

Program Director's Signature:

Date:

Department Chair's Signature:

Date:

Department of Electrical and Electronic Engineering

Program of Information Engineering (2019)

I. Introduction

Information Engineering is a new and promising discipline. It has been developed into an inter-discipline involving multiple areas such as signal and information processing technology, communication technology, and computer science, and rapidly penetrates into traditional information technology (IT) industries. In China, information technology industry is currently the most active and fast-growing profession. This area is deeply involved in international technology competition now, and has also globally become the most vital engine of social and economic productivity and development. Recently, with the increasing demand on the eco-friendly, integrated, and smart information system, professional talents in information engineering are deeply in need.

II. Objectives and Learning Outcomes

Attributes Information Engineering alumni should demonstrate 5 years after graduation:

Technical Skills: are technically competent to conduct research and development in the industry and universities in the broad fields of Electronics and Information Engineering in general and Information Engineering in particular.

Engineering Ethos: are able to think critically and creatively, use engineering principles to embrace challenging engineering and non-engineering problems encountered at work, apply an analytic mindset, make informed decisions and provide innovative solutions.

Attitude: are self-motivated with a desire for lifelong learning to adapt to the fast changing environment, able to operate with integrity and responsibility, have optimism and composure under tight schedule, and committed to make a positive impact in society locally and globally.

Leadership: are effective communicators, well-prepared to advance towards leadership positions, capitalize the individual strengths of team members, and nurture the team to achieve goals.

Student Outcomes (SOs) that prepare graduates to enter the professional practice of engineering:

SO 1: an ability to identify, formulate, and solve complex engineering problems¹ by applying principles of engineering, science, and mathematics.

SO 2: an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

SO 3: an ability to communicate effectively with a range of audiences.

SO 4: an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

SO 5: an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

SO 6: an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

SO 7: an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

SO 8: knowledge of probability and statistics including applications, differential and integral calculus, sciences, engineering sciences and computing science and application to analyze and design complex information engineering systems.

SO 9: knowledge and application of advanced mathematics, such as differential equations, linear algebra, and complex variable.

SO 10: knowledge and application of information processing methods.

III. Study Length and Graduation Requirements

Study length: 4 years

Degree conferred: Bachelor of Engineering

The minimum credit requirement for graduation: 142.5 credits (not including English courses);

Category	Module	Minimum Credit Requirement
General Education (GE) Required Courses (54 credits)	Science	28
	Military Training and Physical Education	8
	Ideological and Political Education	16
	Writing and Communication Skills	2
General Education (GE)	Humanities	4

Elective Courses (13 credits)	Social Sciences	4
	Arts	2
	Science	3
Major Course (75.5 credits)	Major Foundational Courses	25
	Major Core Courses	22.5
	Major Elective Courses	16
	Research Projects, Internship and Undergraduate Thesis / Projects	12
Total (not including English courses)		142.5

IV. Discipline

Major discipline includes Information and Communications Engineering. Interdisciplinary subject includes Electrical and Electronics Science and Technology, Computer Science and Technology.

V. Main Courses

Core courses include Fundamentals of Electric Circuits, Analog Circuits, Analog Circuits Laboratory, Digital Circuits, Digital Circuits Laboratory, Signals and Systems, Communication Principles, Engineering Electromagnetics, Probability and Statistics, Data Structures and Algorithm Analysis B, Frontier Seminars in Modern Electronic Science and Technology I/II/III, Wireless Communications, Computer Networks B, Digital Signal Processing, Digital Image Processing, Speech Signal Processing, DSP Design and Simulation, Digital System Design etc.

VI. Practice-Based Courses

Core practical training includes Industrial Practice, Advanced Electronic Science Experiment I (Outstanding student can participate in research project supervised by his/her academic professor), and all sorts of domestic and international academic competitions. See the table 3.

