DONG NAI TECHNOLOGY UNIVERSITY

DNTU

# CURRICULUM

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|---|---|
| Major: | **Electrical - Electronic** |
| Level of Education: | **Bachelor** |
| Mode of Study: | **Formal** |
| Duration of Study: | **4 Years** |
| Qualification Awarded: | **Full-time Regular** |
| Training course | **Cohort 19 (2023 - 2027)** |
| Total Graduation Credits: | **152** |

*Courses marked with (*) are not included in the calculation of the cumulative grade point average (GPA).*

| **SEMESTER 1: 16 accumulated credits (compulsory: 5)** | | | | | |
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| **Course code** | **Course Name** | **Number of credits** | **Total number of sessions** | **Theory session** | **Practic session** |
| **Compulsory module** | | **16** | | | |
| 3070200 | Electrical and electronic materials | 2 | 45 | 15 | 30 |
| 470165 | Introduction to Electrical and Electronic Engineering | 2 | 45 | 15 | 30 |
| 70206 | Key English 1 * | 3 | 45 | 45 | 0 |
| 70207 | Key English 2 * | 3 | 45 | 45 | 0 |
| 70208 | Key English 3 * | 3 | 45 | 45 | 0 |
| 70209 | English Speaking Community * | 2 | 30 | 30 | 0 |
| CB70303 | Public speaking skills | 1 | 15 | 15 | 0 |
| **Elective course : 0** | | **0** | | | |
| **SEMESTER 2: 21 accumulated credits (compulsory: 19, elective: 02)** | | | | | |
| **Course code** | **Course Name** | **Number of credits** | **Total number of sessions** | **Theory session** | **Practic session** |
| **Compulsory module** | | **19** | | | |
| DT70101 | Circuit Analysis | 3 | 60 | 30 | 30 |
| DT70201 | Electronic Components | 3 | 60 | 30 | 30 |

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| CB70101 | Marxist-Leninist Philosophy | 3 | 45 | 45 | 0 |
| CB70301 | Informatics 1 | 2 | 45 | 15 | 30 |
| CB70304 | Emotional Management Skills | 1 | 15 | 15 | 0 |
| TA70305 | Intensive English 1 | 4 | 60 | 60 | 0 |
| CB70202 | Advanced Mathematics | 3 | 45 | 45 | 0 |
| **Elective course (Choose 1 out of 2 courses)** | | **2** | | | |
| CB71202 | Complex Functions and Laplace Transforms | 2 | 30 | 30 | 0 |
| CB71201 | Computational Methods | 2 | 30 | 30 | 0 |
| **SEMESTER 3: 23 accumulated credits (compulsory: 15, elective: 07)** | | | | | |
| **Course code** | **Course Name** | **Number of credits** | **Total number of sessions** | **Theory session** | **Practic session** |
| **Compulsory module** | | **16** | | | |
| CB70206 | Science Research Methods | 2 | 30 | 30 | 0 |
| CB70102 | Marxist-Lenin Political Economy | 2 | 30 | 30 | 0 |
| CB71401 | Physical education 1 - Swimming * | 1 | 30 | 0 | 30 |
| TA70306 | Intensive English 2 | 4 | 60 | 60 | 0 |
| CB70302 | Informatics 2 | 2 | 60 | 0 | 60 |
| CB70305 | Communication and Relationship Building Skills | 2 | 30 | 30 | 0 |
| CB70203 | Physics | 3 | 45 | 45 | 0 |
| **Elective course** | | **7** | | | |
| DT71101 | Electrical machine | 3 | 60 | 30 | 30 |
| DT71102 | Electrical apparatus | 2 | 45 | 15 | 30 |
| DT71201 | Computer Architecture for the Electronics Field | 3 | 75 | 15 | 60 |
| DT71202 | Signaling theory | 2 | 30 | 30 | 0 |
| DT71203 | Optoelectronics | 2 | 30 | 30 | 0 |
| CB71101 | Environment and Sustainable Development | 2 | 30 | 30 | 0 |
| CB71102 | Behavioral psychology | 2 | 30 | 30 | 0 |

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| CB71103 | Psychology of Medical Ethics | 2 | 30 | 30 | 0 |
| **SEMESTER 4: 31 cumulative credits (compulsory: 17, elective: 05)** | | | | | |
| **Course code** | **Course Name** | **Number of credits** | **Total number of sessions** | **Theory session** | **Practic session** |
| **Compulsory module** | | **26** | | | |
| CT70104 | AutoCAD | 2 | 60 | 0 | 60 |
| DT70103 | Measurement Techniques | 3 | 60 | 30 | 30 |
| DT70107 | Applied Informatics for Specialized Fields | 2 | 60 | 0 | 60 |
| DT70202 | Pulse Techniques | 2 | 45 | 15 | 30 |
| CB70103 | Scientific Socialism | 2 | 30 | 30 | 0 |
| CB70401 | National Defense and Security Education 1 * | 3 | 45 | 45 | 0 |
| CB70402 | National Defense and Security Education 2 * | 2 | 30 | 30 | 0 |
| CB70403 | National Defense and Security Education 3 * | 1 | 30 | 0 | 30 |
| CB70404 | National Defense and Security Education 4 * | 2 | 60 | 0 | 60 |
| CB71402 | Physical Education 2 * | 1 | 30 | 0 | 30 |
| TA70307 | Intensive English 3 | 4 | 60 | 60 | 0 |
| CB70307 | Industrial Accident Prevention Skills | 2 | 30 | 30 | 0 |
| **Elective course** | | **5** | | | |
| DT71103 | Power Supply | 3 | 60 | 30 | 30 |
| DT71204 | Electronic Circuits 1 | 3 | 60 | 30 | 30 |
| CB71104 | Green Economy and Sustainable Development | 2 | 30 | 30 | 0 |
| CB71105 | Vietnamese Culture and Traditional Music | 2 | 30 | 30 | 0 |
| CB71106 | History of World Civilization | 2 | 30 | 30 | 0 |
| **SEMESTER 5: 24 cumulative credits (compulsory: 20, elective: 03)** | | | | | |

