Computer Science

Bachelor of Science (BS.CS)

Core Require	ements		Credits	Notes/Instructions
College Sem.	Quest for Meaning	CSEM 100	3	†A student may be
Communication & Creative Expression	Writing Oral Communication Literature The Arts	ENGL 110 [†] COMM 101 ENGL 140-149 ARTS 100-149	3 3 3 3	required to take ENGL 105 and/or MATH 100 based on placement exams administered prior to their first semester at King's
Citizenship	History Intercultural Global Connections	HIST 100-149 FREN/GERM/SPAN 100-level or Study Abroad ^{††} ECON 150-199; GEOG 150-199; HIST 150-199; PS 150-199; SOC 150-199	3 3 3	College. ENGL 105 and MATH 100 are 3-credit courses and will count at free electives.
Quantitative & Scientific Reasoning	SBM Quantitative Reasoning Scientific Endeavor Science in Context Human Beh. & Soc. Inst	MATH 120 [†] or higher level NSCI 100 NSCI 171-199 ECON 111, 112; GEOG 101, 102; PS 101, PSYC 101, SOC 101	- 3 3 3	Competence requirement can be satisfied by taking a 10(level language class for credits or participating an approved Study
Wisdom, Faith, & the Good Life	Introduction to Phil. Phil. Investigations Theology & Wisdom Theology & the Good Life	PHIL 101 PHIL 170-199; MSB 287 THEO 150-159 THEO 160-169	3 3 3 3	Abroad experience. SBM = Satisfied By Majorequirement(s) and credit(s) listed below.
		Total Core Credits	45	

Major Requirements	Credits	Electives ³ / Other Requirements	Credits
CS 112 Intro. to Programming (fall)	3	HCE 101 Holy Cross Experience	1
CS 120 ^{PR} OO Software Dev. (spring)	3	Free Elective ^{3,4}	3
CS 120L ^{PR} OO Software Dev. Lab (spring)	1	Free Elective ^{3,4}	3
CS 232 ^{PR} Data Structures (fall)	3	Free Elective ^{3,4}	3
CS 232L ^{PR} Data Structures Lab (fall)	1	Free Elective ^{3,4}	3
CS 233 ^{PR} Adv. Data Structures (spring)	3	Free Elective ^{3,4}	3
CS 233L ^{PR} Adv. Data Structures Lab (spring)	1		
CS 256 ^{PR} Database Management	3		
CS 256L ^{PR} Database Management Lab	1		
CS 270 ^{PR} Computer Organization	3		
CS 270L ^{PR} Computer Organization Lab	1		
CS 480 ^{PR} Software Engineering (fall)	3		
CS 481 ^{PR} Appl. Soft. Engr. OR CS 499 ^{PR} CS Internship	3		
CS Elective*,PR	3		
MATH 127 Logic & Axiomatics	3		
MATH 129 ² Calculus I	4		
MATH 130 ^{PR} Calculus II	4		
MATH 235 ^{PR} Discrete Mathematics	3		
Total Major Credits	61	Total Elective / Other Credits	16

Total Credits Required for Graduation = 122

*A student majoring in Computer Science must complete six (6) of the following CS Electives (only 2 can be CIS courses):

		CS Elec	tive*,PR		
CS 305	CS 328	CS 364	CS 380	CS 448	CIS 386
CS 315	CS 336	CS 375	CS 420	CIS 385	CIS 487
		Any CS course	300 or higher		

^{**}The following "Free Electives" are recommended for Computer Science majors: MATH 126, MATH 237, PHYS 111 & PHYS 111L. CIS 106 is recommended particularly to freshman choosing between Computer Science and Computer Information Systems.

General Information:

A student must earn a minimum of 120 credit hours to be awarded the baccalaureate degree. The number of credit hours required for graduation may be higher in certain major programs <u>or</u> if the student elects to pursue a second major. Beyond the requirements of the Core Curriculum and of a student's chosen major program, the balances of the credit hours required for graduation are "free electives."

Computer Science

Suggested Sequence

A suggested course sequence of degree requirements is listed below. Refer to the college catalog for course titles, descriptions, and prerequisites. Always consult your Academic Advisor when planning and scheduling your classes.

