

I-SHOU UNIVERSITY

Department of Department of Information Engineering

4-Year Curriculum for Students Admitted in Academic Year 2020

* **Credits required for graduation from the Department: 128, including:**

1. GE core courses: required, 16 credits
2. GE liberal arts education: elective, 10 credits
3. Service and Knowledge for Practice: required, 2 credits. Service Education: required, 0 credits
4. Physical Education: required, 0 credits
5. College-required courses: 16 credits (including 1 college-level cornerstone courses)
6. Department-required courses: 53 credits, including academic + practical courses: 50 credits, academic courses: 44 credits, practical courses: 6 credits, and capstone courses: 3 credits
7. Departmental electives: 16 credits
 - a. Academic courses: 21 credits; taking 21 credits out of 77 credits
 - b. Practical courses: 21 credits; taking 21 credits out of 78 credits; at least 3 credits from off-campus internship
8. Other electives: 15 credits

Notes:

1. Students are required to meet the requirements set by the Department for “English Proficiency,” “Information Competency,” and “Professional Certification,” in addition to earning the required number of credits to be eligible for graduation.
2. Before graduation, students are required to take at least one required cornerstone course offered by another college. The credits earned from such courses may be recognized as part of the credits under the category of Liberal Arts Education, but only a maximum of four credits will be recognized accordingly. (For more details about required cornerstone course offered by different colleges, please refer to the announcement on the website of the Curriculum Section.)

Freshman Year (2020)

Sophomore Year (2021)

Category	Course Code	Course Title	1 st Semester	2 nd Semester	Required / Elective	Remark
General Education	A93A17	Service Education (I)	0		Required	
	A93A18	Service Education (II)		0	Required	
	A93A24	Digital English communication I	1		Required	Core
	A93A25	Digital English communication II		1	Required	Core
	A93A28	Unraveling the Mystery of Health			Required	Core
	A93A20	Programming			Required	Core

Category	Course Code	Course Title	1 st Semester	2 nd Semester	Required / Elective	Remark
General Education	A93A26	Smart English Practice I	2		Required	Core
	A93A27	Smart English Practice II		2	Required	Core
	A93A15	Physical Education (I)	0		Required	
	A93A16	Physical Education (II)		0	Required	
	A93A23	Chinese Literature 2.0- Critical thinking and creativity in writing	2		Required	Core
	A93A21	Civic Literacy in the Era of Globalization	2		Required	Core

	A93A21	Civic Literacy in the Era of Globalization		2	Required	Core
	A93A22	Chinese Literature 1.0- Reading, Narration and communication		2	Required	Core
College-requird Courses	A8D001	Calculus(I)	3		Required	Academic
	A8DE01	Introduction to Computer Science	4		Required	
	A8DF01	Computer Science Practice	0		Required	
	A8D002	Calculus(II)		3	Required	Academic
	A8D003	Computer Programming	3		Required	Academic
Department-requird Courses	A03211	Discrete Mathematics	3		Required	Academic
	A03151	Artificial intelligence Introduction	3		Required	Academic
	A03149	Information Engineering Exploration	1		Required	Academic
	A03145	Introduction to Computer Network	3		Required	Academic
	A03140	Basic Physics		3	Required	Academic
	A03179	Object Oriented Programming		4	Required	Academic
	A03238	Linear Algebra		3	Required	Academic
Departmental Electives	A03178	English for Science and Technology	2		Elective	Academic
	A03177	Mathematics and Logic	2		Elective	Practical
	A03143	Introduction to information Engineering		2	Elective	Academic
	A03146	Basic Electricity		3	Elective	Academic
	A03260	Basic Network Practices		3	Elective	Practical
College-requird Courses	A8D010	Data Structure	3		Required	Academic
Department-requird Courses	A03276	Engineering Mathematics	3		Required	Academic
	A03234	Digital Systems	3		Required	Academic
	A03311	Probability		3	Required	Academic
	A03231	Digital Systems Laboratory		1	Required	Practical
	A03305	Algorithm		3	Required	Academic
Departmental Electives	A03313	Computer Organization		3	Required	Academic
	A03032	Introduction to Artificial Intelligence	3		Elective	
	A03512	Multimedia Application	3		Elective	Practical
	A03273	Introduction to Embedded System Hardware	3		Elective	Academic
	A03330	TCP/IP and Network Programming	3		Elective	
	A03278	IoT for Health Care	3		Elective	
	A03320	Introduction to Digital Image Process		3	Elective	Academic
	A03322	Computer and Data Communication		3	Elective	Academic
	A03493	Multimedia Programming		3	Elective	Practical
	A03264	Embedded System Software Design		3	Elective	Practical
	A03271	Web Programming		3	Elective	
	A03254	Advanced Data Structures		3	Elective	
	A03277	Assembly Language		3	Elective	Academic

