# 电子信息工程专业本科培养计划

# Bachelor degree of Engineering (BEng) in Electronics and Information Engineering

### 一、培养目标

### Ⅰ．Program Objectives

本专业将培养德、智、体全面发展，具有电子信息领域系统、扎实的理论基础，具有工程实践和创新能力的高素质科技人才。

本专业的毕业生将掌握信息科学领域内基础理论知识，获得从信息获取、传递、处理到应用等各方面的基本专业知识，掌握电子电路、信号处理以及多媒体信息处理等方向的基本原理和技术，具有参与设计和开发信息应用系统的工程实践能力。毕业生将具有较强的专业英语能力、良好的人文素质和创新精神，成为能在信息和通信技术产业的科研部门、高等院校从事通信系统与工程的设计、集成及开发等工作的研究型或应用型人才。

This program is designed to produce fully-developed engineers in morality, intelligence and heath that are trained to develop the fundamental theories and skills, a consolidated knowledge structure, and to be enhanced with hands-on engineering experiences and innovative initiatives in electronics and information engineering.

The graduates in this program are required to develop the systems and technologies which drive the information age, from acquiring information, transmission, processing to application. They are required to master the basic theories and skills in electronic circuits, signal processing and multimedia processing, and they are able to participate in the design and development of various communication and information systems. The graduates are enhanced with strong professional English in electronics and information engineering, good personality and innovative initiatives. They are qualified to design, integrate and develop systems and technologies in communications engineering in information and communications industries, research institutes, universities and other related communities.

### 二、基本规格要求

### Ⅱ．Highlights

毕业生应获得以下几个方面的知识和能力：

1．具有较扎实的数理基础，具有较强的英语语言能力；

2．掌握文献检索和撰写科技论文的方法，了解信息学科的发展动态和理论前沿；

3．理解信息科学的基本理论和方法，具有研究实际问题的能力

4．掌握信号处理、信息处理系统的原理与技术，具有参与设计和开发的实践能力；

5．具有较好的人文社科知识和人文素质；

6．具有较强的团队合作和科技创新精神。

Students are expected to acquire the following knowledge or skills:

1. Consolidated background in both mathematics and physics and strong English capabilities;

2. Skills in searching literatures and writing technical report, and familiar with the development trends in the information discipline and research frontiers;

3. Understanding of basic theories and methods in information science, and research capabilities

of real engineering problems;

4．Mastering principles and technologies in signal processing, information processing systems and participate in the design and development of information systems;

5．Sound knowledge in humanities-and-art and good personality;

6．Cooperative attitude as a team player and strong innovative initiatives.

### 三、培养特色
### Ⅲ．Program Features

本专业将以电子电路、信号分析、多媒体处理等信息系统的设计与应用为方向，着重培养学生在电子技术、信号处理等方面的理论基础，培养学生参与多种信息应用系统的设计与开发的工程实践和创新能力。修完本专业课程后，学生也可选择攻读电子科学、通信工程、计算机科学、自动化、光电信息等领域的研究生。

This program focuses on the design and application of information systems in electronic circuits, signal processing and multimedia processing. Students are required to construct solid and broad theoretical background in electronic technologies and information processing, and they are enhanced with the hands-on engineering experiences and innovative initiatives in the design and development of multiple information systems. Upon graduation, graduates may choose to continue their studies at the postgraduate level in electronic science, communication engineering, computer science, automation and optical-electronic related disciplines.

### 四、主干学科
### Ⅳ．Major Discipline
电子科学与技术
Electronics Science and Technology

### 五、学制与学位
### Ⅴ．Program Length and Degree
学制：四年制
Program Length: Four years
授予学位：工学学士
Degrees Conferred:　Bachelor of Engineering

### 六、学时与学分
### Ⅵ．Hours/Credits
完成学业最低课内学分（含课程体系与集中性实践教学环节）要求：159.5
Minimum Credits of Curriculum (including courses and intensive practical training/internship): 159.5

完成学业最低课外学分要求：5
Minimum Extracurricular Credits: 5

1．课程体系学时与学分
Hours/Credits of the Curriculum

| 课程类别 | | 课程性质 | 学时/学分 | 占课程体系学分比例（%） |
|---|---|---|---|---|
| 通识教育基础课程 | | 必修 | 1080/61.5 | 43.1 |
| | | 选修 | 160/10 | 6.4 |
| 学科基础 | 学科大类基础课程 | 必修 | 552/31.5 | 22.0 |

| 课程 | 学科专业基础课程 | 必修 | 520/31.5 | 20.8 |
|---|---|---|---|---|
| 专业 | 公共专业选修课程 | 选修 | 64/4 | 2.6 |
| 课程 | 专业方向课程 | 选修 | 128/8 | 5.2 |
| 合计 | | | 2504/146.5 | 100 |

| Course Classified | | Course Nature | Hrs/Crs | Percentage (%) |
|---|---|---|---|---|
| Basic Courses in General Education | | Required | 1080/61.5 | 43.1 |
| | | Elective | 160/10 | 6.4 |
| Basic Courses in Discipline | Common Core Courses | Required | 552/31.5 | 22.0 |
| | Common Major Courses | Required | 520/31.5 | 20.8 |
| Courses in Major | Common Elective Courses | Elective | 64/4 | 2.6 |
| | Elective Major Courses | Elective | 128/8 | 5.2 |
| Total | | | 2504/146.5 | 100 |

