Idaho State University

Catalog Year 2024-2025
BAS, Cyber Physical Systems Engineering Technology

(For internal use only)

☒ No change

☐ UCC proposal

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is only one strategy. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Electives, and university requirements (see pg.2) are based on Catalog Year.

Course Subject and Title	Cr.	Min. Grade	*GE, UU or UM	**Sem. Offered	Prerequisite	Co-Requisite
Semester Five						
GE Objective 1: ENGL 1102 **(Recommended)**	3	C-	GE	F, S, Su		
GE Objective 3: MGT 2216: Business Statistics	3	C-	GE	F, S	ENGL 1101/P and MATH 1108 or MGT 1116, or TGE 1140	
ESET 1181: Introduction to Cyber-Physical Systems	3	C-		F, D	Minimum score of 30 on ALEKS or equivalent	
ESET 2282: Introduction to Networking	3	C-		F		
CYBR 3383: Security Design for Cyber-Physical Systems	3	C-	UM	F, D	ESET 2223, 2227, or instructor approval	ESET 1181, 2282, or instructor approval
CYBR 3384: Risk Management for Cyber-Physical Systems	3	C-	UM	F, D	ESET 2223, 2227, or instructor approval	ESET 1181, 2282, CYBR 3383, or instructor approval
Total	18					
Semester Six						
ENGL 3307: Professional and Technical Writing	3	C-	UU	F, S	45 credits and ENGL 1102	
BA 3316: Introduction to Data Analytics	3	C-	UU	F, S	MGT 2216, 2217	
CYBR 4481: Defending Critical Infrastructure and Cyber Physical Systems	3	C-	UM	S, D	ESET 2282, CYBR 3383, 3384	
CYBR 4486: Network Security for Industrial Environments	3	C-	UM	S, D	ESET 2282, CYBR 3383	
CYBR 4487: Professional Development and Certification	3	C-	UM	S, D	CYBR 3383, 3384	CYBR 4481, 4486
CYBR 4489: Capstone in Industrial Cybersecurity **OR** ESET 4497: Internship	3	C-	UM	F, S	Instructor approval	CYBR 4481, 4486
Total	18					
Semester Seven						
GE Objective 7 or 8: CS 1181 or INFO 1101	3	C-	GE	F, S	CS only: MATH 1147 or MATH 1143 and MATH 1144	
GE Objective 4	3	C-	GE			
GE Objective 6: ECON 2201 **(Recommended)**	3	C-	GE	F, S, Su		
INFO 4411: Intermediate Information Assurance	3	C-	UU	D	INFO 1150 or CS 1337 or INFO 3310	
MGT 2217: Applied Business Statistics	3	C-		F, S	MGT 2216 and MATH 1108 or MGT 1116	
Total	15					
Semester Eight						
GE Objective 9	3	C-	GE			
MGT 3312: Individual and Organizational Behavior	3	C-	UU	F, S	ENGL 1102 or HONS 1101	
GE Objective 5: CHEM 1100 **OR** CHEM 1111/L **OR** CHEM 1112/L **OR** PHYS 1100 **OR** PHYS 1101/L **OR** PHYS 1111 & 1113 **OR** PHYS 1112 & 1114	3-4	C-	GE			
MGT 3329: Operations and Supply Chain Management	3	C-	UU	F, S	BA 3316	
MGT 4482: Project Management	3	C-	UU	D	MGET 2216 or MATH 1153 or higher	
Total	15-16					

*GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major
**See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.)

2024-2025 Major Requirements	CR	GENERAL EDUCATION OBJECTIVES Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9		37 cr. min
MAJOR REQUIREMENTS	**83**	1. Written English (6 cr. min)	ENGL 1101	3
Previously received ESTEC AAS Degree	38		ENGL 1102	3
		2. Spoken English (3 cr. min)	COMM 1101	3
BA 3316: Introduction to Data Analytics	3	3. Mathematics (3 cr. min)	MGT 2216	3
CYBR 3383: Security Design for Cyber-Physical Systems	3	4. Humanities, Fine Arts, Foreign Lang. (2 courses; 2 categories; 6 cr. min)		
CYBR 3384: Risk Management for Cyber-Physical Systems	3	Any		3
CYBR 4481: Defending Critical Infrastructure and Cyber Physical Systems	3	Any		3
		5. Natural Sciences (2 lectures-different course prefixes, 1 lab; 7 cr. min)		
CYBR 4486: Network Security for Industrial Environments	3	CHEM 1100, CHEM 1111/L, CHEM 1112/L, PHYS 1100, PHYS		3-4
CYBR 4487: Professional Development and Certification	3			
CYBR 4489: Capstone in Industrial Cybersecurity **OR** ESET 4497: Internship	3	Any other Obj 5 course		3
		6. Behavioral and Social Science (2 courses-different prefixes; 6 cr. min)		
ENGL 3307: Professional and Technical Writing	3	ECON 2201 **(recommended)**		3
ESET 1181: Introduction to Cyber-Physical Systems	3	Any		3
ESET 2282: Introduction to Networking	3	One Course from EITHER Objective 7 OR 8 (1course; 3 cr. min)		
INFO 4411: Intermediate Information Assurance	3	7. Critical Thinking	CS 1181	3
MGT 2217: Applied Business Statistics	3	8. Information Literacy	INFO 1101	
MGT 3312: Individual and Organizational Behavior	3	9. Cultural Diversity (1 course; 3 cr. min)		
MGT 3329: Operations and Supply Chain Management	3	Any		3
MGT 4482: Project Management	3	General Education Elective to reach 36 cr. min. (if necessary)		
MGT 2216: Business statistics (counted in Obj 3)			**Total GE**	**37-38**
Objective 5 courses (counted in Obj 5)		Undergraduate Catalog and GE Objectives by Catalog Year		
INFO 1101 **OR** CS 1181 (counted in Obj 7/8)		http://coursecat.isu.edu/undergraduate/programs/		
		MAP Credit Summary		**CR**
		Major		83
		General Education		37-38
		Upper Division Free Electives to reach 36 credits		45
		Free Electives to reach 120 credits		0
			TOTAL	120-121
		Graduation Requirement Minimum Credit Checklist		**Confirmed**
		Minimum 36 cr. General Education Objectives (15 cr. AAS)		**X**
		Minimum 15 cr. Upper Division in Major (0 cr. Associate)		**X**
		Minimum 36 cr. Upper Division Overall (0 cr. Associate)		**X**
		Minimum of 120 cr. Total (60 cr. Associate)		**X**
Advising Notes		*MAP Completion Status (for internal use only)*		
			Date	
		CAA or COT:	EA 6/18/2024	
		Complete College American Momentum Year		
		Math and English course in first year-Specific GE MATH course identified		
		9 credits in the Major area in first year		
		15 credits each semester (or 30 in academic year)		
		Milestone courses		

Form Revised 9.10.2019