

## CPSC Courses

A checkmark indicates a required course in the specified program. The semester the course is typically offered is specified in the "Offered" column (both indicates it is offered both fall and spring semester; a blank indicates the semester offered may vary).

Course	Course Description	CS	IT	GD	DS	Offered
CPSC105	Introduction to Data Virtualization				√	
CPSC120	Introduction to Creative Graphical Coding			√ <sup>2</sup>		Spring
CPSC122	Client-Side Web Development		√			Fall
CPSC123	Introduction to Scientific Programming		√ <sup>1</sup>		√ <sup>1</sup>	Spring
CPSC125	Discrete Math for Computing I	√	√	√	√	Both
CPSC135	Computer Science I	√	√ <sup>1</sup>	√ <sup>2</sup>	√ <sup>1</sup>	Both
CPSC136	Computer Science II	√		√ <sup>3</sup>		Both
CPSC150	Ethical, Legal & Prof. Impact of the Digital Age	√	√		√	Both
CPSC220	Object-Oriented Multimedia Programming			√ <sup>3</sup>		Fall
CPSC223	Advanced Scientific Programming				√	Both
CPSC225	Discrete Math for Computing II	√				Both
CPSC235	Computer Organization and Assembly Language	√				Fall
CPSC237	Data Structures	√				Both
CPSC240	Fundamentals of Game Development			√		Spring
CPSC242	Web Programming		√			Spring
CPSC243	Java Programming					
CPSC252	UNIX Administration and Scripting		√			Spring
CPSC253	Information Technology Systems		√			Both
CPSC256	SQL Programming				√	Fall
CPSC273	Computing Systems Integration		√			Spring
CPSC310	Programming Languages	√				Spring
CPSC311	Computer Networks		√			Fall
CPSC320	2D Game Development			√		Fall
CPSC323	3D Game Development			√		Spring
CPSC325	Introduction to Computer Science Theory					
CPSC328	Network Programming	√				Fall
CPSC330	Introduction to Mobile Arch. and Systems					
CPSC341	Intro to Information Security		√			Fall
CPSC342	Web Technologies					Fall
CPSC343	Operating Systems	√				Spring
CPSC351	Digital Forensics for Computer Scientists					Spring
CPSC354	Software Engineering I	√	√			Both
CPSC355	Software Engineering II	√	√			Both
CPSC356	Introduction to Database Management Systems		√		√	Spring
CPSC361	Finite Automata & Formal Languages					
CPSC363	Interdisciplinary Software Rapid Prototyping			√ <sup>4</sup>		Spring
CPSC402	Advanced Data Structures					Fall
CPSC411	Advanced Networking					
CPSC415	Design & Analysis of Algorithms I					
CPSC421	Web-Based Software Design & Development					
CPSC425	Principles of Compiler Design					
CPSC441	Advanced Information Security					Spring
CPSC445	Introduction to Intelligent Robotics					
CPSC447	Artificial Intelligence I					
CPSC456	Database Management Systems I					
CPSC458	Data Mining and Predictive Analytics I				√	
CPSC459	Introduction to Big Data				√	
CPSC464	Human Computer Interaction					

1 – IT & DS programs require either CPSC123 or CPSC135

2 – GD program requires either CPSC120 or CPSC135

3 – GD program requires either CPSC136 or CPSC220

4 – GD program requires either CPSC363 or Cods355

## CPSC Courses

### Concomitant and Directed General Education Courses (prerequisites follow course description)

Course	Course Description	CS	IT	GD	DS
ARTH27	History of Animation, Game Art and Interactive Media (none)			√	
MATH105 or higher	College Algebra or higher (ALEKS score 46 or higher)	√	√		√
MATH106	Trigonometry (MATH105 or ALEKS score 61 or higher)			√ <sup>7</sup>	
MATH115	Pre-Calculus (ALEKS score 61 or higher)			√ <sup>7</sup>	
MATH140	Applied Statistics ((C or higher in MATH105/105/115/181) or ALEKS score 61 or higher)	√ <sup>5</sup>	√ <sup>6</sup>		
MATH150	Introduction to Biostatistics (MATH105)		√ <sup>6</sup>		
MATH181	Calculus I (MATH 106 or MATH115 or ALEKS score 76 or higher)	√		√ <sup>7</sup>	
MATH250	Applied Regression Analysis (MATH140QL or PSYC/POLI/SOCI200QL or SOCI201 or SPRT/PYED 276QL or BUSN120 or MATH150 or MATH230 or MATH270 or MATH301 with a grade of C or higher)	√ <sup>8</sup>			√
MATH260	Linear Algebra (C or better in MATH224 or CPSC225)	√ <sup>8</sup>			
MATH301	Probability and Statistics I (C or better in (MATH224 or CPSC225) & C or better in MATH283)	√ <sup>5</sup>			
MATH304	Statistical Programming	√ <sup>9</sup>			
MATH325	Applied Time Series Analysis	√ <sup>9</sup>			
MATH330	Theory of Numbers (MATH224 with a "C" or better OR CPSC225 with a "C" or better)	√ <sup>8</sup>			
MATH337	Introduction to Cryptography (MATH224 or CPSC225 with a grade of "C" or better and at least one MATH or CPSC course at the 300 level or higher with a grade of "C")	√ <sup>8</sup>			
Natural Science	Two Natural Science courses for science majors (one lab)	√ <sup>10</sup>			

### Other CPSC Courses (CS, IT, and GD majors can count them in free electives only)

Course	Course Description	Semester Offered
CPSC101	Computer Applications	Both
CPSC102	Computer Graphics	
CPSC111	Computer Forensics	Both

5 - CS program requires either MATH140 or MATH301

6 – IT program requires either MATH140 or MATH150

7 – GD program requires either MATH106 or MATH115 or MATH181

8 – CS program requires one of MATH250 or MAT260 or MAT330 or MAT337

9 – DS program requires either MATH304 or MATH325

10 – CS program requires two “science courses for science majors”; at least one must be a lab; recommended to do a sequence, such as CHEM100 and CHEM102 or BIOL104 and BIOL212. See the link “[Computer Science Program: Science courses for science majors requirement](#)” on the department website, Student Resources