Cybersecurity

BS in Cybersecurity (Fall 2018 & Later)

Minimum 120 credits required for Bachelor's degree

Foundational Core (30-32 Credits)		Grade
FYWS 125[1]	First Year Seminar	
CTL 125	Critical Thinking	
MA___	Foundational Core Math course [3]	
Choose 1 course from each area *		
[2]Natural and Physical Science		
Literature		
History	HI-100 or HI-102	
Arts/Design/Comm.		
Philosophy		
Theology/Relig		
Social/Behavioral Science [4]		

Human Journey Seminars: Great Books in CIT (6 Credits)		
CIT 201	CIT Seminar I	
CIT 202	CIT Seminar II	

Liberal Arts Explorations (9 Credits Total)

Student must complete one course in each area. (see list on Registrar's Website - checksheets)		
Humanistic Inquiry (3 credits)		
Social and Global Awareness [5]		
Scientific Literacy (3 credits) [6]		

* See list of courses.

[1](Requires Grade C or higher)

[2]Science/Natural Science courses includes approved Math and Computer Science courses. Students are required to take at least one course in Biology, Chemistry, or Physics in the Foundational or Liberal Arts Exploration Core. CS and MA courses may be used as a Science/Natural Science in either the Foundational Core **or** as a requirement in the LAE Core but not in both categories.

[3] MA106/MA140/MA151 may count in this area

[4] EC101 or EC202 is recommended

[5] CS319 is recommended

[6] MA131 may count in this area

Note: MA 006 and ESL courses **will not** count towards the 120 credit graduation requirement.

Approved Study Abroad courses may be used to satisfy requirements for the foundational core or a Liberal Arts Exploration

A maximum of 8 Applied Music credits may be applied towards graduation

Checksheet Key	
T	Course transferred and Requirement satisfied
W	Requirement waived
TW	Course transferred and Requirement waived

80 credits **CYBERSECURITY MAJOR**

REQUIRED CYBERSECURITY COURSES (43 Cr.)		Grade	Credits
CSE 125	Computer Science and Engineering Explorations		1
CY 125	Cybersecurity Explorations		1
CY 211	Computer Networks		3
CY 212	Web Development in UNIX		3
CY 221	Foundations of Cybersecurity		3
CS 319	Computer Ethics**		3
CY 312	Introduction to Cryptography		3
CS 367	Network Security		3
CY 321	Cybersecurity Standards, Laws, and Policies		3
CY 324	Forensic Computing		3
CY 325	Usable Security and Privacy		3
CY 410	Software and System Security		3
CY 413	Internship in Cybersecurity		3
CY 420	Vulnerability Assessment and Penetration Testing		3
CY 417	Cybersecurity Capstone Project I		2
CY 418	Cybersecurity Capstone Project II		3

ELECTIVE CYBERSECURITY COURSES (9 Cr.)		Grade	Credits
CY 414	Directed Research in Cybersecurity		3
CY 419	Cooperative Studies in Cybersecurity		6
CY 421	Cloud Computing: Architecture, Operations and Security		3
CY 422	Web and Application Security		3
CY 423	Wireless Network Security		3
CY 424	Emerging Trends in Cybersecurity		3

REQUIRED COMPUTER SCIENCE COURSES (21 Cr.)		Grade	Credits
CS 111	Introduction to Structured Programming		3
CS 112	Data Structures		3
CS 113	Discrete Structures		3
CS 215	Computer Systems Organization with Assembler		3
CS 241	Advanced Programming Concepts		3
CS 311	Database Design		3
CS 349	Operating Systems		3

Required Supporting Courses (7 Cr.)		Grade	Credits
MA 131	Elementary Statistics**		3
MA 151	Calculus I		4
MUST HAVE GRADE OF "C" OR BETTER			

** Counts in LAE

WELCH COLLEGE OF BUSINESS

BS in Cybersecurity (Fall 2018 & Later)

YEAR 1	SEMESTER I	YEAR 1	SEMESTER 2
FYWS125 OR CTL 125	First Year Seminar OR Crititcal Thinking	CTL 125 OR FYWS125	Critical Thinking OR First Year Seminar
MA 151	Calculus I	MA 131	Elementary Statistics (LAE Scientific Literacy)
CS 111	Intro to Structured Programming	CS 112	Data Structures
CSE 125	CSE Explorations	CS 113	Discrete Structures
HI 100 or HI 102	Western Civ. I or II	CY 125	Cybersecurity Explorations
	Foundational Core		Foundational Core
YEAR 2	**SEMESTER 3**	**YEAR 2**	**SEMESTER 4**
CY 211	Computer Networks	CY 221	Foundations of Cybersecurity
CY 212	Web Development in UNIX	CS 215	Computer Systems Organization with Assembler
CS 241	Advanced Programming Concepts		LAE (Humanistic Inquiry)
CIT 201	CIT Seminar I	CIT 202	CIT Seminar II
	Foundational Core		Foundational Core
YEAR 3	**SEMESTER 5**	**YEAR 3**	**SEMESTER 6**
CS 319	Computer Ethics (LAE Social and Global Awareness)	CY 321	Cybersecurity Standards, Laws, and Policies
CY 312	Introduction to Cryptography	CY 324	Forensic Computing
CS 367	Network Security	CS 349	Operating Systems
CS 311	Database Design	CY 325	Usable Security and Privacy
	Foundational Core		CY Elective
YEAR 4	**SEMESTER 7**	**YEAR 4**	**SEMESTER 8**
CY 410	Software and System Security	CY 420	Vulnerability Assessment and Penetration Testing
CY 413	Internship in Cybersecurity		CY Elective
CY 417	Cybersecurity Capstone Project I	CY 418	Cybersecurity Capstone Project II
	CY Elective		Foundational Core
	Free Elective		Free Elective

effective Fall 2019