405C07 | Calculus (1) | 3/3 | | Major Required | 405C04 | Chemistry | 3/3 | |
| Major Required | 405C09 | Introduction to Electrical Engineering | 0/1 | | Major Required | 405004 | Labor education (2) | 0/1 | |

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|---|---|---|---|---|---|---|---|---|---|
| Major Required | 405031 | Introduction to Computer Science | 2/3 | Computer Course | Major Elective | 405885 | Industrial Wiring internship | 2/3 | |
| Major Required | 405003 | Labor education (1) | 0/1 | | Major Elective | 405892 | Computer Programming and Application | 1/2 | Computer Course |
| | | | | | | | | | |
| 18 Credits, 24 Hours | | | | | 21 Credits, 27 Hours | | | | |
| First Semester, Second Year | | | | | Second Semester, Second Year | | | | |
| Course Category | Course Number | Course Name | Credits/ Hours | Notes | Course Category | Course Number | Course Name | Credits/ Hours | Notes |
| General Education | 400G00 | English(III) | 2/2 | | General Education | 400H00 | English (IV) | 2/2 | |
| General Education | 400C00 | Physical Education (III) | 1/2 | | Major Required | 405023 | Practical Chinese | 2/2 | |
| General Education | 300C00 | General Courses(III) | 2/2 | | Major Required | 405C13 | Electric Circuits(2) | 3/3 | |
| Major Required | 405056 | Contemporary Taiwan and Modern World | 2/2 | | Major Required | 405C15 | Engineering Mathematics (2) | 3/3 | |
| Major Required | 405C12 | Electric Circuits (1) | 3/3 | | Major Required | 405C17 | Electronics (2) | 3/3 | |
| Major Required | 405C14 | Engineering Mathematics (1) | 3/3 | | Major Required | 405D42 | Single-Chip Application and Lab. | 2/3 | |
| Major Required | 405C16 | Electronics (1) | 3/3 | | Major Elective | 405886 | Mechatronics Integration Practice(1) | 2/3 | |
| Major Required | 405C36 | Electronics Lab. | 2/3 | | Major Elective | 405893 | Internet Applications | 2/3 | Computer Course |
| Major Required | 405C43 | Programmable Logic Control and Lab. | 2/3 | | Major Elective | 405N12 | Professional Electrical Engineering English | 2/2 | |
| Major Elective | 405Q10 | Logic Design and Lab. | 3/3 | | Major Elective | 405Q15 | Signals and Systems | 3/3 | |
| Major Elective | 405Q47 | Computer Software Application and Lab. | 2/3 | Computer Course | Major Elective | 405R86 | Photovoltaic System Construction Practice | 2/3 | |
| Major Elective | 405T16 | Green energy and energy conservation engineering | 3/3 | | | | | | |
| | | | | | | | | | |
| 28 Credits, 32 Hours | | | | | 26 Credits, 30 Hours | | | | |
| First Semester, Third Year | | | | | Second Semester, Third Year | | | | |
| Course Category | Course Number | Course Name | Credits/ Hours | Notes | Course Category | Course Number | Course Name | Credits/ Hours | Notes |
| Major Required | 405C19 | Control System | 3/3 | | Major Required | 405C20 | Control System Lab | 1/3 | |
| Major Required | 405C21 | Project in Practice (1) | 1/2 | | Major Required | 405C22 | Project in Practice (2) | 1/2 | |
| Major Required | 405C28 | Electrical Machinery(1) | 3/3 | | Major Required | 405C29 | Electrical Machinery Lab. | 1/3 | |
| Major Elective | 405883 | Introduction to Electric Vehicles | 3/3 | | Major Elective | 405884 | Mechatronics and Practical of electric vehicles | 3/3 | |
| Major Elective | 405887 | Mechatronics Integration Practice(2) | 2/3 | | Major Elective | 405895 | Digital System Design | 2/3 | |
| Major Elective | 405894 | Linear Algebra | 3/3 | | Major Elective | 405N10 | PC-based programming practice | 2/3 | |