Fall	Credits	Spring	Credi
CS 112 Intro. to Programming (fall only)	3	CS 120 ^{PR} OO Software Development (spring only)	3
MATH 127 ² Logic & Axiomatics (fall only)	3	CS 120L PR OO Software Devel. Lab (spring only)	1
MATH 129 ² Analytical Geometry & Calculus I	4	MATH 130 ^{PR} Analytical Geometry & Calculus II	4
Core Course ¹ (ENGL 110) and/or CIS 106 ⁴	3	Core Course ¹ (ARTS 100 – 149)	3
HCE 101 Holy Cross Experience	1	Core Course ¹ (CSEM 100 Quest for Meaning)	3
(Core Course¹)	(3)	Core Course ¹	3
(A student may take and additional course up to 17 credit.	s) 14-17 [†]		17
Summer	Credits		
Fall	Credits	Spring	Cred
CS 232 ^{PR} Data Structures (fall only)	3	CS 233 ^{PR} Adv. Data Structures (spring only)	3
CS 232L ^{PR} Data Structures (fall only)	1	CS 233 ^{PR} Adv. Data Structures Lab (spring only)	1
CS 256 ^{PR} Database Management Systems	3	CS 270 ^{PR} Computer Organization	3
CS 256L ^{PR} Database Management Systems Lab	1	CS 270L ^{PR} Computer Organization Lab	1
MATH 235 ^{PR} Discrete Mathematics	3	Core Course ¹	3
Core Course ¹	3	Core Course ¹	3
	2	Core Course ¹	3
Core Course ¹	3	Core course	
	17	Core course	17
Core Course ¹ Summer		Core course	17
	17		17
Summer	17 Credits	Spring CS Elective*,PR	
Summer Fall	17 Credits	Spring	Cred
Summer Fall CS Elective*,PR	17 Credits Credits	Spring CS Elective*,PR	Crec
Fall CS Elective*,PR CS Elective*,PR	17 Credits Credits 3 3	Spring CS Elective*,PR CS Elective*,PR	Crec 3 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹	Credits Credits 3 3 3	Spring CS Elective*,PR CS Elective*,PR Core Course¹	Crec 3 3 3 3 3 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹	Credits Credits 3 3 3 3 3	Spring CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹	Cree 3 3 3 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹	Credits 3 3 3 3 3	Spring CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹	Cree 3 3 3 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective ^{3,4}	Credits 3 3 3 3 15	Spring CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹	Crec 3 3 3 3 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective ^{3,4}	Credits Credits 3 3 3 3 15 Credits	Spring CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹	Crec 3 3 3 3 3 3 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective ^{3,4} Summer	Credits Credits 3 3 3 3 Credits	Spring CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective ^{3,4}	Cred 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective³,4 Summer Fall CS 480 Software Engineering CS Elective*,PR	Credits 3 3 3 3 15 Credits Credits	Spring CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective³,4 Spring CS 481 Appl. Soft. Engr. OR CS 499 CS Internship CS Elective*,PR	Crec 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective³,4 Summer Fall CS 480 Software Engineering CS Elective*,PR Core Course¹	Credits 3 3 3 3 15 Credits	Spring CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective³,4 Spring CS 481 Appl. Soft. Engr. OR CS 499 CS Internship CS Elective*,PR Core Course¹	Cree 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective³,4 Summer Fall CS 480 Software Engineering CS Elective*,PR	Credits 3 3 3 3 15 Credits Credits	Spring CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective³,4 Spring CS 481 Appl. Soft. Engr. OR CS 499 CS Internship CS Elective*,PR	Cree 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Fall CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective³,4 Summer Fall CS 480 Software Engineering CS Elective*,PR Core Course¹	Credits 3 3 3 3 15 Credits Credits	Spring CS Elective*,PR CS Elective*,PR Core Course¹ Core Course¹ Free Elective³,4 Spring CS 481 Appl. Soft. Engr. OR CS 499 CS Internship CS Elective*,PR Core Course¹	Crec 3 3 3 3 3 3 3 3 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6

NOTES

[†]The standard semester course load is five courses consisting of 15 – 17 credits. A student may take 18 credits if a lab puts them over 17 credits (for more information about credit loads, please see the college catalog).

¹Choose one course from each of the Core Requirements listed on the reverse side.

² Course may satisfy both a Major and a Core requirement. MATH 127 or MATH 129 will satisfy the Quantitative Reasoning Core requirement.

³ Students may select "free electives" for personal enrichment <u>OR</u> for Minor and/or Second Major Requirements.

⁴ The following "Free Electives" are recommended for Computer Science majors: MATH 126, MATH 237, PHYS 111 & PHYS 111L. CIS 106 is recommended particularly to freshman choosing between Computer Science and Computer Information Systems.

PR Course has a prerequisite – check college catalog.