

I-SHOU UNIVERSITY

Department of Department of Information Engineering 4-Year Curriculum for Students Admitted in Academic Year 2024

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

1. GE core courses: required, **18** credits
2. GE liberal arts education: elective, **10** credits
3. Physical Education: required, **0** credits
4. College-required courses: **10** credits (including **1** college-level cornerstone courses)
5. Department-required courses: **56** credits, including academic + practical courses: **53** credits, academic courses: **47** credits, practical courses: **6** credits, and capstone courses: **3** credits
6. Departmental electives: **14** credits
 - a. Academic courses: **21** credits; taking **21** credits out of **71** credits
 - b. Practical courses: **21** credits; taking **21** credits out of **63** credits; at least **3** credits from off-campus internship
7. Other electives: **20** 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 (2024)

Category	Course Code	Course Title	1 st Semester	2 nd Semester	Required / Elective	Remark
General Education	A93A20	Programming			Required	Core(2 credits)
	A93A21	Civic Literacy in the Era of Globalization		2	Required	Core (Freshman Year 2nd Semester or Sophomore Year 1st Semester)
	A93A22	Chinese Literature 1.0-Reading, Narration and communication		2	Required	Core
	A93A30	English in Practice I	1		Required	Core
	A93A31	English in Practice II		1	Required	Core
	A93A28	Codes in Health and Medicine			Required	Core(2 credits)
	A93A29	Secret Codes in Intelligent Technologies			Required	Core(2 credits)

Sophomore Year (2025)

Category	Course Code	Course Title	1 st Semester	2 nd Semester	Required / Elective	Remark
General Education	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 (Freshman Year 2nd Semester or Sophomore Year 1st Semester)
	A93A32	English in Practice III	2		Required	Core
	A93A33	English in Practice IV		2	Required	Core
Department-required Courses	A03218	Data Structure	3		Required	Academic

College-required 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
Department-required Courses	A03125	Computer Programming	3		Required	Academic
	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
	A03179	Object Oriented Programming		4	Required	Academic
	A03238	Linear Algebra		3	Required	Academic
Departmental Electives	A03377	Basic physics		3	Elective	Academic
	A03143	Introduction to information Engineering		2	Elective	Academic
	A03146	Basic Electricity		3	Elective	Academic
	A03260	Basic Network Practices		3	Elective	Practical
Total Required Credits for this Academic Year			40			
	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
	A03313	Computer Organization		3	Required	Academic
Departmental Electives	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
	A03378	Artificial Intelligence in Practice	3		Elective	Practical
Total Required Credits for this Academic Year			27			

I-SHOU UNIVERSITY
Department of Department of Information Engineering
4-Year Curriculum for Students Admitted in Academic Year 2024

Junior Year (2026)

Senior Year (2027)

Category	Course Code	Course Title	1 st Semester	2 nd Semester	Required / Elective	Remark
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	
	A03269	Chip Design	3		Elective	Academic
	A03157	Design of embedded multimedia software	3		Elective	
	A03434	Software Engineering		3	Elective	Practical
	A03354	Handset Programming		3	Elective	Practical

Category	Course Code	Course Title	1 st Semester	2 nd Semester	Required / Elective
Department-required Courses	A03555	Information Ethics and Career Planning	2		Required
	A03346	Special Topics Studies (II)	3		Required
	A03483	English Proficiency	0		Required
Departmental Electives	A03250	Wireless Networks	3		Elective
	A03486	Computing	3		Elective
	A03445	Computer Vision	3		Elective
	A03251	DSP IP Design	3		Elective
	A03414	Parallel Algorithms	3		Elective
	A03441	Compiler Theory	3		Elective
	A03668	Digital Image Compression	3		Elective
	A03333	Techniques of Embedded Systems	3		Elective
	A03547	Big Data	3		Elective
	A03550	Wireless Communication Technologies in IoT	3		Elective
	A03375	Deep Learning	3		Elective
	A03556	Block Chain Technology	3		Elective
	A03465	Fuzzy Theory	3		Elective
	A03671	Data Mining	3		Elective
	A03338	E. S. Application		3	Elective
	A03746	Industrial Analysis of Technology		3	Elective

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
A03454	Data Compression		3	Elective	Academic
A03337	New-Generation Network Technology		3	Elective	Academic
A03453	Information Security		3	Elective	Academic
A03423	Cryptology		3	Elective	
A03379	Service and Knowledge Practitioner		2	Elective	
A03153	Data Analysis		3	Elective	
A03152	IoT Security		3	Elective	
Total Required Credits for this Academic Year		12			

A03675	Soft Computer		3	Elective
A03469	Distributed System		3	Elective
A03459	Network Communication Protocol		3	Elective
A03446	Introduction to Virtual Reality		3	Elective
A03553	Blockchain Implementation		3	Elective
A03552	Intelligent Cloud-based Multimedia		3	Elective
A03358	Nature Language Processing		3	Elective
A03466	Text Mining		3	Elective
A03280	Practical Training (I)	3		Elective
A03281	Practical Training (II)		3	Elective
Total Required Credits for this Academic Year		5		



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