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|---|-----------|
| General Education Core for Associate of Science (See Page 127) | 27 |
| NOTE: Math requirement must be MATH 188 | |
| ENGL 211 or ENGL 218 requirement - Must take ENGL 211 | |
| Lab Science Requirement included in Chemistry core classes | |
| Additional Mathematics | 7 |
| MATH 189 Calculus II | 4 |
| MATH 231 Discrete Mathematics | 3 |

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|--|---|-----------|
| Computer Science – Core classes | | 32 |
| COSC 118 | Computer Programming Fundamentals I with C++ ** | 3 |
| COSC 190 | Database Concepts and Principles | 3 |
| COSC 218 | Computer Programming Fundamentals II with C++ | 3 |
| COSC 236 | UNIX | 3 |
| COSC 240 | Java Programming | 3 |
| COSC 243 | Web Programming on UNIX Systems | 3 |
| COSC 262 | Data Structures with C++ | 3 |
| COSC 270 | Windows GUI Programming | 3 |
| PHYS 211 | General Physics I *** | 4 |
| PHYS 212 | General Physics II *** | 4 |
| Total credit hours required for this degree | | 66 |

** You need to be able to use a computer, type, create documents, save files, etc. before taking COSC 118. If your computing skills are low you should take COSC 097 concurrently.

*** Read the current catalog of your intended transfer degree institution to take the most appropriate laboratory science courses. Any San Juan College approved laboratory science course may be substituted as deemed appropriate by your computer science advisor. This course also satisfies General Education laboratory science requirement. For information about NM Tech go to www.nmt.edu, NMSU www.nmsu.edu and Fort Lewis www.fortlewis.edu.

Object-oriented Computer Programming Certificate

The Object-Oriented Computer Programming certificate is designed for students interested in computer programming. The object-oriented language C++ is covered in great depth for console and Windows GUI Programming as well as treating the standard Template Library (STL) and Microsoft Foundation Classes (MFC).

| | | Credits |
|---------------------------|---|----------------|
| COSC 118 | Computer Programming Fundamentals I with C++ | 3 |
| COSC 218 | Computer Programming Fundamentals II with C++ | 3 |
| COSC 262 | Data Structures with C++ | 3 |
| COSC 270 | Windows GUI Programming | 3 |
| Total credit hours | | 12 |

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Web Programming Certificate

The Web Programming Certificate provides a strong background with plenty of hands-on experience in structured, procedural, and object-oriented programming languages. The latest versions of C++, Java, and Perl are covered.

| | | Credits |
|---------------------------|---|-----------|
| COSC 118 | Computer Programming Fundamentals I with C++ | 3 |
| COSC 190 | Database Concepts and Principles | 3 |
| COSC 202 | Web Development I | 3 |
| COSC 203 | Web Development II | 3 |
| COSC 218 | Computer Programming Fundamentals II with C++ | 3 |
| COSC 236 | UNIX | 3 |
| COSC 240 | Java Programming | 3 |
| COSC 243 | Web Programming on UNIX Systems | 3 |
| Total Credit Hours | | 24 |

ENGINEERING Associate of Science

It is suggested that students complete the degree as outlined and consider the additional courses accepted through the New Mexico Engineering Transfer Module (see details below degree requirements).

Students must have a minimum 2.0 grade point average and a grade of C or better in any of the courses required for transfer.

| Communications | | Credits |
|--|--|-----------|
| ENGL 111 | Freshman Composition | 3 |
| ENGL 211 | Advanced Composition | 3 |
| Total Communications | | 6 |
| Mathematics | | Credits |
| MATH 188 | Calculus I | 4 |
| MATH 189 | Calculus II | 4 |
| MATH 268 | Calculus III | 4 |
| MATH 282 | Differential Equations | 4 |
| Total Mathematics | | 16 |
| Social and Behavioral Science: | | Credits |
| | Select one course: For appropriate courses see Page 127 | 3 |
| Total Social/Behavioral Science | | 3 |
| Humanities and Fine Arts: | | Credits |
| | Select one course: For appropriate courses see Page 127 | 3 |
| Total Humanities/Fine Arts | | 3 |
| Engineering – Core classes: | | Credits |
| CHEM 111 | General Chemistry I | 4 |
| CHEM 112 | General Chemistry II | 4 |
| COSC 118 | Computer Programming Fundamentals I with C++ | 3 |