Computer Science, BS
International Engineering Concentration

University of Wyoming, 2017-18

Freshman Fall Semester			Hrs	Min Grade	Notes
		USP First-Year Seminar	3	C	FY
		USP Human Culture (Language *)	4	C	H
COSC	1010	Introduction to Computer Science ^ **	4	C	
MATH	2200	Calculus I ^ ***	4	C	Q
		Credit hours subtotal:	**15**		

Freshman Spring Semester			Hrs	Min Grade	Notes
		USP Communication I	3	C	C1
		USP Human Culture (Language *)	4	C	H
COSC	1030	Computer Science I ^	4	C	
MATH	2205	Calculus II ^	4	C	
		Credit hours subtotal:	**15**		

Sophomore Fall Semester			Hrs	Min Grade	Notes
COSC	2030	Computer Science II ^	4	C	
COSC	2150	Computer Organization ^	3	C	
COSC	2300	Discrete Structures ^	3	C	Cross listed with MATH 2300.
		Language *	4	C	
		Science Series I ^ ****	4		PN
		Credit hours subtotal:	**18**		

Sophomore Spring Semester			Hrs	Min Grade	Notes
COSC	3011	Introduction to Software Design ^	3	C	
COSC	3020	Algorithms and Data Structures ^	4	C	
		Language *	3	C	
		Math Elective I *****	3	C	
		Science Series II ^ ****	4		PN
		Credit hours subtotal:	**17**		

This is a guide for course work in the major; actual course sequence may vary by student. Please refer to the online student degree evaluation, and consult with an academic advisor. • Not all courses are offered every semester and some electives may have prerequisites. Students should review the course descriptions in the *University Catalog* and consult with their academic advisor to plan accordingly.

University of Wyoming requirements:

Students must have a minimum cumulative GPA of 2.0 to graduate. • Students must complete 42 hours of upper division (3000-level or above) coursework, 30 of which must be from the University of Wyoming. • Courses must be taken for a letter grade unless offered only for S/U. • University Studies Program (USP) Human Culture (H) and Physical & Natural World (PN) courses must be taken outside of the major subject, but can be cross-listed with the major.

College of Engineering and Applied Science requirements:

Students must have a minimum cumulative GPA of 2.0 in all Engineering courses for graduation. • A grade of C or higher is required for all prerequisite courses. Students must also achieve a grade of C or better in all required mathematics courses.

Computer Science–International Engineering Concentration Program Notes:

All computer science, math, and statistics courses must be completed with a grade of C or better. A grade of C- is not acceptable.

• International Engineering students must complete a semester of study abroad, normally in their junior year. Please consult with an academic advisor.

^ Computer Science core courses.

Computer Science–International Engineering Concentration Program Notes con't on page 2.

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Junior Fall Semester			Hrs	Min Grade	Notes
		USP Communication II	3	C	C2
COSC	3015	Functional Programming	3	C	
COSC	4740	Operating Systems Design	4	C	
		Math Elective II *****	3	C	
		Science Elective I ******	4		
		Credit hours subtotal:	17		

Junior Spring Semester			Hrs	Min Grade	Notes
COSC	3050	Ethics for the Computer Professional	1	C	
		COSC Elective I *******	3	C	
		COSC Elective II *******	3	C	
		Science Elective II ******	4	C	
		Upper Division Elective I	3		
		Credit hours subtotal:	14		

Senior Fall Semester			Hrs	Min Grade	Notes
		USP US & Wyoming Constitutions	3		V
COSC	4950	Senior Design I ^	1	C	
STAT	4220	Basic Engineering Statistics	3	C	Can substitute STAT 2010 (Statistical Concepts), STAT 2050 (Fund of Statistics), or STAT 2070 (Intro Stats for the Social Sciences).
		Computer Science Systems Course	3	C	Choose from COSC 4760 (Computer Networks) or COSC 4820 (Database Systems).
		Computer Science Theory Course	3	C	Choose from COSC 4100 (Foundations of Computing) or COSC 4200 (Computability & Complexity).
		Credit hours subtotal:	13		

Senior Spring Semester			Hrs	Min Grade	Notes
		USP Communication III	3	C	C3
COSC	4955	Senior Design II ^	2	C	
		Computer Science Programming Language	3	C	Choose from COSC 4780 (Prin of Programming Language) or COSC 4785 (Compiler Construction).
		COSC Elective III *******	3	C	
		COSC Elective IV *******	3	C	
		Upper Division Elective II	3		
		Credit hours subtotal:	17		

TOTAL CREDIT HOURS: 126

Computer Science–International Engineering Concentration Program Notes con't:

* A **single language** must be taken for four (4) semesters or 15 hours to fulfill the foreign language requirement for the program.

- Students taking American Sign Language to fulfill the language requirement for the major will have to take other courses to fulfill the USP H requirements.

** Requires MATH ACT ≥ 25, MATH SAT ≥ 600, Math Placement Exam ≥ 4, or ≥ C in MATH 1400 within one year prior to the start of the course. (University standard)

*** Requires MATH ACT ≥ 27, MATH SAT ≥ 600, Math Placement Exam ≥ 5, or ≥ C in MATH 1405 or 1450. (University standard)

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Computer Science–International Engineering Concentration Program Notes con't:

****** Science Series I & II.** Students must complete two courses from a tightly-coupled series, each of which has a lab component and recommended for science or engineering majors. Be aware that the first course in each series has a Math Placement Exam or course prerequisite requirement; please consult the course descriptions in the *University Catalog* for specific information. Courses can be selected from:

CHEM 1020 (General Chemistry I) & CHEM 1030 (General Chemistry II)
CHEM 1050 (Advanced General Chemistry I) & CHEM 1060 (Advanced General Chemistry II)
LIFE 1010 (General Biology I) & LIFE 2022 (Animal Biology) or LIFE 2023 (Biology of Plants & Fungi)
PHYS 1110 (General Physics I) & PHSY 1120 (General Physics II)
PHYS 1210 (Engineering Physics I) & PHYS 1220 (Engineering Physics II)
PHYS 1310 (College Physics I) & PHYS 1320 (College Physics II)

******* Math Elective I & II.** A total of six (6) additional hours of math course work is required. Students must choose math courses above Calculus II or statistics courses 3000-level or above. Exceptions: MATH 2350 (Business Calculus), MATH 2355 (Mathematical Applications for Business), MATH 4000 (History of Mathematics), or any variable length credit courses cannot be counted toward this requirement.

******** Science Electives.** Please see the Computer Science Department web page *www.uwyo.edu/cosc/undergraduate_students/cosc_degree/* for a current list of approved courses. These course selections must have a lab component and be recommended for science or engineering majors.

********* Computer Science Electives.** A total of 12 hours of upper division (3000-level or above) computer science electives are required. A maximum of three (3) hours of COSC 3970 (Internship) can be included in this requirement.