



**Course** Programming: Microsoft Enterprise Applications (2015-2016)

**Code / Version** PROG3050 (101)

**Total Hours** 75

**Credits** 5

**PreRequisite(s)** PROG2370 (100) Object Oriented Game Prog

**CoRequisite(s)**

### Course Description

This course provides a bridge between previous programming courses and Systems Development: Systems Project. It builds on previous courses to teach end-to-end development of realistic business applications. Working with an existing case study, students work in teams to implement a complete, complex enterprise application. The finished application is expected to satisfy all design goals, conform to standards, be thoroughly tested, have complete documentation, and be ready to deploy.

**PLAR Eligible:** Yes

### Course Outcomes

Successful completion of this course will enable the student to:

1. Explain the architecture options for enterprise applications created with current Microsoft products.
2. List the “hard” and “soft” that are needed in a functioning software development team.
3. Explain the “hard” and “soft” skills that individuals bring to a software development team.
4. Organize a functioning software development team.
5. Apply cooperativeness, respectfulness, a sense of responsibility and a professional work ethic to the team development of software.
6. Prepare (i) project, analysis and design documents (ii) project and test plans, and (iii) installation, user and technical documentation using current Microsoft software.
7. Create data stores, standards-compliant programs, unit tests, reports and installers using current Microsoft products.

Essential Employability Skills addressed in this course			Taught	Reinforced	Assessed
Communication	ⁿ	Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience			
	ⁿ	Respond to written, spoken, or visual messages in a manner that ensures effective communication			
Numeracy	ⁿ	Execute mathematical operations accurately			
Critical Thinking and Problem Solving	ⁿ	Apply a systematic approach to solve problems	X	X	X
	ⁿ	Use a variety of thinking skills to anticipate and solve problems	X	X	X
Information Management	ⁿ	Locate, select, organize, and document information using appropriate technology and information systems	X	X	X
	ⁿ	Analyze, evaluate, and apply relevant information from a variety of sources		X	
Interpersonal	ⁿ	Show respect for the diverse opinions, values, belief systems, and contributions of others		X	
	ⁿ	Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals	X	X	X
Personal	ⁿ	Manage the use of time and other resources to complete projects	X	X	X



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Essential Employability Skills addressed in this course		Taught	Reinforced	Assessed
Personal	<sup>n</sup> Take responsibility for one's own actions, decisions, and consequences		X	

## Unit Outcomes

Successful completion of the following units will enable the student to:

### 1.0 Layered Application Development

- 1.1 Describe n-tier application architectures.
- 1.2 Explain cohesion, coupling and separation of concerns.
- 1.3 Describe alternative approaches to designing the business, service, data access and presentation layers of an application.
- 1.4 Create programs with current Microsoft products to implement the business, service, data access and presentation layers of an application.
- 1.5 Produce and execute test plans.
- 1.6 Produce technical and user documentation.

### 2.0 Team Project Initiation

- 2.1 Evaluate the strengths and interests of team members and decide how tasks and roles will be allocated
- 2.2 Create a Team Charter
- 2.3 Create a Project Charter
- 2.4 Create a Statement of Scope
- 2.5 Create a Project Plan
- 2.6 Create weekly status reports and meeting minutes

### 3.0 Team Project Detailed Design

- 3.1 Create a Business Logic and Data Validation Report
- 3.2 Create a Database Design
- 3.3 Create a User Interface Design
- 3.4 Create a Reporting Design
- 3.5 Create a Security Design

### 4.0 Team Project Coding

- 4.1 Create the business application using current Microsoft development tools
- 4.2 Create the business application's relational database using current Microsoft database tools
- 4.3 Create, document, and perform unit and integration tests

### 5.0 Team Project Implementation

- 5.1 Create, document, and perform interactive tests.
- 5.2 Create technical and user documentation, and training materials
- 5.3 Create a CD that can be used to deploy the finished application.
- 5.4 Create a Project ID sheet with deployment instructions
- 5.5 Create presentation materials and demonstrate the finished application

## Required Student Resources



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### Optional Student Resources

Dino Esposito. Programming Microsoft ASP.NET MVC (Feb 2014). Microsoft Press.

Adam Freeman. Pro ASP.NET MVC 5 (Expert's Voice in ASP.Net) (Dec 2013). Apress.

Jennings, Roger. Professional ADO.NET 3.5 with LINQ and the Entity Framework (2009). Wrox: Indianapolis.

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### Evaluation

The minimum passing grade for this course is 55 (D).

In order to successfully complete this course, the student is required to meet the following evaluation criteria:

Team Project Initiation	5.00
Team Project Requirement Analysis	30.00
Team Project Design	25.00
Team Project Implementation	30.00
Team Project Deployment and Documentation	10.00
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	100.00 %

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### Other

Conestoga College is committed to providing academic accommodations for students with documented disabilities. Please contact the Accessibility Services Office.

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**Prepared By** John McKay

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**School** Information Technology

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**Date** 2015-07-21

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