

# Degree & Certificate Requirements

## Programming and Software Development Associate in Applied Science (AAS) PROFESSIONAL TECHNICAL 2022-2023 Degree Requirements

### Major Courses

Course Number	Course Title	Credits	Qtr. Completed	Comments / Substitution
CS 101	Intro to Computers & Information Technology	5		
CS 102	Programming Fundamentals [M/S]	5		
or				
CS& 131	Computer Science I C++ [M/S]	5		
CS 106	Database Systems	5		
CS 117	Computer Ethics	2		
CS 118	Customer Service	3		
CS 150	Computer Security	5		
CS 228	Windows Server	5		
<b>Subtotal</b>		<b>30</b>		

### Major Support

Course Number	Course Title	Credits	Qtr. Completed	Comments / Substitution
CS& 141	Computer Science I Java [M/S]	5		
CS 162	C++2 [M/S]	5		
or				
CS 202	Programming Fundamentals 2 [M/S]	5		
CS 236	Advanced Object Oriented Programming [M/S]	5		
CS 250	HTML5-JavaScript/JQuery	5		
CS 262	Game Programming Design and Development	5		
<b>Select 15 credits from the following:</b>				
CS 123	PC Hardware	5		
or				
CS 127	Windows Configuration	5		
CS 206	Database Design	5		
CS 221	SQL Server Administration	5		
CS 225	SQL Server Programming	5		
CS 260	Data Structures in C++	5		
<b>Subtotal</b>		<b>40</b>		

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## General Education

Course Number	Course Title	Credits	Qtr. Completed	Comments / Substitution
ENGL&101	English Composition I [C]	5		
<b>Mathematics - select 5 credits from the following:</b>				
MATH&141	Precalculus I [M/S] [Q/SR]	5		
MATH&142	Precalculus II [M/S] [Q/SR]	5		
MATH&144	Precalculus I & II [M/S] [Q/SR]	5		
MATH&146	Introduction to Stats [M/S] [Q/SR]	5		
MATH&148	Business Calculus [M/S] [Q/SR]	5		
MATH&151	Calculus I [M/S] [Q/SR]	5		
MATH&152	Calculus II [M/S] [Q/SR]	5		
MATH&153	Calculus III [M/S] [Q/SR]	5		
<b>Psychology or Sociology - select 5 credits from the following:</b>				
PSYC&100	General Psychology [S/B]	5		
Any PSYC course higher than 100		5		
SOC& 101	Intro to Sociology [S/B]	5		
SOC& 201	Social Problems [S/B]	5		
<b>Communication Studies - select 5-6 credits from the following:</b>				
CMST 104	Speech Essentials [C]	3		
CMST 110	Communication Behavior [C]	3		
CMST&210	Interpersonal Communication [C]	5		
CMST&220	Public Speaking [C]	5		
CMST 260	Multicultural Communication [C]	5		

**Subtotal**      **20-21**  
**Total Credits Required**      **90-91**

**Note:**

MATH 094 or MATH 095 or MATH 098 or MATH 050 or MATH 070 or MATH 072 with a minimum grade of 2.0 is a prerequisite for all programming classes. Students must receive a minimum grade of 2.5 in all Computer Science courses.