2. 集中性实践教学环节周数与学分

Weeks/Credits of Intensive Practical Training / Internship

| 实践教学环节名称 | 课程性质 | 周数/学分 | 占实践教学环节学分比例（%） |
|---|---|---|---|
| 军事训练 | 必修 | 2/1 | 7.7 |
| 电工实习 | 必修 | 2/1 | 7.7 |
| 生产实习（社会实践） | 必修 | 2/1 | 7.7 |
| 软件课程设计 | 必修 | 2/1 | 7.7 |
| 硬件课程设计 | 必修 | 2/1 | 7.7 |
| 毕业设计 | 必修 | 16/8 | 61.5 |
| 合计 | | 26/13 | 100 |

| Practical Training / Internship | Course Nature | Weeks/Credits | Percentage (%) |
|---|---|---|---|
| Military Training | Required | 2/1 | 7.7 |
| Electrical Engineering Practice | Required | 2/1 | 7.7 |
| Engineering Internship (Social Practice) | Required | 2/1 | 7.7 |
| Course Project of Software | Required | 2/1 | 7.7 |
| Course Project of Hardware | Required | 2/1 | 7.7 |
| Undergraduate Thesis | Required | 16/8 | 61.5 |
| Total | | 26/13 | 100 |

3. 课外学分

Extracurricular Credits

| 序号 | 课外活动名称 | 课外活动和社会实践的要求 | | 课外学分 |
|---|---|---|---|---|
| 1 | 社会实践活动 | 提交社会调查报告，通过答辩者 | | 1 |
| | | 个人被校团委或团省委评为社会实践活动积极分子者，集体被校团委或团省委评为优秀社会实践队者 | | 2 |
| 2 | 英语及计算机考试 | 全国大学英语六级考试 | 考试成绩达到学校要求者 | 2 |
| | | 全国计算机等级考试 | 获二级以上证书者 | 2 |
| | | 全国计算机软件资格、水平考试 | 获程序员证书者 | 2 |
| | | | 获高级程序员证书者 | 3 |
| | | | 获系统分析员证书者 | 4 |
| 3 | 竞赛 | 校级 | 获一等奖者 | 3 |
| | | | 获二等奖者 | 2 |
| | | | 获三等奖者 | 1 |
| | | 省级 | 获一等奖者 | 4 |
| | | | 获二等奖者 | 3 |
| | | | 获三等奖者 | 2 |
| | | 全国 | 获一等奖者 | 6 |
| | | | 获二等奖者 | 4 |

| | | | 获三等奖者 | 3 |
|---|---|---|---|---|
| 4 | 论文 | 在全国性刊物发表论文 | 每篇论文 | 2~3 |
| 5 | 科研 | 视参与科研项目时间与科研能力 | 每项 | 1~3 |
| 6 | 实验 | 视创新情况 | 每项 | 1~3 |

注：参加校体育运动会获第一名、第二名者与校级一等奖等同，获第三名至第五名者与校级二等奖等同，获第六至第八名者与校级三等奖等同。

| No. | Extracurricular Activities and Social Practice | Requirements | | Extracurricular Credits |
|---|---|---|---|---|
| 1 | Activities of Social Practice | Submit social practice report and pass oral defense | | 1 |
| | | Entitled as the Activist by the Communist Youth League of HUST or the Hubei Province; Membership of the group which is entitled as Excellent Social Practice Group by the Communist Youth League of HUST or the Hubei Province | | 2 |
| 2 | Examinations in English and Computer | CET-6 | Students whose Band-6 exam scores passed university requirements | 2 |
| | | National Computer Rank Examination | Holder of the Certificate of Band-2 or higher | 2 |
| | | National Computer Software Qualification | Holder of the Certificate of programmer | 2 |
| | | | Holder of the Certificate of Advanced Programmer | 3 |
| | | | Holder of the Certificate of System Analyst | 4 |
| 3 | Competitions | University Level | First prize winner | 3 |
| | | | Second prize winner | 2 |
| | | | Third prize winner | 1 |
| | | Provincial Level | First prize winner | 4 |
| | | | Second prize winner | 3 |
| | | | Third prize winner | 2 |
| | | National Level | First prize winner | 6 |
| | | | Second prize winner | 4 |
| | | | Third prize winner | 3 |
| 4 | Research papers | Published in national journals | Per paper | 2~3 |
| 5 | Scientific Research | Determined based on both the time and research capability demonstrated in research project | Each item | 1~3 |
| 6 | Experiments | Determined based on innovation output | Each item | 1~3 |

Note: In HUST Sports Meets, number 1~2 is equivalent to the first prize winner of the university-level games; number 3~5 is equivalent to the second prize winner of the university-level games; and number 6~8 is equivalent to the third prize winner of the university-level games when the extracurricular credits are calculated.

