SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE: **.NET Framework**

CODE NO. : **CSD321** **SEMESTER:** **Five**

PROGRAM: **Computer Programmer/Analyst**

AUTHOR: **Willem de Bruyne**

DATE: **June 2006** **PREVIOUS OUTLINE DATED:** **June 2005**

APPROVED:

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DEAN **DATE**

TOTAL CREDITS: **Five**

PREREQUISITE(S): **CSD300**

HOURS/WEEK: **Four Hours per week**

I. COURSE DESCRIPTION:

The course is designed to have the students examine the .NET technology that allows almost any type of application to run in a common environment known as the .NET Framework. Students will look at the rich set of classes and methods while develop applications**.** All learning styles will be addressed by having the students learn by using manuals; lectures; small group work; online referencing, step-by-step exercises, as well as the development of a real life computer system.

The development of the computer system will place the students in a project team and complete the analysis, design, development and the implementation of a computer based system using Visual Basic, Crystal Reports and a database tool to handle file storage. The nature of the projects are real, therefore, there is a Community Value Added component of the course. The instructor will secure a project that will involve a non-profit organization or a small business within Sault Ste. Marie. The students must work closely with the business acting as the primary end - users.

The students have gained a solid background in data base design, programming, and systems analysis and design, as well as working in small teams to complete project work. This course will bring all of these curriculum components together and challenge the students with real life projects that will prepare them for their computer profession. The CSD301 course will continue the course content and community based project in semester six.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Major Term Project.

Potential Elements of the Performance:

- Create Service Request
- Develop the problem statement
- Establish priorities
- Establish a method to study the present system
- Organize the products of the study
- Review existing procedures
- Observing current operations
- Perform interviews and walkthroughs

- Create data flow diagrams
- Define the prototype
- Build prototyped reports, screens, functions, controls and any interfaces.
- Define the database structure and contents, from table definitions and keys identified, to attributes.
- Ensure data normalization
- Describe types of data validation and verification techniques
- Identify different reporting types
- Identify output formats
- Create the required windows interfaces.
- Design any required coding techniques, code each object and any functions and modules.
- Develop and enter test data
- Establish version controls
- Establish documentation procedures, and creation of user guide
- Identify the hardware the system will eventually reside on.
- Monitor team member progress.
- Establish milestones and monitor progress.
- Train end users
- Ensure operating acceptance
- Establish responsibilities for making revisions.
- Establish backup procedures.

2. Review Classes

Potential Elements of the Performance:

- Value types and reference types
- Namespaces
- Object-Oriented design
- Namespaces
- Creating Classes
- Methods
- Public and Private Member access
- Properties
- Constructors and Destructors
- Using UML to describe Classes

3. Exceptions and User Interfaces

Potential Elements of the Performance:

- User Interface Design
- Input validation
- Listview Control
- TreeView Control
- Structured Exception Handling

4. ADO.NET Databases

Potential Elements of the Performance:

- Data Sources and Connections
- DataSets
- Using Data-Bound Controls
- Navigating, Adding, and Removing Rows
- Writing Code for DataTables
- Use the Query Builder
- Filling Lists and Combo Boxes
- Adding Expressions to Datasets
- Parameterized Queries

5. DataGrid, DataView, and ListView

Potential Elements of the Performance:

- DataGrid Control
- Table Styles and Column Styles
- DataGrid Events
- Updating a DataGrid
- DataViews and ListViews
- Using a DataView Control
- Filling a ListView Control
- Command Objects
- Inserting Table Rows
- Updating Table Rows
- Deleting Table Rows

6. Databases with Related Tables

Potential Elements of the Performance:

- Connecting to SQL Server Databases
- Installing SQL Server Desktop Engine (MSDE)
- Cascading Deletes and Updates
- Creating SQL Queries that Join Tables
- Database Constraints
- Primary Key Constraints
- Referential Integrity Constraints
- Column Check Constraints
- DataGrid Control with Related Tables
- Displaying Parent and Child Tables in the same DataGrid
- GetChildRows Method
- GetParentRow Method
- Using Query Builder to Join Tables

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Advanced Visual Basic .NET 3rd Ed., Kip Irvine
Scott Jones Publishing
Instructor Handouts and notes

V. EVALUATION PROCESS/GRADING SYSTEM:

The following semester grades will be assigned to students:

Final Test	**@ 20%**
Work Ethic/Participation	**@ 10%**
Assignments	**@ 30%**
Major Project	**@ 40%**
	100%

Grade	**Definition**	*Grade Point Equivalent*
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

CR (Credit) Credit for diploma requirements has been awarded.

S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

The professor reserves the right to adjust the mark up or down 5% based on attendance, participation, leadership, creativity and whether there is an improving trend.

A minimum of **80% attendance** required in the labs and lectures.

- Students must complete and pass both the test and assignment portion of the course in order to pass the entire course.
- All Assignments must be completed satisfactorily to complete the course.
- Late hand in penalties will be 5% per day. Assignments will not be accepted past one week late unless there are extenuating and legitimate circumstances.
- Makeup Tests are at the discretion of the instructor and will be assigned a maximum grade of 50%.
- The professor reserves the right to adjust the number of tests, practical tests and quizzes based on unforeseen circumstances. The students will be given sufficient notice to any changes and the reasons thereof.
- A student who is absent for 3 or more times without any valid reason or effort to resolve the problem will result in action taken.

NOTE: If action is to be taken, it will range from marks being deducted to a maximum of removal from the course.

Eligibility for X Grades/Upgrading of Incompletes When a student's course work is incomplete or final grade is below 50%, there is the possibility of upgrading to a pass when a student meets all of the following criteria: The student's attendance has been satisfactory. An overall average of at least 50% has been achieved. The student has not had a failing grade in all of the theory tests taken. The student has made reasonable efforts to participate in class and complete assignments.

Note: The opportunity for an X grade is usually reserved for those with extenuating circumstances. The nature of the upgrading requirements will be determined by the instructor and may involve one or more of the following: completion of existing labs and assignments, completion of additional assignments, re-testing on individual parts of the course or a comprehensive test on the entire course.

Labs:
Lab activities represent a very important component of this course in which practical 'hands-on' skills will be developed. Because of this, attendance is mandatory and the satisfactory completion of all lab activities is required. Evaluation of lab work in-class will be done. It is the student's responsibility to discuss absences from regularly scheduled labs with the instructor so that alternate arrangements (where possible) can be made to complete the lab requirements.

Attendance:
Attendance is mandatory. Absenteeism will affect a student's ability to succeed in this course. Absences due to medical or other unavoidable circumstances should be discussed with the instructor, so that remedial activities can be scheduled. Absenteeism for tests can only be allowed for medical reasons and should be authorized ahead of time. Unauthorized absences could result in a zero grade being assigned.

VI. SPECIAL NOTES:

Special Needs:
If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 2493 so that support services can be arranged for you.

Retention of Course Outlines:
It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:
Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:
The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean’s secretary. Students will be required to provide a transcript and course outline related to the course in question.