VII. Pre-requisites for Major Declaration

Major Declaration Time	Course Code	Course Name	Prerequisite
Declare major at the end of First Year	MA107A	Linear Algebra A	NA
	MA101B	Calculus I A	NA
	MA102B	Calculus II A	MA101B
	PHY103B	General Physics B (I)	NA
	PHY105B	General Physics B (II)	PHY103B
	CS102A	Introduction to Computer Programming A	NA
Declare major at the end of Second Year	MA107A	Linear Algebra A	NA
	MA102B	Calculus II A	MA101B
	PHY105B	General Physics B (II)	PHY103B
	CS102A	Introduction to Computer Programming A	NA
	EE205	Signals and Systems	MA101B

VIII. Requirements for of GE Required Courses

(I) Science Module

Course Code	Course Name	Credit	Credits Lab	Hours/week	Term	Instruction Language	Prerequisite	Dept
MA101B	Calculus I A	4		4	Spr/Fall	B/E	NA	MA
MA102B	Calculus II A	4		4	Spr/Fall	B/E	Calculus I A	MA
MA107A	Linear Algebra A	4		4	Spr/Fall	B/E	NA	MA
PHY103B	General Physics B (I)	4		4	Spr/Fall	B/E	NA	PHY
PHY105B	General Physics B (II)	4		4	Spr/Fall	B/E	General Physics I B	PHY
BIO102B	Introduction to Life Science	3		3	Spr/Fall	B/E	NA	BIO
CS102A	Introduction to Computer Programming A	3	1	4	Spr/Fall	B/E	NA	CS
PHY104B	Experiments of Fundamental Physics	2	2	4	Spr/Fall	B/E	NA	PHY
Total		28	3	31				

(II) Military Training and Physical Education

Course Code	Course Name	Credit	Lab Credits	Hours/week	Term	Language Instruction	Prerequisite	Dept
GE102	Military Theory	2				C		Office of Students Affairs
GE104	Military Skills	2				C		
GE131	Physical Education I	1		2	1/Fall	C	NA	PE Center
GE132	Physical Education II	1		2	1/Spr	C	NA	
GE231	Physical Education III	1		2	2/Fall	C	NA	
GE232	Physical Education IV	1		2	2/Spr	C	NA	
Total		8		8				

(III) Ideological and Political Education

Course Code	Course Name	Credit	Lab Credits	Hours/week	Term	Language Instruction	Prerequisite	Dept
IPE105	Situation and Policy	2		2	Fall/Spr	C		IPE Center
IPE103	The Outline of Modern and Contemporary History of China y	2		2	Fall/Spr	C		
IPE101	Cultivation of Ethic Thought and Fundamentals of Law	2		2	Fall/Spr	C		
IPE104	Mao Zedong Thought and Introduction to the Theoretical System of Socialism with Chinese Characteristic	3		3	Fall/Spr	C		
IPE102	The Basic Principles of Marxism	2		2	Fall/Spr	C		
IPE107	Practice Course of the Basic Principles of Marxism	1	1		Fall/Spr /Smr	C		
IPE108	Practice Course of Introduction to Mao Zedong Thought and Theoretical System of Socialism with Chinese Characteristic	3	3		Fall/Spr /Smr	C		
IPE106	Practice Course of Cultivation of Ethics and Fundamentals of Law	1	1		Fall/Spr /Smr	C		
Total		16	5					

(IV) English Language

All students are required to undertake the English Placement Test before selecting courses, based on which students will be assigned to 3 levels to be ready for the courses with English as the instruction language.

SUSTech English III , English for Academic Purposes for Level A.

SUSTech English II, SUSTech English III, English for Academic Purposes for Level B.

SUSTech English I, SUSTech English II, SUSTech English III, English for Academic for Level C.

Course Code	Course Name	Credit	Hours/week	Instruction Language	Prerequisite
CLE021	SUSTech English I	4	4	E	NA
CLE022	SUSTech English II	4	4	E	CLE021
CLE023	SUSTech English III	4	4	E	CLE022
CLE030	English for Academic Purposes	2	2	E	CLE023

IX. Requirements for of GE Elective Courses

(I) Students are required to complete 4 credits for the Humanities Module and Social Sciences Module respectively, and 2 credits for the Music and Art Module. In particular, a course with contents of Ethics of Science and Technology or Engineering Ethics is compulsory, and the credits of the course are counted to the Social Sciences Module. (Information about the available courses and the instruction language will be announced before the course selection session).