### 七、主要课程
### Ⅶ．Main Courses in Major

电路理论 Circuit Theory、模拟电子技术 Analog Electronics、数字电路与逻辑设计（一）Digital Circuit and Logic Design（Ⅰ）、信号与线性系统 Signal and Linear System、数字信号处理 Digital Signal Processing、通信原理 Principles of Communications、通信电子线路 Electronic Circuits of Communications、基础信息论 Fundamentals of Information Theory、随机过程 Stochastic Process、电磁场与电磁波 Electromagnetic Field and Wave、数据结构 Data Structure、微机原理 Principles of Microcomputer

### 八、主要实践教学环节（含专业实验）
### Ⅷ．Main Internship and Practical Training (Including experiments)

电子线路设计·测试·实验 Electronic Circuit Design, Test and Experiments、微机原理实验 Experiments of Microcomputer Principles、软件课程设计 Course Project of Software、硬件课程设计 Course Project of Hardware

### 九、教学进程计划表
### Ⅸ．Program Schedule

院（系）：电子与信息工程系　　　　　　　　　　　专业：电子信息工程

School (Department): Department of Electronics and Information Engineering　　　Major: Electronics and Information Engineering

| 课程类别 Course Classification | 课程性质 Course Nature | 课程代码 Course Code | 课程名称 Course Name | 学时/学分 Hrs/Crs | 其中 Including | | | 各学期学时 Hours Distribution in a Semester | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 课外 Extra-cur. | 实验 Exp. | 上机 Oper-ation | 一 1st | 二 2nd | 三 3rd | 四 4th | 五 5th | 六 6th | 七 7th | 八 8th |
| | 必修 Required | 0301901 | 思想道德修养与法律基础 Morals & Ethics & Fundamentals of Laws | 40/2.5 | 8 | | | 32 | | | | | | | |
| 通识教育基础课程 General Education Courses | 必修 Required | 0100721 | 中国近现代史纲要 An Outline of Modern Chinese History | 32/2 | 8 | | | | 24 | | | | | | |
| | 必修 Required | 0100881 | 马克思主义基本原理 Basic Theory of Marxism | 40/2.5 | 8 | | | | | 32 | | | | | |
| | 必修 Required | 0100931 | 思政课社会实践 Social Practice of Ideological and Political Theories | 24/1.5 | 20 | | | | | 4 | | | | | |
| | 必修 Required | 0100321 | 毛泽东思想和中国特色社会主义理论体系概论 General Introduction to Mao Zedong's Thoughts and Socialist Theory with Chinese Characteristics | 56/3.5 | | | | | | | | 56 | | | |
| | 必修 Required | 0100741 | 形势与政策 Contemporary Affairs and Policies | 32/2 | 14 | | | 3 | 3 | 3 | 3 | 3 | 3 | | |
| | 必修 Required | 0510071 | 中国语文 Chinese | 32/2 | 10 | | | 22 | | | | | | | |
| | 必修 Required | 0500015 | 综合英语（一） College English （Ⅰ） | 56/3.5 | | | | 56 | | | | | | | |
| | 必修 Required | 0500017 | 综合英语（二） College English （Ⅱ） | 56/3.5 | | | | | 56 | | | | | | |
| | 选修 Elective | 0500019 | 基础英语（三） College English （Ⅲ） | 32/2 | | | | | | 32 | | | | | |

