

Project Research 1-2	6										3		3					1-semester courses
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Course	Credits	Hours	1 st year				2 nd year				3 rd year				4 th year				Note
			Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		
			class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	
Elective Courses- Software and Data Engineering Program	XML Programming	3	3							3									Computer course
	Artificial Intelligence	3	3							3									
	Introduction to Programming with Python	3	3							3									
	Advanced Java Programming and Licence	3	3							3									
	Data Mining	3	3							3									
	Web Programming	3	3									3							
	Introduction to Software Engineering	3	3									3							
	Data Warehouse System	3	3									3							
	Advanced Mobile Device Programming	3	3									3							
	R Language Data Processing	3	3									3							
	Systems Analysis and Design	3	3											3					
	UNIX Operations Systems	3	3											3					
	Social Networking Programming	3	3											3					
	Advanced iOS Programming	3	3											3					
	Business Intelligence	3	3											3					
	Weka Practice Data Analysis	3	3											3					
	Linux System	3	3													3			
	Social Network Mining	3	3													3			
	Software Testing and Maintenance	3	3													3			
	Practical Data Analysis	3	3													3			
Object-Oriented Design Patterns	3	3													3				

Subtotal Elective Course Credits	19																		
Subtotal Professional Elective Course Credits	20																		
Subtotal Other Elective Course Credits	128																		

Notes:

1. The students of CSIE department must fulfill 128 credits to be eligible for graduation, including:
 - I.24 required credits demanded by the university
 - II.58 required credits demanded by the department
 - III.At least 46 elective credits which include:
 - A.At least one course from each of the four modules (totally 12 credits)
 - B.At least one of the following two courses: Information Law and Information Ethics.
 - IV.Pre-requisite policy: The minimum score of 40 for Programming Design II is the pre-requisite for Data Structure and Computer Algorithms.
2. Courses from focused course programs set up by any individual IT department or cooperatively between IT and other Schools can be regarded as the CSIE professional elective courses under the approval of the department chair. Courses selected from other Schools can also be regarded as the CSIE professional elective courses under the approval of the department chair with a limitation of at most 20 course credits.
3. Students can choose the courses from the CSIE Master program, which can be counted as their graduation credits under the approval of the department chair.
4. If students any cannot finish the requirement for graduation owing to the reason that some courses from each of the four programs cannot be delivered, the department chair can assign other courses as substitutions.
5. When retaking the required course, students can choose those which are with the same course name or the same course content as substitutions under the approval of the department chair. These courses can be regarded as their graduation credits.
6. Students need to complete at least 12 General Education course credits. General Education courses are divided into three areas: Humanities, Social Science, and Natural Science. Each area is divided into two subcategories: core and extended. Students need to take 1 two-credit course in both of the subcategories within each area to be eligible for graduation. Only 12 course credits will be counted toward graduation. Additional course credits earned in General Education courses are not counted toward graduation.
7. In accordance with the General Provisions for Study, undergraduate students need to satisfactorily complete Service Learning, meet the university-wide basic competencies of English, Information Technology, Chinese, and Sports, and pass the core competencies of their department to be eligible for graduation.
8. Education credits cannot be counted as the graduation credits.
9. Students who fulfill the requirement of each modules can apply for the corresponding certificate. The requirement of each modules will be specified in the other regulation.
10. The elective courses on this Course Outline may be counted toward total graduation credits by students who entered the university prior to the 2017-7 academic year. 11.The credits of interdisciplinary focused course program are not included in course structure diagram that can be regarded as the other department credits.