(II).Students are required to complete 3 credits for Science Module

Course Code	Course Name	Credit	Lab Credits	Hours/week	Term	Language Instruction	Prerequisite	Dept
CH101B	General Chemistry B	3		3	Fall/Spr	1/ Fall/Spr	NA	CH
CS201	Discrete Mathematics	3		3	Spr	2/ Spr	MA102B MA107A	CS
CS202	Computer Organization	3	1	4	Spr	2/ Spr	CS207or EE202-17	CS
CS205	C/C++ Program Design	3	1	4	Fall/Spr	2/ Fall	NA	CS
Total		12	2	14				

X. Major Course Arrangement

Table 1: Major Required Course (Foundational and Core Courses)

Category Course	Course Code	Course Name	Credits	Lab Credits	Hours/week	Terms	Advised term to take the course	language instruction	Prerequisite	Dept.
Major Foundational Courses	EE104	Fundamentals of Electric Circuits	2		2	Spr/Fall	1/ Spr /Fall	B/E	MA101B MA107A	EE
	EE201-17	Analog Circuits	3		3	Fall	2/ Fall	C	PHY105B EE104	EE
	EE201-17L	Analog Circuits Laboratory	1	1	2	Fall	2/ Fall	B	EE201-17	EE
	EE202-17	Digital Circuits	3		3	Spr/Fall	2/ Spr /Fall	B/E	PHY105B	EE
	EE202-17L	Digital Circuits Laboratory	1	1	2	Spr/Fall	2/ Spr / Fall	B/E	EE202-17	EE
	EE205	Signals and Systems	3	1	4	Fall	2/ Fall	B	MA101B	EE
	EE206	Communication Principles	3	1	4	Spr	2/ Spr	E	EE205	EE
	EE208	Engineering Electromagnetics	3	1	4	Spr	2/ Spr	B	MA107A EE104	EE
	MA212	Probability and Statistics	3		3	Spr	2/ Spr	B/E	MA102B Or MA102a	MA
	CS203B	Data Structures and Algorithm Analysis B	3	1	4	Fall	2/ Fall	E	CS102A	CS
	Total		25	6	31					
Major Core Courses	EE301	Frontier Seminars in Modern Electronic Science and Technology I	1		1	Fall	3/ Fall	B	EE201-17 or EE202-17	EE
	EE302	Frontier Seminars in Modern Electronic Science and Technology II	1		1	Spr	3/ Spr	B	EE201-17 or EE202-17	EE
	EE313	Wireless Communications	3	1	4	Fall	3/ Fall	B	EE206	EE
	CS305B	Computer Networks B	3	1	4	Fall	3/ Fall	E	CS102A	CS
	EE323	Digital Signal Processing	3	1	4	Fall	3/ Fall	E	EE205	EE
	EE326	Digital Image Processing	3	1	4	Spr	3/ Spr	E	EE205	EE
	EE328	Speech Signal Processing	3	1	4	Spr	3/ Spr	E	EE323	EE
	EE330	DSP Design and Simulation	1.5	1.5	3	Spr	3/ Spr	B	EE323	EE
	EE332	Digital System Design	3	1	4	Spr	3/ Spr	E	EE202-17	EE
	EE401	Frontier seminars in modern electronic science and	1		1	Fall	4/ Fall	B	EE201-17 or EE202-17	EE

		technology III								
		Total	22.5	7.5	30					
Practice	EE470	Internship	2	2	16	Smr	3/Smr	NA	NA	EE
	EE480	Research Projects*	2	2				NA	NA	EE
	EE490	Undergraduate Thesis/Projects**	8	8	8	Fall& Spr	4/Fall& Spr	NA	NA	EE
		Total	12	12	24					
Notes: 1. Students can choose the term most appropriate for the course of Research Projects based on their study plan, The minimum study load for this course is 64 hours in total, see the Syllabus. 2.Students who have completed Comprehensive Design I & II (COE491 & COE492) are not required to take the Graduation Projects/Thesis(EE490).										

