

2015-2016 B.S. Computer Science and Technology – Software Engineering Concentration

CORE CURRICULUM – 43-44 Semester Hours (SH)

UNIVERSITY CORE

A. Core Foundations

CORE 101	_____	3
CORE 102	_____	3
HNRS 103*	_____	3
CORE 201	_____	3
CORE 202	_____	3

NOTE: Courses listed in multiple areas can only be used to fulfill a single area requirement.

Students can use only one course with their major prefix to fulfill core requirements.

* Honors course – will meet CORE 101 & 102 for those students in the RU honors program

B. Core Skills & Knowledge

Courses must be from different disciplines:

MATHEMATICAL SCIENCES (3 SH)
MATH 151 _____ 3

NATURAL SCIENCES (4 SH)
_____ _____ 4

One of the following: ASTR 111, 112 BIOL 103, 104, 105 CHEM 101: 102, 120 GEOL 100, 105: 106 PHYS 111: 112, 221: 222

HUMANITIES (3 SH)
_____ _____ _____ 3

One of the following: CLSS 110 CCST 110 ENGL 200 HIST 101, 102 PHIL 111, 112, 114; POSC 110; RELN 111, 112, 203, 206

VISUAL & PERFORMING ARTS (3 SH)
_____ _____ _____ 3

One of the following: ART 100, 215, 216 CVPA 266, DNCE 111 MUSC 100, 121, 123 THEA 100, 180

SOCIAL/BEHAV. SCIENCES (3 SH)
_____ _____ _____ 3

One of the following: ANSC 101, APST 200 ECON 205, 206 GEOG 101, 102, 103 HIST 111, 112 POSC 120 PSYC 121 RELN 205 SOCY 110, 121

COLLEGE CORE

A. National & International Perspectives

Courses must be from different disciplines:

U. S. PERSPECTIVES (3 SH)
_____ _____ _____ 3

One of the following: APST 200 ECON 101, 205, 206, ENGL 203 GEOG 201, 202, 203 HIST 111, 112 POSC 120, SOCY 110

GLOBAL PERSPECTIVES (3 SH)
_____ _____ _____ 3

One of the following: CVPA 266, ENGL 201; CCST 103; GEOG 101, 102, 140, 280 HIST 101, 102 INST 101 ITEC 112 PEAC 200 RELN 112, 205, SOCY 121, THEA 180 WMST 101

B. Supporting Skills & Knowledge

NATURAL SCIENCES OR MATH (3/4 SH)
(Must select a 4-credit lab science)

_____ _____ _____ 4
One of the following: ASTR 111, 112 BIOL 103, 104, 105 CHEM 101: 102, 120 GEOL 100, 105:106 PHYS 111: 112, 221:222

HUMANITIES, VISUAL & PERFORMING ARTS, OR FOREIGN LANGUAGES (3-4 SH)
_____ _____ _____ 3-4

One of the following: CLSS 110 CCST 110 ENGL 200 HIST 101, 102 PHIL 111, 112, 114; POSC 110; RELN 111, 112, 203, 206 Or ART 111, 215, 216; CVPA 266; DNCE 111 MUSC 100, 121, 123 THEA 100, 180 Or CHNS 101: 102, 201: 202 ARAB 101, 102, 201, 202, 300, 303 FORL 100, 200, 209, 210, 309, 409; FREN 100, 200:210, 300, 320 GRMN 100, 200: 210, 300 LATN 101, 102, 201, 350; RUSS 100, 200, 210, 300; SPAN 101: 102, 103, 201, 202

SOCIAL/ BEHAV. SCI. OR HEALTH & WELLNESS (3 SH)
_____ _____ _____ 3

One of the following: ANSC 101, APST 200 ECON 205, 206 GEOG 101, 102, 103 HIST 111, 112 POSC 120 PSYC 121 RELN 205 SOCY 110, 121 HLTH 111,200, NUTR 214 RCPT 200

CSAT – Software Engineering Concentration * A grade of C or better is required for any course with an asterisk

Software Engineering CONCENTRATION

*ITEC 110	_____ (3)	Principles of Information Technology	F/S
*ITEC 120	_____ (4)	Principles of Computer Science I	F/S
*ITEC 220	_____ (4)	Principles of Computer Science II	F/S
*ITEC 225	_____ (3)	Web Programming I	F/S
*ITEC 345	_____ (3)	Introduction to Information Security	F/S
ITEC 490	_____ (1)	IT Professionalism	F/S
MATH 151	_____ (3)	Calculus & Analytical Geometry I	F/S
ITEC 122	_____ (3)	Discrete Mathematics	F/S
ITEC 324	_____ (3)	Principles of Computer Science III	F/S
ITEC 320	_____ (3)	Procedural Analysis and Design	F/S
ITEC 335	_____ (3)	Software Testing	S
ITEC 370	_____ (3)	Software Engineering I	F/S
ITEC 380	_____ (3)	Organization of Programming Languages	F
ITEC 471	_____ (3)	Software Engineering II	F
ITEC 472	_____ (3)	Software Engineering III	S