| 课程<br>类别<br>Course<br>Classification | 课程<br>性质<br>Course<br>Nature | 课程<br>代码<br>Course<br>Code | 课程名称<br>Course Name | 学时/<br>学分<br>Hrs/<br>Crs | 其中<br>Including | | | 各学期学时<br>Hours Distribution<br>in a Semester | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 课外<br>Extra-<br>cur. | 实验<br>Exp. | 上机<br>Oper-<br>ation | 一<br>1st | 二<br>2nd | 三<br>3rd | 四<br>4th | 五<br>5th | 六<br>6th | 七<br>7th | 八<br>8th |
| | 选 修<br>Elective | 0503019 | 基础英语（四）<br>College English （Ⅳ） | 32/2 | | | | | | 32 | | | | | |
| | 必 修<br>Required | 0400111 | 大学体育（一）<br>Physical Education(Ⅰ) | 32/1 | | | | 32 | | | | | | | |
| | 必 修<br>Required | 0400121 | 大学体育（二）<br>Physical Education(Ⅱ) | 32/1 | | | | | 32 | | | | | | |
| | 必 修<br>Required | 0400131 | 大学体育（三）<br>Physical Education(Ⅲ) | 32/1 | | | | | | 32 | | | | | |
| | 必 修<br>Required | 0400141 | 大学体育（四）<br>Physical Education(Ⅳ) | 32/1 | | | | | | 32 | | | | | |
| | 必 修<br>Required | 1200011 | 军事理论<br>Military Theory | 16/1 | | | | 16 | | | | | | | |
| | 必 修<br>Required | 0700011 | 微积分（一）上<br>Calculus （Ⅰ） | 80/5 | | | | 80 | | | | | | | |
| | 必 修<br>Required | 0700012 | 微积分（一）下<br>Calculus （Ⅱ） | 80/5 | | | | | 80 | | | | | | |
| | 必 修<br>Required | 0700031 | 大学物理（一）<br>Physics （Ⅰ） | 64/4 | | | | | 64 | | | | | | |
| | 必 修<br>Required | 0700032 | 大学物理（二）<br>Physics （Ⅱ） | 64/4 | | | | | | 64 | | | | | |
| | 必 修<br>Required | 0700041 | 物理实验（一）<br>Physical Experiments （Ⅰ） | 32/1 | | 32 | | | 32 | | | | | | |
| | 必 修<br>Required | 0700042 | 物理实验（二）<br>Physical Experiments （Ⅱ） | 32/1 | | 32 | | | | 32 | | | | | |
| | 必 修<br>Required | 0700051 | 线性代数（一）<br>Linear Algebra （Ⅰ） | 40/2.5 | | | | | 40 | | | | | | |
| | 必 修<br>Required | 0700071 | 复变函数与积分变换<br>Complex Functions and Integral Transforms | 40/2.5 | | | | | | 40 | | | | | |
| | 必 修<br>Required | 0700063 | 概率论与数理统计 （三）<br>Probability and Mathematics Statistics (III) | 40/2.5 | | | | | | 40 | | | | | |
| | 必 修<br>Required | 0700081 | 数理方程与特殊函数（一）<br>Mathematics Physics Equations and Functions | 40/2.5 | | | | | | 40 | | | | | |
| | 选 修<br>Required | 0800171 | 大学计算机基础<br>Fundamentals of Computer Technology | 32/2 | | | 12 | 32 | | | | | | | |
| | 必 修<br>Required | 0810011 | C 语言程序设计<br>Advanced Programming Language (C++) | 56/3.5 | | | 20 | | 56 | | | | | | |
| | | | 人文社科类选修课程<br>Elective courses in Humanities and Social Science | 160/10 | | | | | | | | | | | |

| 课程类别<br>Course Classification | 课程性质<br>Course Nature | 课程代码<br>Course Code | 课程名称<br>Course Name | 学时/学分<br>Hrs/ Crs | 其中<br>Including | | | 各学期学时<br>Hours Distribution in a Semester | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 课外<br>Extra-cur. | 实验<br>Exp. | 上机<br>Oper-ation | 一<br>1st | 二<br>2nd | 三<br>3rd | 四<br>4th | 五<br>5th | 六<br>6th | 七<br>7th | 八<br>8th |
| 学科基础课程 学科大类基础<br>Basic Courses in General Discipline | 必 修<br>Required | 0801663 | 工程制图（一）<br>Engineering Graphics（Ⅰ） | 40/2.5 | | | | 40 | | | | | | | |
| | 必 修<br>Required | 0800441 | 信息技术导论<br>Introduction to Information Technologies | 24/1.5 | | | | 16 | | 4 | | 4 | | | |
| | 必 修<br>Required | 0800113 | 电路理论（三）<br>Circuit Theory（Ⅲ） | 88/5.5 | | | | | 88 | | | | | | |
| | 必 修<br>Required | 0511901 | 文献情报检索<br>Information Retrieval in Literature | 24/1.5 | | 12 | | | | | 24 | | | | |
| 学科基础课程 学科大类基础<br>Common Major Courses | 必 修<br>Required | 0803051 | 电路测试实验<br>Circuit Measurement Experiments | 32/1 | | 32 | | | | | 32 | | | | |
| | 必 修<br>Required | 0800124 | 模拟电子技术（二）<br>Analog Electronics（Ⅱ） | 56/3.5 | | | | | | | 56 | | | | |
| | 必 修<br>Required | 0800155 | 信号与线性系统<br>Signal and Linear System | 64/4 | | 8 | | | | | | 64 | | | |
| | 必 修<br>Required | 0800773 | 数字电路与逻辑设计（一）<br>Digital Circuit and Logic Design（Ⅰ） | 56/3.5 | | | | | | | 56 | | | | |
| | 必 修<br>Required | 0815811 | 电子线路设计·测试·实验（一）<br>Electronic Circuitry Design, Test and Experiments（Ⅰ） | 32/1 | | 32 | | | | | 32 | | | | |
| | 必 修<br>Required | 0815821 | 电子线路设计·测试·实验（二）<br>Electronic Circuitry Design, Test and Experiments（Ⅱ） | 32/1 | | 32 | | | | | | 32 | | | |
| | 必 修<br>Required | 0800301 | 微机原理<br>Principles of Microcomputer | 56/3.5 | | | | | | | | 56 | | | |
| | 必 修<br>Required | 0811161 | 计算机网络技术及应用<br>Computer Networks and Applications | 48/3 | | 16 | | | | | | 48 | | | |
| | 选 修<br>Electiv | 0810651 | 微电子器件与IC设计<br>Electronic Device Basics and IC Design | 56/3.5 | | | | | | | | | 56 | | |
| 学科基础课程 学科专业基础<br>Core Major Courses | 必 修<br>Required | 0800412 | 数据结构<br>Data Structure | 56/3.5 | | | 12 | | | 56 | | | | | |
| | 必 修<br>Required | 0803071 | 通信电子线路<br>Electronic Circuits of Communications | 64/4 | | 8 | | | | | | 64 | | | |
| | 必 修<br>Required | 0700034 | 随机信号分析<br>Stochastic Process | 48/3 | | 8 | | | | | 48 | | | | |
| | 必 修<br>Required | 0800791 | 微机原理实验<br>Experiments of Microcomputer Principles | 32/1 | | 32 | | | | | | 32 | | | |
| | 必 修<br>Required | 0808041 | 操作系统<br>Operation Systems | 48/3 | | | 8 | | | | | | 48 | | |
| | 必 修<br>Required | 0800252 | 电磁场与电磁波<br>Electromagnetic Field and Wave | 40/2.5 | | | | | | | | 40 | | | |
| | 必 修<br>Required | 0800161 | 数字信号处理<br>Digital Signal Processing | 48/3 | | 8 | | | | | | 48 | | | |