Table 2: Major Elective Courses

Course Code	Course Name	Credits	Lab Credits	Hours/week	Terms	course to take the Advised term	language instruction	Prerequisite	Dept.
EE106	Introduction to Optoelectronic	2		2	Spr	1/ Spr	B	NA	EE
EE203	Solid-state Electronics	3		3	Fall	2/ Fall	B	PHY105B	EE
EE204	Introduction to Semiconductor Devices	3	1	4	Spr	2/ Spr	B	EE203	EE
EE210	Fundamentals of Optics	3		3	Spr	2/ Spr	B	PHY105B	EE
EE303	Fundamentals of Optoelectronic Technology	3	1	4	Fall	3/ Fall	B	PHY105B	EE
EE304	Integrated Circuit Design	3	2	5	Spr	3/Spr	B	EE202-17 EE204	EE
EE305	Introduction to VLSI technology	3	1	4	Fall	3/ Fall	E	EE203	EE
EE306	Introduction to MEMS	3	1	4	Spr	3/ Spr	E	PHY105B	EE
EE307	Antennas and Radio Propagation	3	1	4	Spr	3/ Spr	E	EE208	EE
EE308	Fiber Communication Principles and Techniques	3	1	4	Spr	3/ Spr	B	MA102B	EE
EE309	Introduction to Semiconductor Optics	3		3	Fall	3/ Fall	B	MA102B EE203	EE
EE310	Principles and Technologies of Lasers	3		3	Spr	3/ Spr	B	MA102B EE210	EE
EE311	Optical Design	3	1	4	Fall	3/ Fall	B	EE210	EE
EE312	Design of Modern Communication Systems	3	1	4	Spr	3/ Spr	B	EE206 EE313	EE
EE316	Microwave Engineering	3	1	4	Fall	3/ Fall	E	EE201-17 EE208	EE
EE317	Advanced Electronic Science Experiment I	1	1	2	Fall	3/ Fall	B	EE201-17 or EE202-17	EE
EE318	Advanced electronic science experiment II	1	1	2	Spr	3/ Spr	B	EE201-17 or EE202-17	EE
EE320-15	Integrated Circuit Fabrication Laboratory	3	1.5	4.5	Spr /Fall	3/ Spr /Fall	C	EE204	EE
EE321	Spectral Technology and Application	3		3	Spr	3/Spr	B	NA	EE
EE322	Optoelectronics Devices Fabrication Laboratory	2	1	3	Spr	3/ Spr	B	EE204	EE
EE325	Nonlinear Optimization Techniques for Electrical Engineering	3	1	4	Fall	3/ Fall	B	MA102B MA107A	EE
EE327	Fundamentals of Information Optics	3	1	4	Fall	3/ Fall	B	EE205	EE
EE334	Advanced Integrated Circuit Design:	3	1	4	Spr	3/ Spr	E	EE202-17	EE

	Machine Learning on Chip								
EE335	Liquid Crystal Optoelectronics	3	1	4	Fall	3/ Fall	C	EE210	EE
EE336	Fundamentals of Photovoltaics	3	1	4	Fall	3/ Fall	E	EE204	EE
EE337	Analog Integrated Circuit Design	3	1	4	Fall	3/ Fall	B	EE201-17 EE204	EE
EE338	Application Specific IC (ASIC) Designs Methodology and Practice	3	1	4	Spr	3/Spr	B	EE201-17 EE202-17 EE204	EE
EE339	Analog IC Layout Design	1	1	2	Fall	3/ Fall	B	EE304	EE
EE340	Statistical Learning for Data Science	3	1	4	Spr	3/ Spr	B	MA107A	EE
EE341	Advanced Integrated Circuit Design: Microprocessor	3	1	4	Fall	3/Fall	B	EE202-17	EE
EE342	Sensors and Applications	3		3	Spr	3/ Spr	B	PHY103B	EE
EE343	Optoelectronic Instrumentation	3	1	4	Fall	3/Fall	B	EE106 or EE204	EE
EE345	Introduction of Wide Bandgap Semiconductors	3		3	Fall	3/Fall	B	EE203 or EE204	EE
EE347	Power Semiconductor Devices and Application	3		3	Fall	3/Fall	B	EE203 or EE204	EE
EE349	Power Semiconductor Devices and Application Laboratory	1	1	2	Fall	3/Fall	B	EE347	EE
EE402	Frontier Seminars in Modern Electronic Science and Technology IV	1		1	Spr	4/ Spr	B	EE201-17 or EE202-17	EE
EE403	Introduction to Display and Lighting Technologies	2		2	Fall	4/ Fall	B	EE204	EE
EE405	Advanced Electronic Science Experiment III	1	1	2	Fall	4/ Fall	B	EE201-17 or EE202-17	EE
EE411	Information theory and coding	2		2	Fall	4/ Fall	B	MA212	EE
EE417	Communications System Design II	2	2	4	Fall	4/ Fall	E	EE316 EE206 EE307	EE
EE423-14	Pattern Recognition	3	1	4	Fall	4/ Fall	B	EE323 EE326	EE
EE427	Principles of Remote Sensing	2		2	Fall	4/ Fall	B	EE323 EE326	EE
EE429	Image and Video Processing	3	1	4	Fall	4/ Fall	E	EE205 MA107A MA212	EE
EE431	BioMEMS and Lab-on-a-Chip	3		3	Fall	4/ Fall	E	PHY105B	EE
EE433	Modern Electric Vehicle Technologies	2		2	Fall	4/ Fall	B	EE208	EE
EES101	Brief Introduction of "Creative Electronic	1	0.5	6	Smr	1/ Smr	C	PHY105B	EE