Prerequisites

"C" or better ITEC 120
ITEC 109 or ITEC 120 "C" or better in either
"C" or better in ITEC 120
Senior Standing (86 hours or more)
Math SAT ≥ 550, or college pre-calc ≥ "C"
"C" or better in ITEC 120 and MATH 125, 126, 138, 140 or 151
"C" or better in both ITEC 110/220
"C" or better in both ITEC 110/220
ITEC 110, 220, and 225 "C" or better in all
"C" or better in both ITEC 110/220
ITEC 224, ITEC 320
ITEC 320, ITEC 324, ITEC 335, ITEC 370
ITEC 471

Technical Electives -Plus 9 Additional credit hours in 300 or 400 level ITEC course (except for ITEC 301, 304, 307, 381, 398, 493 or 498) or any 500/600 level ITEC course approved by the Department Chair.

ITEC_____ (), ITEC_____ (), ITEC_____ ()

See BS requirements on back

Sample Schedule B.S. Computer Science Major – Software Engineering Concentration 15/16

Fall Semester		Spring Semester	
Freshman Year	Cr.	Freshman Year	Cr.
University Core A: Core 101	3	University Core A: Core 102	3
*ITEC 110	3	ITEC 122 ITEC 120 "C" or better & MATH 126, 138, 140, 145, or 151	3
*ITEC 120	4	*ITEC 220 "C" or better ITEC 120	4
MATH 151 Math SAT \geq 550, or college pre-calc \geq "C"	3	CORE	3
UNIV 100	1	CORE	3
	14		16
Students with no programming experience are advised to take ITEC 109 their first semester. This course does not count towards major requirements, but will count towards the 120 credit hours needed to graduate. * Students must receive a grade of "C" or better in courses marked with an asterisk *			
Sophomore Year	Cr.	Sophomore Year	Cr.
University Core A: Core 201	3	University Core A: Core 202	3
ITEC 225 ITEC 109 or ITEC 120 "C" or better in either	3	ITEC 320 "C" or better in both ITEC 110/220	3
ITEC 324 "C" or better in both ITEC 110/220	3	ITEC 370 "C" or better in both ITEC 110/220	3
CORE Natural Science	4	CORE Natural Science	4
*ITEC 345 "C" or better in ITEC 120	3	FREE ELECTIVE to reach 120 credit hours	3
	16		16
CORE 101, 102, 201, and 202 must be completed in succession. Students should complete CORE 202 prior to their junior year.			
Junior Year	Cr.	Junior Year	Cr.
ITEC 3/4XX elective for major	3	ITEC 3/4XX elective for major	3
ITEC 471 (F ONLY) ITEC 324, ITEC 320, ITEC 370	3	ITEC 472 (S ONLY) ITEC 471	3
ITEC 380 (F ONLY) ITEC 324, ITEC 320	3	CORE	3
CORE	3	CORE	3
FREE ELECTIVE to reach 120 credit hours	3	ITEC 335 (S ONLY) ITEC 110, 220 & 225 C or better in all	3
	15		15
Senior Year	Cr.	Senior Year	Cr.
ITEC 3/4XX elective for major (except ITEC 301, 304, 307, 381, 398, 493, and 498)	3	ITEC 3/4XX elective for major (except ITEC 301, 304, 307, 381, 398, 493, and 498)	3
B.S. requirement (see below)	3	B.S. requirement (see below)	4
ITEC 490 senior standing	1	FREE ELECTIVE to reach 120 credit hours	3
FREE ELECTIVE to reach 120 credit hours	3	FREE ELECTIVE to reach 120 credit hours	3
CORE	3		
CORE	16		13

B.S. requirements 6-8 hrs: Any 300 level or above ITEC course (except ITEC 301, 304, 307, 381, 398, and 498); any 500 or 600-level ITEC course approved by the Department Chair; MATH 152; any 200 level or above Math course; ASTR 111, ASTR 112, any Biology (except BIOL 301 and 302); any Chemistry; any Geology (except GEOL 110 and 205), any Physics, or PHSC 301.