

Department of Software Engineering
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Application Domain Description

UNDERGRADUATE

Name of domain: Scientific and Engineering Computing

This domain develops software for use in scientific and engineering endeavors. The applications are typically oriented to mathematical modeling of complex physical systems. Numerical analysis techniques are important for carrying out the computations.

Courses

<i>Course number</i>	<i>Course title</i>	<i>Prerequisites</i>
1016-331	Matrix Algebra	1016-366
0303-503	Simulation	0303-302, 0303-401, 1016-351
Either		
1016-511	Numerical Analysis	1016-305, 1016-306
or		
1016-512	Numerical Linear Algebra	1016-305, 1016-306, 1016-331

Domain Prerequisites

<i>Course number</i>	<i>Course title</i>	
0303-401	Operations Research	1016-331
1016-305	Multivariable Calculus	1016-274 or 1016-283
1016-306	Differential Equations I	1016-253

Considerations

Before you start on an application domain you should work through the impacts on your schedule. There may be a need to coordinate your co-op blocks based on the quarters in which courses are typically offered as well as considering course pre-requisite chains required within the application domain. Before embarking on a minor you should meet with the department sponsoring the minor to review their current minor requirements, register for the minor, and review scheduling strategies.

Last reviewed: September 24, 2007