| 课程类别<br>Course Classification | 课程性质<br>Course Nature | 课程代码<br>Course Code | 课程名称<br>Course Name | 学时/学分<br>Hrs/Crs | 其中<br>Including | | | 各学期学时<br>Hours Distribution in a Semester | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 课外<br>Extra-cur. | 实验<br>Exp. | 上机<br>Oper-ation | 一<br>1st | 二<br>2nd | 三<br>3rd | 四<br>4th | 五<br>5th | 六<br>6th | 七<br>7th | 八<br>8th |
| | 必修<br>Required | 0800511 | 基础信息论<br>Fundamentals of Information Theory | 32/2 | | | | | | | | 32 | | | |
| | 必修<br>Required | 0821341 | 嵌入式系统原理与设计<br>Principles and Design of Embedded Systems | 32/2 | | | | | | | | | 32 | | |
| | 必修<br>Required | 0800431 | 通信原理<br>Principles of Communications | 64/4 | | 8 | | | | | | | 64 | | |
| | 必修<br>Required | 0803081 | 微波技术基础<br>Fundamentals of Microwave Engineering | 56/3.5 | | 8 | | | | | | | 56 | | |
| 专业课程 专业方向 Elective Major Courses | | | 专业方向选修公共课程<br>Elective Major Courses | 64/4 | | | | | | | | | | | |
| | 限选<br>Elective | | 专业方向及其选课（讲座）<br>Lectures on Majors and Courses | 8/0 | | | | | | | | 8 | | | |
| | 选修<br>Elective | 0800502 | 高级程序设计<br>Advanced Programming | 32/2 | | | | | | | | | 32 | | |
| | 选修<br>Elective | 0800234 | 数据库<br>Database Systems | 32/2 | | | | | | | | | 32 | | |
| | 选修<br>Elective | 0803172 | 软件工程<br>Software Engineering | 32/2 | | | | | | | | | 32 | | |
| | 选修<br>Elective | 0809961 | 虚拟仪器技术及应用<br>Virtual Instrumentation and Applications | 32/2 | | | | | | | | | 32 | | |
| | 选修<br>Elective | 0803231 | 传感器技术及应用<br>Sensor Technology and Applications | 32/2 | | | | | | | | | 32 | | |
| | 选修<br>Elective | 0809891 | Java 语言程序设计<br>JAVA Language Programming | 32/2 | | | 16 | | | | | | 32 | | |
| | 选修<br>Elective | 0810261 | 可靠性技术基础<br>Fundamentals of Reliability | 32/2 | | | | | | | | | 32 | | |
| | 选修<br>Elective | 0821351 | ARM 处理器及应用<br>ARM Processor and Applications | 32/2 | | 32 | | | | | | | 32 | | |
| | 选修<br>Elective | 0821361 | Altera 可编程片上系统及应用<br>Altera SOPC and Applications | 32/2 | | 32 | | | | | | | 32 | | |
| | 选修<br>Elective | 0821371 | Xilinx FPGA 及应用<br>Xilinx FPGA and Applications | 32/2 | | 32 | | | | | | | 32 | | |
| | 选修<br>Elective | 0821381 | MSP430 单片机及应用<br>MSP430 Microcontroller and Applications | 32/2 | | 32 | | | | | | | 32 | | |
| | 选修<br>Elective | 0821391 | Freescale 单片机及应用<br>Freescale Microcontroller and Applications | 32/2 | | 32 | | | | | | | 32 | | |
| | 选修<br>Elective | 0821401 | 8051 系列单片机原理及应用<br>8051 Microcontroller Principles and Applications | 32/2 | | 32 | | | | | | | 32 | | |