	Design I"								
EES102	DIY Project: Assembling an iPhone6	2	2	8	Smr	1/ Smr	C	EE104	EE
EES201	Brief Introduction of "Creative Electronic Design II"	0.5	0.5	4	Smr	2/ Smr	C	NA	EE
EES202	Design based on LabVIEW Programming	1	1	8	Smr	2/ Smr	C	NA	EE
EES203	Innovation and Entrepreneurship	0.5	0.5	4	Smr	2/ Smr	C	NA	EE
EES204	Fiber Sensor Design	1	1	8	Smr	2/ Smr	C	NA	EE
EES205	Advanced Technology Forecasting	1.5		6	Smr	2/ Smr	E	NA	EE
EES301	Statistical Machine Learning	2		8	Smr	3/ Smr	E	MA107A MA212	EE
EES302	2D Materials: Properties and Devices	2		8	Smr	3/ Smr	E	NA	EE
EES303	Convex Optimization	2		2	Smr	3/ Smr	E	MA107A; MA215 or MA212	EE
EES305	Electronic Materials	2		2	Smr	3/ Smr	E	NA	EE
BMEB13 1	Introduction to Biomedical Engineering	2		2	Spr	1/ Spr	C	NA	BME B
BMEB22 1	Biomedical Instrumentation	4	2	6	Spr	2/ Spr	C	NA	BME B
CS301	Embedded System and Microcomputer Principle	3	1	4	Fall	3/ Fall	B	CS207	CS
CS303B	Artificial Intelligence B	3	1	4	Fall	3/ Fall	B	CS203B CS102A MA212	CS
CS307	Principles of Database Systems	3	1	4	Spr	3/ Spr	B	NA	CS
CS403	Cryptography and Network Security	2		2	Fall	4/ Fall	B	CS201 CS305 CS302	CS
CS405	Machine Learning	3	1	4	Fall	4 / Fall	B	MA212 MA107A	CS
MA109	Advanced Linear Algebra	4		4	Fall	1/ Spr	B	MA107A	MA
MA201b	Ordinary Differential Equations B	4		4	Fall	2/ Fall	B	MA102B	MA
MA208	Applied Stochastic Processes	3		3	Spr	2/ Spr	E	MA212 or MA204	MA
Total		162. 5	44	249. 5					