| Course code | Course Name | Number of credits | Total number of sessions | Theory session | Practic session |
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| **Compulsory module** | | **21** | | | |
| DT70105 | Sensor and Measurement Technology | 3 | 60 | 30 | 30 |
| DT70106 | Automatic Control Theory | 3 | 60 | 30 | 30 |
| DT70203 | Digital Engineering | 3 | 75 | 15 | 60 |
| DT70204 | C Programming | 3 | 60 | 30 | 30 |
| CB70104 | Ho Chi Minh Thought | 2 | 30 | 30 | 0 |
| CB70105 | History of the Communist Party of Vietnam | 2 | 30 | 30 | 0 |
| CB71405 | Physical Education 3 * | 1 | 30 | 0 | 30 |
| TA70308 | Intensive English 4 | 4 | 60 | 60 | 0 |
| **Select a study module (Choose 1 of the 2 modules)** | | **3** | | | |
| DT71104 | Electric machine control | 3 | 45 | 45 | 0 |
| DT71205 | Electronic circuit 2 | 3 | 75 | 15 | 60 |
| **SEMESTER 6: 22 cumulative credits (compulsory: 16, elective: 06)** | | | | | |
| **Course code** | **Course Name** | **Number of credits** | **Total number of sessions** | **Theory session** | **Practic session** |
| **Compulsory module** | | **16** | | | |
| DT70109 | PLC | 3 | 75 | 15 | 60 |
| DT70110 | Course Project 1 | 1 | 30 | 0 | 30 |
| DT70114 | Electropneumatics | 4 | 90 | 30 | 60 |
| DT70205 | Power Electronics | 3 | 60 | 30 | 30 |
| DT70206 | Microcontrollers | 3 | 60 | 30 | 30 |
| CB70106 | General Law | 2 | 30 | 30 | 0 |
| **Elective course** | | **6** | | | |
| DT71105 | Electrical Machine Control Practice | 3 | 90 | 0 | 90 |
| DT71106 | Power Systems | 3 | 60 | 30 | 30 |

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|---|---|---|---|---|---|
| DT71107 | Illumination Engineering | 3 | 75 | 15 | 60 |
| DT71108 | Power Plants and Substations | 3 | 60 | 30 | 30 |
| DT71206 | Electronic Circuit Design | 3 | 90 | 0 | 90 |
| DT71207 | Intelligent Control | 3 | 75 | 15 | 60 |
| DT71208 | Telecommunication Systems | 3 | 45 | 45 | 0 |
| DT71209 | Digital Signal Processing (DSP) | 3 | 75 | 15 | 60 |
| **SEMESTER 7: 21 cumulative credits (compulsory: 6, elective: 15)** | | | | | |
| **Course code** | **Course Name** | **Number of credits** | **Total number of sessions** | **Theory session** | **Practic session** |
| **Compulsory module** | | **6** | | | |
| DT70111 | Course Project 2 | 1 | 30 | 0 | 30 |
| DT70112 | Advanced PLC | 3 | 90 | 0 | 90 |
| DT70113 | Automation of Technological Processes | 2 | 60 | 0 | 60 |
| **Elective course** | | **15** | | | |
| DT71109 | Power System Protection | 3 | 75 | 15 | 60 |
| DT71110 | Industrial Communication Networks | 3 | 75 | 15 | 60 |
| DT71111 | Renewable Energy | 3 | 75 | 15 | 60 |
| DT71112 | Power Supply Design | 3 | 75 | 15 | 60 |
| DT71113 | Advanced Pneumatics | 3 | 90 | 0 | 90 |
| DT71114 | Electric Drives | 3 | 75 | 15 | 60 |
| DT71210 | FPGA Technology | 4 | 90 | 30 | 60 |
| DT71211 | Industrial Instrumentation | 2 | 30 | 30 | 0 |
| DT71212 | Computer-Based Instrumentation and Control | 3 | 75 | 15 | 60 |
| DT71213 | Embedded Systems | 3 | 75 | 15 | 60 |
| DT71214 | Networking and Data Communication | 3 | 75 | 15 | 60 |
| DT71215 | Advanced Microcontrollers | 2 | 60 | 0 | 60 |
| DT71216 | Automatic Control Equipment and Systems | 3 | 75 | 15 | 60 |
| DT71217 | IOT | 3 | 75 | 15 | 60 |

| SEMESTER 8: 16 cumulative credits (compulsory: 16, elective: 0) | | | | | |
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| **Course code** | **Course Name** | **Number of credits** | **Total number of sessions** | **Theory session** | **Practic session** |
| **Compulsory module** | | **16** | | | |
| DT71218 | Graduation Internship | 8 | 30 | 30 | 0 |
| DT71219 | Graduation Thesis | 8 | 30 | 30 | 0 |
| 70138 | Orientation Education | 0 | 0 | 0 | 0 |
| **Elective course** | | **0** | | | |