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| Major Elective | 405N09 | Supervisory Control System and Practice | 3/3 | | Major Elective | 405Q18 | Power Systems(1) | 3/3 | |
| Major Elective | 405N11 | Microprocessor and Lab | 2/3 | Computer Course | Major Elective | 405Q20 | Control System Design | 3/3 | |
| Major Elective | 405Q14 | Computer-Aided Circuit Design and Practice | 2/3 | Computer Course | Major Elective | 405Q40 | Computer Graphics on Electrical Engineering | 3/3 | Computer Course |
| Major Elective | 405Q16 | Distribution Design | 3/3 | | Major Elective | 405Q42 | Electrical Machinery(2) | 3/3 | |
| Major Elective | 405Q21 | Elementals of Sensor and Transducers | 3/3 | | Major Elective | 405Q71 | The introduction of embeded system | 3/3 | |
| Major Elective | 405Q41 | Electromagnetism | 3/3 | | Major Elective | 405R15 | Materials and Elements of Fiber-Optics | 3/3 | |
| Major Elective | 405R13 | Introduction to Electro-optics Engineering | 3/3 | | Major Elective | 405R50 | Introduction to Energy Management | 3/3 | |
| Major Elective | 405R14 | Physics of Semiconductor | 3/3 | | Major Elective | 405R71 | Semiconductor and optoelectronic manufacturing equipment | 3/3 | |
| Major Elective | 405T08 | Industrial distribution and Lab. | 2/3 | | Major Elective | 405T31 | Distribution Design and Lab. | 2/3 | |
| Major Elective | 400N01 | Teaching assistant practice | 1/1 | | | | | | |
| None | 405R55 | Programming and Analysis | 3/3 | | | | | | |
| | | | | | | | | | |
| 43 Credits, 48 Hours | | | | | 36 Credits, 44 Hours | | | | |
| First Semester, Fourth Year | | | | | Second Semester, Fourth Year | | | | |
| Course Category | Course Number | Course Name | Credits/ Hours | Notes | Course Category | Course Number | Course Name | Credits/ Hours | Notes |
| Major Required | 405058 | English Proficiency qualification | 0/2 | | College Major | 40TND9 | Interdisciplinary program learning | 0/1 | |
| Major Elective | 405865 | Introduction to Semiconductor Manufacturing Technology | 3/3 | | College Major Required | 40TNF1 | Interdisciplinary Micro Course Program for Engineering Digital Technology | 0/1 | |
| Major Elective | 405N06 | Originality Thinking Training | 2/2 | | Major Required | 405C42 | Electrical Engineering Practical Capability Certification | 0/2 | |
| Major Elective | 405N07 | Personal Character and Professional Ethics | 2/2 | | Major Elective | 405848 | Thin Film Engineering and Lab | 3/3 | |
| Major Elective | 405Q19 | Power Systems(2) | 3/3 | | Major Elective | 405891 | Numerical Methods | 3/3 | |
| Major Elective | 405Q24 | Power electronics | 3/3 | | Major Elective | 405896 | Power Generation Technology for New and Renewable Resource | 3/3 | |
| Major Elective | 405Q25 | Energy Technology. | 3/3 | | Major Elective | 405N08 | Life-Career Counseling | 2/2 | |
| Major Elective | 405Q27 | System Protections and Coordinations | 3/3 | | Major Elective | 405Q32 | Electrical Supervisory and Control Automation | 3/3 | |
| Major Elective | 405Q43 | Project Management | 3/3 | | Major Elective | 405Q33 | Renewable Electricity | 3/3 | |
| Major Elective | 405Q49 | Summer Internship | 3/3 | | Major Elective | 405Q34 | Power system simulation | 3/3 | |
| Major Elective | 405Q55 | Semester Off-campus Internship (1) | 9/9 | | Major Elective | 405Q39 | Electrical Technology Evaluation | 2/2 | |
| Major Elective | 405Q59 | Practic of Electrical Facility Testing | 2/3 | | Major Elective | 405Q56 | Semester Off-campus Internship (2) | 9/9 | |

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|---|---|---|---|---|---|---|---|---|---|
| Major Elective | 405R16 | Introduction to Nanotechnology | 3/3 | | Major Elective | 405Q60 | Electric Motor Control and Practice | 2/4 | |
| Major Elective | 405R19 | Vacuum Technique | 3/3 | | Major Elective | 405R24 | The Theory and Technique of Solar Cell | 3/3 | |
| Major Elective | 405R51 | Programming and Analysis of Power System | 3/3 | | Major Elective | 405R81 | LED Lighting and Applications | 3/3 | |
| Major Elective | 405T01 | Distribution of electricity regulations | 3/3 | | Major Elective | 405T13 | Engineering quality control and budget production | 2/4 | |
| | | | | | | | | | |
| 48 Credits, 51 Hours | | | | | 41 Credits, 49 Hours | | | | |