Table 3: Overview of Practice-Based Courses

Course Code	Course Name	Credits	Lab Credits	Hours/week	Terms	course to take the Advised term	language instruction	Prerequisite	Dept.
EE201-17L	Analog Circuits Laboratory	1	1	2	Fall	2/ Fall	B	EE201-17	EE
EE202-17L	Digital Circuits Laboratory	1	1	2	Spr/ Fall	2/ Spr/ Fall	B/E	EE202-17	EE
EE204	Introduction to Semiconductor Devices	3	1	4	Spr	2/ Spr	B	EE203	EE
EE205	Signals and Systems	3	1	4	Fall	2/ Fall	B	MA101B	EE
EE206	Communication Principles	3	1	4	Spr	2/ Spr	E	EE205	EE
EE208	Engineering Electromagnetics	3	1	4	Spr	2/ Spr	B	MA103A EE104	EE
EE303	Fundamentals of Optoelectronic Technology	3	1	4	Fall	3/ Fall	B	PHY105B	EE
EE304	Integrated Circuit Design	3	2	5	Fall	3/ Fall	B	EE202-17 EE204	EE
EE305	Introduction to VLSI technology	3	1	4	Fall	3/ Fall	E	EE203	EE
EE306	Introduction to MEMS	3	1	4	Spr	3/ Spr	E	PHY105B	EE
EE307	Antennas and Radio Propagation	3	1	4	Spr	3/ Spr	E	EE208	EE
EE308	Fiber Communication Principles and Techniques	3	1	4	Spr	3/ Spr	B	MA102B	EE
EE311	Optical Design	3	1	4	Fall	3/ Fall	B	EE210	EE
EE312	Design of Modern Communication Systems	3	1	4	Spr	3/ Spr	B	EE206 EE313	EE
EE313	Wireless Communications	3	1	4	Fall	3/ Fall	B	EE206	EE
EE316	Microwave Engineering	3	1	4	Fall	3/ Fall	E	EE201-17 EE208	EE
EE317	Advanced Electronic Science Experiment I	1	1	2	Fall	3/ Fall	B	EE201-17 or EE202-17	EE
EE318	Advanced electronic science experiment II	1	1	2	Spr	3/ Spr	B	EE201-17 or EE202-17	EE
EE320-15	Integrated Circuit Fabrication Laboratory	3	1.5	4.5	Spr/ Fall	3/ Spr/Fall	C	EE204	EE
EE322	Optoelectronics Devices Fabrication Laboratory	2	1	3	Spr	3/ Spr	B	EE204	EE
EE323	Digital Signal Processing	3	1	4	Fall	3/ Fall	E	EE205	EE
EE325	Nonlinear Optimization Techniques for Electrical Engineering	3	1	4	Fall	3/ Fall	B	MA102B MA103A	EE
EE326	Digital Image Processing	3	1	4	Spr	3/ Spr	E	EE205	EE
EE327	Fundamentals of Information Optics	3	1	4	Fall	3/ Fall	B	EE205	EE
EE328	Speech Signal Processing	3	1	4	Spr	3/ Spr	E	EE323	EE

EE330	DSP Design and Simulation	1.5	1.5	3	Spr	3/ Spr	B	EE323	EE
EE332	Digital System Design	3	1	4	Spr	3/ Spr	E	EE202-17	EE
EE334	Advanced Integrated Circuit Design: Machine Learning on Chip	3	1	4	Spr	3/ Spr	E	EE202-17	EE
EE335	Liquid Crystal Optoelectronics	3	1	4	Fall	3/ Fall	C	EE210	EE
EE336	Fundamentals of Photovoltaics	3	1	4	Fall	3/ Fall	E	EE204	EE
EE337	Analog Integrated Circuit Design	3	1	4	Fall	3/ Fall	B	EE201-17 EE204	EE
EE338	Application Specific IC (ASIC) Designs Methodology and Practice	3	1	4	Spr	3/Spr	B	EE201-17 EE202-17 EE204	EE
EE339	Analog IC Layout Design	1	1	2	Fall	3/ Fall	B	EE304	EE
EE340	Statistical Learning for Data Science	3	1	4	Spr	3/ Spr	B	MA107A	EE
EE341	Advanced Integrated Circuit Design: Microprocessor	3	1	4	Fall	3/ Fall	B	EE202-17	EE
EE343	Optoelectronic Instrumentation	3	1	4	Fall	3/ Fall	B	EE106 or EE204	EE
EE349	Power Semiconductor Devices and Application Laboratory	1	1	2	Fall	3/ Fall	B	EE347	EE
EE405	Advanced Electronic Science Experiment III	1	1	2	Fall	4/ Fall	B	EE201-17 or EE202-17	EE
EE417	Communications System Design II	2	2	4	Fall	4/ Fall	E	EE316 EE206 EE307	EE
EE423-14	Pattern Recognition	3	1	4	Fall	4/ Fall	B	EE323 EE326	EE
EE429	Image and Video Processing	3	1	4	Fall	4/ Fall	E	EE205 MA103A MA212	EE
EE470	Internship	2	2	16	Smr	3/Smr	NA	NA	EE
EE480	Research Projects	2	2				NA	NA	EE
EE490	Undergraduate Thesis/Projects	8	8	8	Fall / Spr	4/Fall/Spr	NA	NA	EE
EES101	Brief Introduction of "Creative Electronic Design I"	1	0.5	6	Smr	1/ Smr	C	PHY105B	EE
EES102	DIY Project: Assembling an iPhone6	2	2	8	Smr	1/ Smr	C	EE104	EE
EES201	Brief Introduction of "Creative Electronic Design II"	0.5	0.5	4	Smr	2/ Smr	C	NA	EE
EES202	Design based on LabVIEW Programming	1	1	8	Smr	2/ Smr	C	NA	EE
EES203	Innovation and Entrepreneurship	0.5	0.5	4	Smr	2/ Smr	C	NA	EE
EES204	Fiber Sensor Design	1	1	8	Smr	2/ Smr	C	NA	EE
BMEB21	Biomedical Instrumentation	4	2	6	Spr	2/ Spr	C	NA	BMEB

