**DEPARTMENT OF COMPUTER SCIENCE**
**VOLGENAU SCHOOL OF ENGINEERING**
**GEORGE MASON UNIVERSITY**

# SWE 621 - Software Modeling and Architectural Design

Prerequisite: SWE 619 or permission of instructor
             (MSCS Students may substitute CS 540 and CS 571 for SWE 619)

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**Office Hours**: By email or by appointment

**Course Description**:
This is a course in concepts and methods for the architectural design of software systems of sufficient size and complexity to require the effort of several people for many months. Fundamental design concepts and design notations are introduced. Several design methods are presented and compared, with examples of their use. Students will undertake a term project working in small groups addressing the design of a relatively complex software system.

**Required Course Text** (Available from Johnson Center bookstore):
> H. Gomaa, "Software Modeling and Design: UML, Use Cases, Patterns, and Software Architectures", Cambridge University Press, February 2011, ISBN: 9780521764148

**Optional Course Texts** (Available from Johnson Center bookstore):
> Fowler, M. *UML Distilled: Applying the Standard Object Modeling Language*, 3rd edition, Addison-Wesley, 2004.

**Course Material** (Download from course Web site):
https://gmu.blackboard.com/webct/

**Grading**:

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| Term   Project | 56% |
| Small   assignments | 8% |
| Final Exam | 36% |

**Software Laboratory**: The Rational Software Architect CASE tool is available for the SWE 621 term project in the Volgenau School of Engineering labs. Visual Paradigm, MagicDraw, and Visio are also available.