| 课程类别 Course Classification | 课程性质 Course Nature | 课程代码 Course Code | 课程名称 Course Name | 学时/学分 Hrs/Crs | 其中 Including | | | 各学期学时 Hours Distribution in a Semester | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 课外 Extra-cur. | 实验 Exp. | 上机 Oper-ation | 一 1st | 二 2nd | 三 3rd | 四 4th | 五 5th | 六 6th | 七 7th | 八 8th |
| | 选修 Elective | 0803151 | DSP 处理器及应用 Digital Signal Processors and their Applications | 32/2 | | 32 | | | | | | | 32 | | |
| | 选修 Elective | 0821411 | 嵌入式 Linux 软件设计 Embedded Linux Software Design | 32/2 | | 32 | | | | | | | 32 | | |
| | 选修 Elective | 0821421 | WinCE 软件设计 WinCE Software Design | 32/2 | | 32 | | | | | | | 32 | | |
| | 选修 Elective | 0833041 | 信号检测与估计 Signal Detection and Estimation | 40/2.5 | | 40 | | | | | | | | 40 | |
| | 选修 Elective | 0833051 | 现代信号处理 Advanced Signal Processing | 40/2.5 | | 40 | | | | | | | | 40 | |
| | 选修 Elective | 0830041 | 光纤通信基础 Fundamentals of Fiber-optic Communications | 32/2 | | | | | | | | | | 32 | |
| 专业课程 专业方向 Elective Major Courses | | | 专业方向选修课程组（2 组选 1 组） Elective Major Courses | 128/8 | | | | | | | | | | | |
| | | | 课程组 A（信号与信息处理） Elective Courses in Stream A | 128/8 | | | | | | | | | | | |
| | 限选 Elective | 0840361 | 现代信息处理（讲座） Selective Topics on Modern Information Processing | 16/1 | | | | | | | | | 16 | 16 | |
| | 选修 Elective | 0803211 | 数字语音处理 Digital Speech Processing | 32/2 | | | | | | | | | 32 | 32 | |
| | 选修 Elective | 0800243 | 数字图像处理 Digital Image Processing | 40/2.5 | | | | | | | | | 40 | 40 | |
| | 选修 Elective | 0803141 | 视频技术 Video Technology | 40/2.5 | | | | | | | | | 40 | 40 | |
| | 选修 Elective | 0810571 | 多媒体技术及应用 Multimedia Technology and Applications | 40/2.5 | | | 16 | | | | | | 40 | 40 | |
| | 选修 Elective | 0809871 | 雷达阵列信号处理 Radar Array Signal Processing | 40/2.5 | | | | | | | | | 40 | 40 | |
| | 选修 Elective | 0840321 | 生物信息与医学图像处理 Bio-information and Medical Image Processing | 40/2.5 | | | | | | | | | 40 | 40 | |
| | 选修 Elective | 0840331 | 卫星导航原理与应用 Satellite Navigation System: Principles and Applications | 32/2 | | | | | | | | | 32 | 32 | |
| | 选修 Elective | 0833121 | 人工智能与模式识别 Artificial Intelligence and Pattern Recognition | 32/2 | | | | | | | | | 32 | 32 | |
| | | | 课程组 B（信息安全方向） Elective Courses in Stream B | 128/8 | | | | | | | | | | | |
| | 限选 Elective | 0840391 | 信息安全前沿讲座 Advanced Topics on Information Security | 16/1 | | | | | | | | | 16 | 16 | |
| | 选修 Elective | 0833101 | 网络信息安全 Security of Networks and Information | 32/2 | | | | | | | | | 32 | 32 | |