Total Required Credits for this Academic Year	41
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Total Required Credits for this Academic Year	27
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I-SHOU UNIVERSITY

Department of Department of Information Engineering

4-Year Curriculum for Students Admitted in Academic Year 2020

Junior Year (2022)

Category	Course Code	Course Title	1 st Semester	2 nd Semester	Required / Elective	Remark
General Education	A93A14	Service and Knowledge Practitioner		2	Required	
Department-required Courses	A03317	System Programming	3		Required	Academic
	A03369	Data-base System	3		Required	Academic
	A03304	Operating Systems		3	Required	Academic
	A03345	Special Topics Studies (I)		3	Required	Practical
Departmental Electives	A03406	Wireless Communication System	3		Elective	Academic
	A03408	Local and High Speed Network	3		Elective	Academic
	A03332	Computer Graphics	3		Elective	Academic
	A03361	Microcomputer System	3		Elective	Academic
	A03336	Linux OS	3		Elective	Academic
	A03279	Programming Language	3		Elective	Academic
	A03349	Introduction to Cloud Computing Technologies	3		Elective	Practical
	A03370	Machine Learning	3		Elective	Practical
	A03376	Programming ability contest	3		Elective	Practical
	A03365	Artificial intelligence and biomedical sensing	3		Elective	
	A03244	Programming Techniques	3		Elective	
	A03316	Numerical Methods	3		Elective	
	A03157	Design of embedded multimedia software	3		Elective	
	A03434	Software Engineering		3	Elective	Practical
	A03354	Handset Programming		3	Elective	Practical

Senior Year (2023)

Category	Course Code	Course Title	1 st Semester	2 nd Semester	Required / Elective	Remark
Department-required Courses	A03555	Information Ethics and Career Planning	2		Required	Practical
	A03346	Special Topics Studies (II)	3		Required	Capstone
	A03483	English Proficiency	0		Required	Graduation Threshold
Departmental Electives	A03250	Wireless Networks	3		Elective	Academic
	A03486	Computing	3		Elective	Academic
	A03249	Multimedia Communication	3		Elective	Academic
	A03445	Computer Vision	3		Elective	Academic
	A03251	DSP IP Design	3		Elective	Practical
	A03414	Parallel Algorithms	3		Elective	
	A03441	Compiler Theory	3		Elective	
	A03668	Digital Image Compression	3		Elective	
	A03429	System Management	3		Elective	
	A03333	Techniques of Embedded Systems	3		Elective	Practical
	A03339	Applications of healthcare information and instruments	3		Elective	Practical
	A03470	Practice of Digital Content	3		Elective	Practical
	A03546	Practical Training	3		Elective	Practical
	A03547	Big Data	3		Elective	Practical
	A03548	Principles and Practices of VoIP	3		Elective	Practical
	A03550	Wireless Communication Technologies in IoT	3		Elective	Practical
	A03375	Deep Learning	3		Elective	Practical
	A03556	Block Chain Technology	3		Elective	Practical

A03350	Principles and Applications of Internet of Things		3	Elective	Practical
A03355	Cloud Web Programming		3	Elective	Practical
A03427	Multimedia Signal Processing		3	Elective	Academic
A03508	Computer Architecture		3	Elective	Academic
A03452	Interfacing Techniques		3	Elective	Academic
A03454	Data Compression		3	Elective	Academic
A03337	New-Generation Network Technology		3	Elective	Academic
A03453	Information Security		3	Elective	Academic
A03423	Cryptology		3	Elective	
A03153	Data Analysis		3	Elective	
A03152	IoT Security		3	Elective	
Total Required Credits for this Academic Year		14			

A03465	Fuzzy Theory	3		Elective	
A03671	Data Mining	3		Elective	
A03497	Techniques and Applications of Network Security	3		Elective	Practical
A03338	E. S. Application		3	Elective	Practical
A03746	Industrial Analysis of Technology		3	Elective	Practical
A03542	Hardware Description Language and Logic Synthesis		3	Elective	Practical
A03496	Automatic VLSI and LCD Inspection system		3	Elective	Practical
A03545	Cloud multimedia applications		3	Elective	Practical
A03675	Soft Computer		3	Elective	
A03469	Distributed System		3	Elective	Academic
A03459	Network Communication Protocol		3	Elective	Academic
A03446	Introduction to Virtual Reality		3	Elective	Academic
A03438	Multimedia Database System		3	Elective	Academic
A03269	Chip Design		3	Elective	Academic
A03553	Blockchain Implementation		3	Elective	Practical
A03552	Intelligent Cloud-based Multimedia		3	Elective	
Total Required Credits for this Academic Year		5			

(Official Seal of the Department)