



**I. COURSE DESCRIPTION:**

The power of GIS lays in the automation of repetitive and complex GIS operations to save time, produce consistent results and present clients with products and interfaces usable with limited GIS knowledge. Upon successful completion of this course the student will have developed advanced GIS Visual Basic programming skills. Specific attention will be paid to Visual Basic for Applications within ArcGIS and ArcObjects.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

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

**1. Customize ArcGIS with Visual Basic**Potential Elements of the Performance:

- Understand the connection of ArcObjects and VB to ArcGIS
- Understand the role of UIControls
- Understand object modeling terminology specific to GIS
- Read UML diagrams
- Read ArcObjects object models
- Develop Visual Basic code to customize ArcGIS
- Work with SQL in ArcGIS

**III. TOPICS:**

1. Customize ArcGIS with Visual Basic
  - The connection of ArcObjects and VB to ArcGIS
  - UIControls
  - GIS object modeling terminology
  - UML diagrams
  - ArcObjects object models
  - Customizing ArcGIS with Visual Basic and ArcObjects
  - Several tutorials and exercises exploring the use of VBA and ArcObjects within ArcGIS

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

Burke, R. 2003. Getting to Know ArcObjects. ESRI Press.

**V. EVALUATION PROCESS/GRADING SYSTEM:**

Labs (4)	60%
Tests	<u>40%</u>
Total	100%

**Note: Students must achieve a mark of at least 50% on the Test components to pass the course.**

Note: All assignments are due at the beginning of class on the scheduled due date, or will be subject to a 10% penalty. Each subsequent day that the assignment is not handed in by 8:30am is an additional 10% deduction.

The following semester grades will be assigned to students:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	
A	80 – 89%	4.00
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W	Student has withdrawn from the course without academic penalty.	

**VI. SPECIAL NOTES:**Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

Course Outline:

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.

**VI. COURSE OUTLINE ADDENDUM:**

The provisions contained in the addendum located on the portal form part of this course outline.