| 课程类别<br>Course Classification | 课程性质<br>Course Nature | 课程代码<br>Course Code | 课程名称<br>Course Name | 学时/学分<br>Hrs/Crs | 其中 Including | | | 各学期学时<br>Hours Distribution in a Semester | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 课外<br>Extra-cur. | 实验<br>Exp. | 上机<br>Oper-ation | 一<br>1st | 二<br>2nd | 三<br>3rd | 四<br>4th | 五<br>5th | 六<br>6th | 七<br>7th | 八<br>8th |
| | 选 修<br>Elective | 0833111 | 数字水印技术与应用<br>Digital Watermarking and Applications | 32/2 | | | | | | | | | 32 | 32 | |
| | 选 修<br>Elective | 0700391 | 小波分析与应用<br>Wavelet Analysis and Application | 32/2 | | | | | | | | | 32 | 32 | |
| | 选 修<br>Elective | 0804441 | 人工智能与模式识别<br>Artificial Intelligence and Pattern Recognition | 32/2 | | | | | | | | | 32 | 32 | |
| | 选 修<br>Elective | 0806491 | 数据挖掘<br>Data Mining | 32/2 | | | | | | | | | 32 | 32 | |
| | 选 修<br>Elective | 0800243 | 数字图像处理<br>Digital Image Processing | 40/2.5 | | | | | | | | | 40 | 40 | |
| | 选 修<br>Elective | 0840381 | 应用密码学<br>Applied Cryptography | 32/2 | | | | | | | | | 32 | 32 | |
| 实践环节 Internship and Practical Training | 必 修<br>Required | 1300012 | 军事训练<br>Military Training | 2w/1 | | | | 2w | | | | | | | |
| | 必 修<br>Required | 1300032 | 电工实习<br>Electrical Engineering Practice | 2w/1 | | | | | | | 2w | | | | |
| | 必 修<br>Required | 1300083 | 生产实习<br>Engineering Internship | 2w/1 | | | | | | | | | 2w | | |
| | 必 修<br>Required | 1300402 | 软件课程设计<br>Course Project of Software | 2w/1 | | | | | | | | 2w | | | |
| | 必 修<br>Required | 1300292 | 硬件课程设计<br>Course Project of Hardware | 2w/1 | | | | | | | | | 2w | | |
| | 必 修<br>Required | 1300066 | 毕业设计（论文）<br>Undergraduate Thesis | 16w/8 | | | | | | | | | | | 16w |

# 电子信息工程第二主修专业培养计划

# Bachelor degree of Engineering (BEng) for the Second Major in Electronics and Information Engineering

### 一、培养目标
### Ⅰ．Program Objectives

本专业将培养德、智、体全面发展，具有电子信息领域系统、扎实的理论基础，具有工程实践和创新能力的高素质科技人才。

This program is designed to produce fully-developed engineers in morality, intelligence and heath that are trained to develop the fundamental theories and skills, a consolidated knowledge structure, and to be enhanced with hands-on engineering experiences and innovative initiatives in electronics and information engineering.

### 二、学位
### Ⅱ．Degree Conferred

工学学士

Bachelor of Engineering

### 三、学分
### Ⅲ．Credits

完成学业最低学分要求：50

Minimum Course Credits：50

其中：

Including：

学科大类基础课程：12 学分

Common Core Courses：12

学科专业基础课程：5.5 学分

Common Major Courses：5.5

专业核心课程：9.5 学分

Core Major Courses：9.5

专业方向课程：13 学分

Elective Major Courses：13

毕业设计：10 学分

Undergraduate Thesis：10

### 四、教学进程计划表
### Ⅳ．Table of Teaching Schedule

| 课程类别<br>Course Classification | 课程性质<br>Course Nature | 课程代码<br>Course Code | 课程名称<br>Course Name | 学时/学分<br>Hrs/Crs | 其中 Including | | | 各学期学时<br>Hours Distribution<br>in a Semester | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 课外<br>Extra-cur. | 实验<br>Exp. | 上机<br>Oper-ation | 一<br>1st | 二<br>2nd | 三<br>3rd | 四<br>4th | 五<br>5th | 六<br>6th | 七<br>7th | 八<br>8th |
| | 必 修<br>Required | 0800441 | 信息技术导论<br>Introduction to Information Technologies | 24/1.5 | | | | 16 | | 4 | | 4 | | | |

