

**Bachelor of Engineering Program 工程学士课程**  
**Field of Study: Electrical Engineering 学习领域: 电气工程**  
**Revised curriculum 2023 2023 年修订课程**

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<b>Name of a higher education institution</b> 高等教育机构名称	Bangkok Thonburi University 曼谷吞武里大学
<b>Campus/Faculty/Department</b> 校园/学院/部门	Faculty of Engineering 工程学部  Field of Study: Electrical Engineering 学习领域: 电气工程

**Part 1 Name of Degree and Field of Study**  
**第 1 部分 学位名称和研究领域**

**1. Course code and name 课程代码和名称**

**1.1 Course code 科目编号**

25561131101469

**1.2 Course name 课程名**

中文 电气工程学士学位课程

English Bachelor of Engineering Program in Electrical Engineering

**2. Degree name and field of study 学位名称和研究领域**

中文 全名: 工程学士 (电气工程)

缩写: B.Eng. (电气工程)

English Full name : Bachelor of Engineering (Electrical Engineering)

Abbreviation: B.Eng. (Electrical Engineering)

**3. Major 主要的**

do not have 没有

**4. Format of the course 课程形式**

**4.1 Type 类型**

It is a bachelor's degree level course. 这是学士学位课程。

Academic 学术的

Professional 专业的

Operational 操作

### Part 3 Structure of the course Courses and credits

#### 第三部分 课程结构 课程和学分

#### 1. Structure of the course 课程结构

##### 1.1 Course 课程

1.1.1 The total number of credits throughout the course is 147 credits 学分  
整个课程的总学分是 147。

##### 1.1.2 Course structure 课程结构

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|--|----------------|
| 1. General education subjects 通识教育科目                       | 24 credits 学分  |
| 2. Specific subjects category 特定科目类别                       | 117 credits 学分 |
| 2.1 Basic Mathematics and Science Subject Group<br>基础数理学科组 | 27 credits 学分  |
| 2.2 Basic engineering subject group<br>基础工程学科组             | 14 credits 学分  |
| 2.3 Specialized professional groups<br>专门的专业团体             | 76 Credits 学分  |
| 2.3.1 Required professional groups<br>所需专业团体               | 63 Credits 学分  |
| 2.3.2 Elective professional groups<br>选修专业组                | 6 Credits 学分   |
| 2.3.3 Group of subjects to enhance experience<br>增强体验的科目组  | 7 credits 学分   |
| 3. Free elective courses 免费选修课                             | 6 credits 学分   |

#### 3. Free elective courses 免费选修课 6 credits 学分

Let students choose which subjects to study in the bachelor's degree program as specified by the university. And provide a total number of credits of not less than six credits, which students can choose to study in all program subjects. That is taught at the bachelor's level at Bangkok Thonburi University.

让学生根据大学的规定选择学习学士学位课程的科目。并提供总学分不少于6个学分，学生可以选择在所有课程科目中学习。这是曼谷吞武里大学的学士学位课程。

Suppose students choose to study courses at other higher education institutions, both domestically and abroad, that are certified by the Ministry of Higher Education, Science, Research, and Innovation. In that case, the students are responsible for the expenses themselves.

假设学生选择在国内外其他高等教育机构学习课程，这些机构均获得高等教育、科学、研究和创新部的认证。在此情况下，费用由学生自行承担。

Or training experience in establishing the student's choice, both domestically and abroad, with the student being responsible for the expenses incurred in the course.

或者在国内和国外建立学生选择的培训经验，学生负责课程中产生的费用。

EE 444 Free experience in the workplace 免费职场体验 6 (270 hours 小时)

(Independent training in the workplace) (职场独立培训)

### 1.1.4 Study Plan 学习计划

#### Year 1, Semester 1 第一年第一学期

Course code 科目编号	Course Name 课程名	Credits _ (Theory-practice-self-study) 制作人员_ (理论-实践-自学)
GE 103	English for communication 沟通英语	3 (2-2-5)
EI 101	Calculus 1 微积分 1	3(3-0-6)
EI 103	General Physics 1 普通物理 1	3(3-0-6)
EI 104	Physics Lab 1 普通物理 1	1(0-2-1)
ME 101	Engineering drawing 工程制图	3(2-2-5)
ME 102	Basic engineering practice 基础工程实践	2(0-4-2)
ME 103	Computer programming for engineers 工程师的计算机编程	3(2-2-5)
EE 101	Fundamentals of electrical engineering and technology 电气工程与技术基础	1(0-3-2)
<b>Total 全部的</b>		<b>19(12-15-32)</b>

#### Year 1, Semester 2 第一年第二学期

Course code 科目编号	Course Name 课程名	Credits _ (Theory-practice-self-study)
GE 104	Reading English for life 终生阅读英语	3 (2-2-5)
EI 102	Calculus 2 微积分 2	3(3-0-6)
EI 105	General Physics 2 普通物理 2	3(3-0-6)
EI 106	Physics Lab 2 物理实验室 2	1(0-2-1)
EI 107	General Chemistry 普通化学	3(3-0-6)
EI 108	Chemistry Lab 化学实验室	1(0-2-1)
ME 104	Engineering Mechanics 1 工程力学 1	3(3-0-6)
EE 221	Communication Technology 通信技术	2(2-0-2)
<b>Total 全部的</b>		<b>19(16-6-33)</b>

**1st year, summer semester 第一年, 夏季学期**

<b>Course code 科目编号</b>	<b>Course Name 课程名</b>	<b>Credits _ (Theory-practice-self-study)</b>
GE 102	Thai language for careers 泰语职业	3 ( 2-2-5 )
GE 105	Leadership and anti-corruption education 领导力和反 腐败教育	3 ( 2-2-5 )
<b>Total 全部的</b>		<b>6(4-4-10)</b>