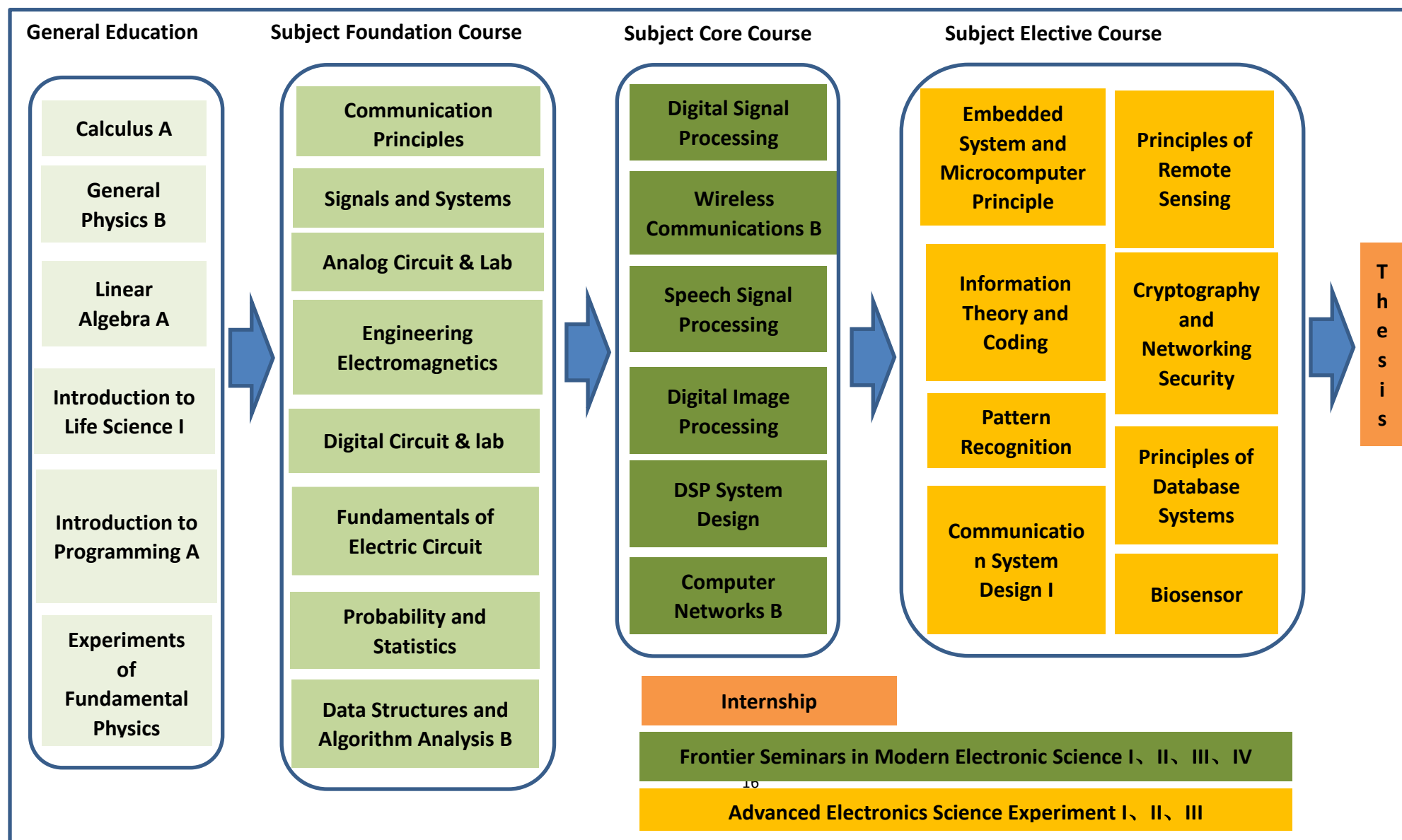
CS203B	Data Structures and Algorithm Analysis B	3	1	4	Fall	2/ Fall	E	CS102A	CS
CS301	Embedded System and Microcomputer Principle	3	1	4	Fall	3/ Fall	B	CS207	CS
CS303B	Artificial Intelligence B	3	1	4	Fall	3/ Fall	B	CS203B CS102A MA212	CS
CS305B	Computer Networks B	3	1	4	Fall	3/ Fall	E	CS102A	CS
CS307	Principles of Database Systems	3	1	4	Fall	3/ Fall	B	NA	CS
CS405	Machine Learning	3	1	4	Fall	4 /Fall	B	MA212 MA103A	CS
Total		145. 5	69 .5	241. 5					