| 类别 | 性质 | 课程号 | 课程名称 | 学时/学分 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 程学科大类基础课 Common Core Courses | 必 修 Required | 0800124 | 模拟电子技术（二）<br>Analog Electronics（Ⅱ） | 56/3.5 | | | | | | 56 | | | | |
| | 必 修 Required | 0800152 | 信号与线性系统<br>Signal and Linear System | 56/3.5 | | | | | | 56 | | | | |
| | 必 修 Required | 0811161 | 计算机网络技术及应用<br>Computer Networks and Applications | 48/3 | | | | | | | | 48 | | |
| 学科专业基础课程 Common Major Courses | 必 修 Required | 0800773 | 数字电路与逻辑设计（一）<br>Digital Circuit and Logic Design（Ⅰ） | 56/3.5 | | | | | | | 56 | | | |
| | 必 修 Required | 0827002 | 电子线路设计·测试·实验（一）<br>Electronic Circuitry Design,<br>Test and Experiments（Ⅰ） | 32/1 | 32 | | | | | | 32 | | | |
| | 必 修 Required | 0827002 | 电子线路设计·测试·实验（二）<br>Electronic Circuitry Design,<br>Test and Experiments（Ⅰ） | 32/1 | 32 | | | | | | | 32 | | |
| 专业核心课程 Core Major Courses | 必 修 Required | 0800252 | 电磁场与电磁波<br>Electromagnetic Field and Wave | 48/3 | | | | | | | | 48 | | |
| | 必 修 Required | 0800161 | 数字信号处理<br>Digital Signal Processing | 48/3 | 8 | | | | | | | 48 | | |
| | 必 修 Required | 0803071 | 通信电子线路<br>Electronic Circuits of Communication | 64/4 | 8 | | | | | | | 64 | | |
| 专业方向课程 Elective Major Courses | | | 专业方向选修课程<br>Elective Major Courses | 208/13 | | | | | | | | | | |
| | 选 修 Elective | 0800511 | 基础信息论<br>Fundamentals of Information Theory | 40/2.5 | | | | | | | | | 40 | |
| | 选 修 Elective | 0803141 | 数字视频技术<br>Digital Video Technology | 40/2.5 | | | | | | | | | 40 | |
| | 选 修 Elective | 0803151 | DSP 处理器及应用<br>Digital Signal Processors<br>and Their Application` | 32/2 | | | | | | | | | 32 | |
| | 选 修 Elective | 0800431 | 通信原理<br>Principles of Communications | 64/4 | 8 | | | | | | | | | 64 |
| | 选 修 Elective | 0800241 | 数字图像处理<br>Digital Image Processing | 48/3 | 8 | | | | | | | | | 48 |
| | 选 修 Elective | 0803211 | 数字语音处理<br>Digital Speech Processing | 32/2 | | | | | | | | | | 32 |
| 实践环节 Internship and Practical Training | 必 修 Required | 1300057 | 毕业设计（论文）<br>Undergraduate Thesis | 10w/10 | | | | | | | | | | 10w |

# 电子信息工程辅修专业培养计划

# Bachelor degree of Engineering (BEng) for the Minor in Electronics and Information Engineering

## 一、培养目标
## Ⅰ．Program Objectives

本专业将培养德、智、体全面发展，具有电子信息领域系统、扎实的理论基础，具有工程实践和创新能力的高素质科技人才。

This program is designed to produce fully-developed engineers in morality, intelligence and heath that are trained to develop the fundamental theories and skills, a consolidated knowledge structure, and to be enhanced with hands-on engineering experiences and innovative initiatives in electronics and information engineering.

## 二、学分
## Ⅱ．Degree Conferred

完成学业最低学分要求：28

Minimum Course Credits：28

其中：

Including：

学科专业基础课程：15 学分

Common Major Courses：15

专业核心课程：13 学分

Core Major Courses：13

## 三、教学进程计划表
## Ⅲ．Program Schedule

| 课程类别 Course Classification | 课程性质 Course Nature | 课程代码 Course Code | 课程名称 Course Name | 学时/学分 Hrs/Crs | 其中 Including | | | 各学期学时 Hours Distribution in a Semester | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 课外 Extra-cur. | 实验 Exp. | 上机 Oper-ation | 一 1st | 二 2nd | 三 3rd | 四 4th | 五 5th | 六 6th | 七 7th | 八 8th |
| 学科基础课程 Common Major Courses | 必修 Required | 0800152 | 信号与线性系统 Signal and Linear System | 56/3.5 | | 8 | | | | 56 | | | | | |
| | 必修 Required | 0800124 | 模拟电子技术（二）Analog Electronics（Ⅱ） | 56/3.5 | | | | | | 56 | | | | | |
| | 必修 Required | 0800773 | 数字电路与逻辑设计（一）Digital Circuit and Logic Design（Ⅰ） | 56/3.5 | | | | | | | 56 | | | | |
| | 必修 Required | 0827002 | 电子线路设计·测试·实验 Electronic Circuitry Design, Test and Experiments | 64/4 | | 64 | | | | | 64 | | | | |
| 专业 | 必修 Required | 0803071 | 通信电子线路 Electronic Circuits of Communication | 64/4 | | 8 | | | | | | 64 | | | |

| 课程类别<br>Course Classification | 课程性质<br>Course Nature | 课程代码<br>Course Code | 课程名称<br>Course Name | 学时/学分<br>Hrs/Crs | 其中<br>Including | | | 各学期学时<br>Hours Distribution<br>in a Semester | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 课外<br>Extra-cur. | 实验<br>Exp. | 上机<br>Oper-ation | 一<br>1st | 二<br>2nd | 三<br>3rd | 四<br>4th | 五<br>5th | 六<br>6th | 七<br>7th | 八<br>8th |
| | 必　修<br>Required | 0800161 | 数字信号处理<br>Digital Signal Processing | 48/3 | | | | | | | | 48 | | | |
| Core Major Courses | 必　修<br>Required | 0800511 | 基础信息论<br>Fundamentals of Information Theory | 32/2 | | | | | | | | 32 | | | |
| | 必　修<br>Required | 0800431 | 通信原理<br>Principles of Communications | 64/4 | | 8 | | | | | | | 64 | | |