**Year 2 Semester ,1 第二年, 第一学期**

<b>Course code 科目编号</b>	<b>Course Name 课程名</b>	<b>Credits _ (Theory-practice-self-study)</b>
EI 201	Calculus 3 微积分 3	3(3-0-6)
ME 105	Engineering Materials 工程材料	3(3-0-6)
EE 201	Electrical Circuit 电路	3(3-0-6 )
EE 202	Electrical Circuit Operations 电路操作	1(0-3-2)
EE 203	Measuring Instruments and Electrical Measurements 测 量仪器和电气测量	3(3-0-6)
EE 204	Practice Measuring Instruments and Electrical Measurements 练习测量仪器和电气测量	1(0-3-2)
EE 214	Electromagnetic Field 电磁场	3 ( 2-2-5 )
<b>Total 全部的</b>		<b>17(14-8-33)</b>

**Year 2, Semester 2 第二年第二学期**

<b>Course code 科目编号</b>	<b>Course Name 课程名</b>	<b>Credits _ (Theory-practice-self-study)</b>
GE 112	Principles of Statistics 统计学原理	3 ( 2-2-5 )
EI 202	Linear Algebra for Engineers 工程师线性代数	3(3-0-6)
EE 205	Electronic Engineering 电子工程	3(3-0-6)
EE 206	Electronic Engineering Laboratory 电子工程实验室	1(0-3-2)
EE 216	Microcontrollers and modern electronics 微控制器和现代电 子产品	3(3-0-6)
EE 217	Operating microcontrollers and modern electronics 操作微控制器 和现代电子产品	1(0-3-2)
EE 222	Energy Storage 储能	2(2-0-2)
<b>Total 全部的</b>		<b>16(13-8-29)</b>

**Year 2, summer semester** 二年级，夏季学期

<b>Course code</b> 科目编号	<b>Course Name</b> 课程名	<b>Credits _</b> (Theory-practice-self-study)
GE 106	Psychology, Ethics and Life skills 心理学、伦理学和生活技能	3 ( 2-2-5 )
GE 109	General law and human rights principles 一般法和人权原则	3 ( 2-2-5 )
<b>Total 全部的</b>		<b>6 ( 4 - 4 - 10 )</b>

**Year 3, Semester 1** 第三年，第一学期

<b>Course code</b> 科目编号	<b>Course Name</b> 课程名	<b>Credits _</b> (Theory-practice-self-study)
EI 203	Numerical Methods for Engineers 工程师数值方法	3(3-0-6)
EE 218	Electrical machinery and controls 电机和控制	3(3-0-6)
EE 219	Electrical machinery operations and controls 电机操作和控制	1(0-3-2)
EE 220	Signals and systems 信号和系统	3 ( 2-2-5 )
EE 223	Electrical Power System 电力系统	3(3-0-6)
EE 224	Electrical power system operations 电力系统运行	1(0-3-2)
EE 301	Power Electronics 电力电子	3(3-0-6)
EE 302	Power Electronics Operations 电力电子业务	1(0-3-2)
<b>Total 全部的</b>		<b>18(14-11-35)</b>

**Year 3, Semester 2 第三年第二学期**

<b>Course code</b> 科目编号	<b>Course Name</b> 课程名	<b>Credits _</b> (Theory-practice-self-study)
EE 303	Control System 控制系统	3(3-0-6)
EE 304	Operating Control System 操作控制系统	1(0-3-2)
EE 401	Power Plants and Substations 发电厂和变电站	3 ( 2-2-5 )
EE 402	High Voltage Engineering 高电压工程	3 ( 2-2-5 )
EE 406	Electric Propulsion 电力推进	3 ( 2-2-5 )
EE 430	Electrical Engineering Project 1 电气工程项目 1	1(0-3-2)
xx xxx	Elective Profession 选修专业	3 ( xxx )
<b>Total 全部的</b>		<b>17 ( xxx )</b>

**Year 3, Summer Semester 第三年，夏季学期**

<b>Course code</b> 科目编号	<b>Course Name</b> 课程名	<b>Credits _</b> (Theory-practice-self-study)
GE 111	Computers and information in the digital age 数字时代的计算机和信息	3 ( 2-2-5 )
xx xxx	Free elective courses 免费选修课	3( xxx )
<b>Total 全部的</b>		<b>6 ( xxx )</b>

**Year 4, Semester 1 第四年，第一学期**

<b>Course code</b> 科目编号	<b>Course Name</b> 课程名	<b>Credits _</b> (Theory-practice-self-study)
EE 306	Prepare cooperative education for electrical engineering 准备电气工程合作教育	1(0-2-1)
EE 403	Electrical power system protection and relays 电力系统保护和继电器	3 ( 2-2-5 )
EE 404	Electrical system design and cost estimation 电气系统设计和成本估算	3(3-0-6)
EE 405	Practice writing and designing electrical systems using computers. 练习使用计算机编写和设计电气系统。	1(0-3-2)
EE 431	Electrical Engineering Project 2 电气工程项目 2	3(0-9-6)
xx xxx	Elective Profession 选修专业	3 ( xxx )
xx xxx	Free elective courses 免费选修课	3 ( xxx )
<b>Total 全部的</b>		<b>17 ( xxx )</b>

Year 4 Semester 2 第四年第二学期

Course code 科目编号	Course Name 课程名	Credits _ (Theory-practice-self-study)
EE 400	Cooperative education for electrical engineering 电气 工程合作办学	6(600 hours)
<b>Total 全部的</b>		<b>6(600 hours)</b>