Table 4: Overview of Course Hours and Credits

Course Category	Total Course Hours	Total Credits	Credit Requirements	Percentage of the Total*
General Education (GE) Required Courses (not including English courses)	832	54	54	37.9
General Education (GE) Elective Courses			13	9.1
Major Foundational Courses	496	25	25	17.5
Major Core Courses	480	22.5	22.5	15.8
Major Elective Courses	3992	162.5	16	11.2
Research Projects, Internship and Undergraduate Thesis/Projects	约 380	12	12	8.5
Total (not including English courses)	6180	276	142.5	100

* Percentage of the total= Credit requirements of each line / Total credit requirements

Curriculum Structure of Information Engineering



Note: The Subject Elective course lists include only part of the courses, see more in Program.

Recommended Plan for Courses Selection of XXX Program (not including English courses)

	First Year	Credits	Second Year	Credits	Third Year	Credits	Fourth Year	Credits
Fall	Calculus I A	4	Analog Circuits	3	Frontier Seminars in Modern Electronic Science and Technology I	1	Frontier Seminars in Modern Electronic Science and Technology III	1
	Linear Algebra A	4	Analog Circuits Laboratory	1	Computer Networks B	3	Projects of Science and Technology Innovation	2
	General Physics B (I)	4	Signals and Systems	3	Wireless Communications	3		
	Introduction to Computer	3	Data Structures and Algorithm Analysis	3	Digital Signal Processing	3		
	Cultivation of Ethic Thought and Fundamentals of Law	2	The Outline of Modern and Contemporary History of China y	2	Situation and Policy	2		
	Physic Education I	1	Physic Education III	1	Major Elective Courses	8		
	GE Elective Courses	2	GE Elective Courses	7				
	Total	20	Total	20	Total	20	Total	3
Spring	Calculus II A	4	Digital Circuits	3	Frontier Seminars in Modern Electronic Science and Technology II	1	Thesis(Graduation Project)	8
	General Physics B (II)	4	Digital Circuits Laboratory	1	Speech Signal Processing	3		
	Experiments of Fundamental Physics	2	Communication Principles	3	Digital System Design	3		
	Introduction to Life Science	3	Engineering Electromagnetics	3	Digital Image Processing	3		
	Fundamentals of Electric Circuits	2	Probability and Statistics	3	DSP Design and Simulation	1.5		
	Writing and Communication Skills	2	Physic Education IV	1	Major Elective Courses	8		
	Physic Education II	1	Mao Zedong Thought and Introduction to the Theoretical System of Socialism with Chinese Characteristic	3				
	The Basic Principles of Marxism	2	GE Elective Courses	3				
	GE Elective Courses	1						
	Total	21	Total	20	Total	19.5	Total	8
Summer	Cultivation of Ethics and Fundamentals of Law	1	Introduction to Mao Zedong Thought and Theoretical System of Socialism	3	Internship	2		
	The Basic Principles of Marxism	1						
	Total	2	Total	3	Total	2	Total	

