



Computer and Information Sciences

Major - Computer Science with a Track in Cyber Operations

Catalog Year 2019 - 2020

Required Computer Science Courses

34 Units

			Units
_____	COSC 236	Intro to Computer Science I	4
_____	COSC 237	Intro to Computer Science II	4
_____	COSC 290	Principles of Comp Architecture	4
_____	COSC 336	Data Structures & Algorithm Analysis	4
_____	COSC 350	Data Communication and Networking	3
_____	CIS 377	Information Systems Security	3
_____	COSC 412	Software Engineering	3
_____	COSC 439	Operating Systems	3
_____	COSC 455	Programming Languages	3
_____	COSC 457	Database Management Systems	3

Required Cyber Operations Track Courses

18 Units

		Units	
_____	COSC 310	Advanced Programming	3
_____	COSC 440	Operating Systems Security	3
_____	COSC 450	Network Security	3
_____	COSC 458	Application Software Security	3
_____	COSC 481	Case Studies	3
_____	COSC 485	Reverse Eng/Malware Analysis	3

Required Math Courses

18 Units

			Units
_____	MATH 263	Discrete Math	3
_____	MATH 273	Calculus I	4
_____	MATH 274	Calculus II	4
_____	MATH 314	Cryptography	3
_____	MATH 330	Intro to Statistical Methods	4

Required Core Courses

9 Units

			Units
_____	COMM 131	Speech Communication (Core 5)	3
_____	ENGL 317	Writing for Business (Core 9)	3
_____	COSC 418	Ethical Concerns (Core 14)	3

Required Science Courses

8 Units

Select two lab science courses from the following (the courses do not need to form a sequence):

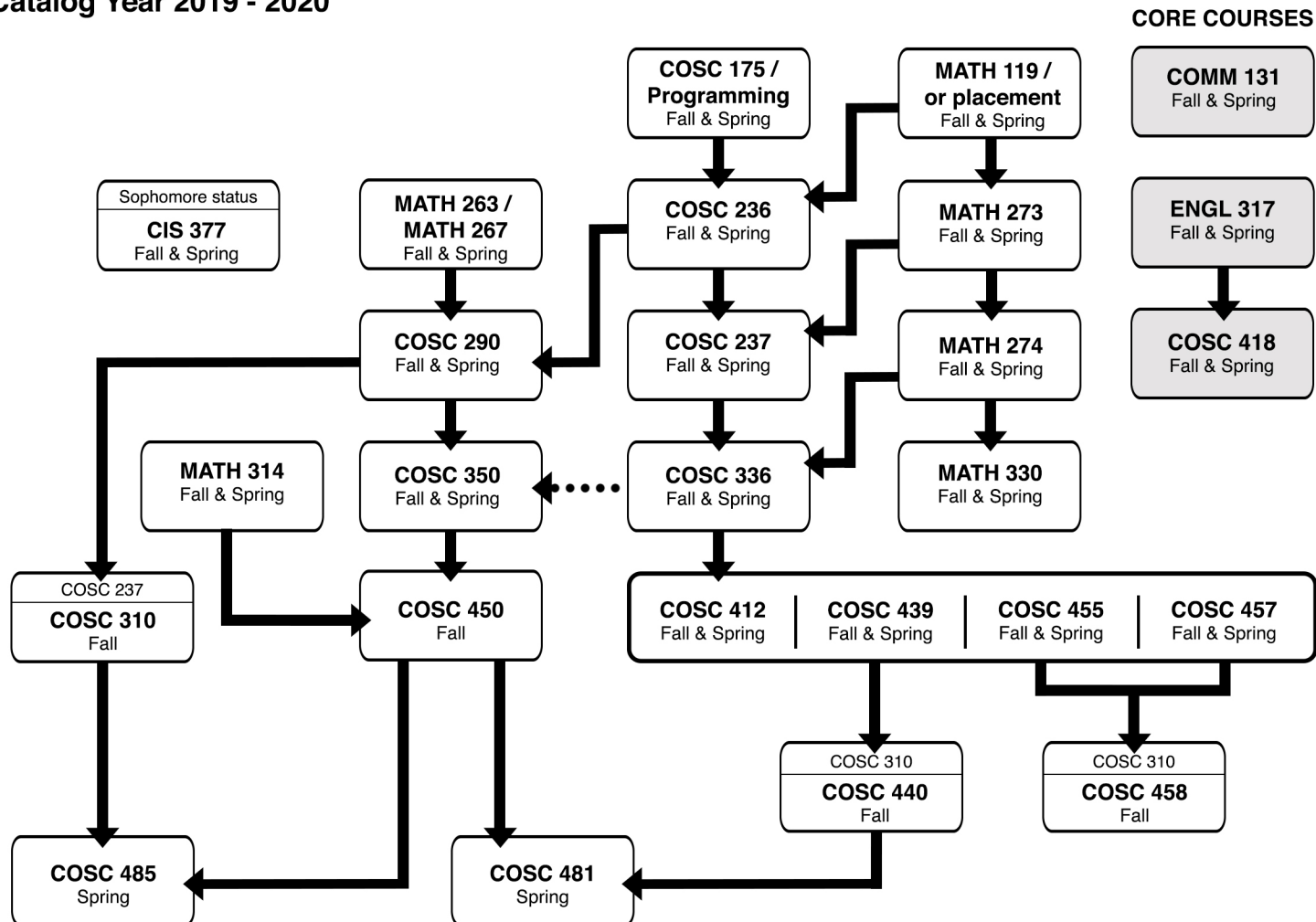
		Units	
_____	ASTR 161	Sky and Solar System	4
_____	ASTR 181	Stars, Galaxies, Universe	4
_____	BIOL 200 + L	Intro to Cell Biology	4
_____	BIOL 202	Intro to Ecology/Evolution	4
_____	CHEM 131 + L	General Chemistry I	4
_____	CHEM 132 + L	General Chemistry II	4
_____	GEOL 121	Physical Geology	4
_____	PHYS 241	General Physics I	4
_____	PHYS 242	General Physics II	4

Total Units: 87

www.towson.edu/cis
www.towson.edu/cyber

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Find more advising resources on:

www.towson.edu/fcsm/departments/computerinfosci/resources/advising.html