



**I. COURSE DESCRIPTION:**

This course is develops the students understanding of the issues associated with managing software and data. The student will study a variety of environments and the software issues such as legal requirements to save data, the rights to privacy and the freedom of information act. The student will also study the software issues of licensing, copyright, and third party liability. Students will also learn database concepts, data modelling and data normalization techniques. They will investigate and use database and web technologies in the creation, implementation and use of support based systems. They will use SQL to create, maintain and create queries from help desk / call centre systems.

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

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

**1. Review the issues associated with the storage of computer data and the use of software.**

***Potential elements of the performance:***

- Discuss the legal requirements for organizations to save data.
- Research the Freedom of Information Act and how it can impact on storage of information.
- Discuss the rights to privacy of information, and how it can impact on how an organization stores data.
- Review the issues of copyright associated with computer software, and how it affects the organization.
- Review the various licensing techniques used with software products, and the situations in which they might be used.
- Discuss the various types of maintenance agreements that can be reached with software vendors, and the general process of upgrading software products.

***This learning outcome will constitute 10 % of the course's grade. (Possible weighting strategy)***

**2. Explain what data base design concepts are and how they work.**

***Potential elements of the performance:***

- Describe and appreciate the process of data and database design and why it is so important in support systems.
- Describe and apply various data modelling techniques in creating a simple database (such as entity relationships, semantic objects and data normalization).
- Define and describe various various forms of data and how they relate to each other.

***This learning outcome will constitute 15 % of the course's grade. (Possible weighting strategy)***

**3. Research and evaluate a variety of support databases such as help-desk and call centre systems.**

***Potential elements of the performance:***

- Define and describe the characteristics of the various support tools.
- Research and obtain related information on a variety of products currently being used.
- Evaluate and prepare a formal presentation on how these tools work.

***This learning outcome will constitute 20 % of the course's grade. (Possible weighting strategy)***

**4. Design a simple support system using various data base modelling and normalization techniques.**

***Potential elements of the performance:***

- Develop and implement in a team atmosphere, various models of data and databases.
- Describe and apply the process of modelling.
- Design the appropriate tables and their data definitions.

***This learning outcome will constitute 15 % of the course's grade. (Possible weighting strategy)***

5. **Build a simple database and use SQL and web technologies to extract and display relevant information from it.**

***Potential elements of the performance:***

- Build the appropriate tables and their associated keys and definitions.
- Build the appropriate forms and code for data entry.
- Populate the tables with a reasonable representation of data.
- Use SQL queries to extract data from the tables.

***This learning outcome will constitute 25 % of the course's grade. (Possible weighting strategy)***

6. **Research and evaluate various emerging technologies such as e-commerce, ODBC, Data Warehousing, Intranet/Internet Databases.**

***Potential elements of the performance:***

- Research the impact OF E-COMMERCE to the support role.
- Research how Intranet and Internet Database applications work.
- Describe what ODBC is and how it works.
- Describe various improvements in technology such as OBJECTS, Database Warehousing.

***This learning outcome will constitute 15 % of the course's grade. (Possible weighting strategy)***

**III. TOPICS TO BE COVERED**

- **Note:** These topics sometimes overlap several areas of skill development and are not necessarily intended to be explored in isolated learning units or in the order below.

	<b>SPECIFIC TOPICS</b>	<b>APPROXIMATE TIME</b>
1.	Storage Issues	1 WEEK
2.	Database Concepts	2 WEEKS
3.	Support Systems	4 WEEKS
4.	Database Design	3 WEEKS
5.	SQL and Web Programming	4 WEEKS
6.	Emerging Data Management Technologies	2 WEEKS

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

“Data Base with Web Applications” by Riccardi, Prentice Hall, ISBN: 0-20-17438-6

**ADDITIONAL RESOURCE MATERIALS**

Additional reference material will either be given to the students or placed in the library for the student's use.

Handouts, Guidance, and Material as it relates to the individual topics.

Use of research modes such as INTERNET, Library Data Base Searches, and articles.

**REQUIRED INDIVIDUAL STUDENT RESOURCES**

Participation & Teamwork    Box of Disks  
Individual Research         Documentation

**V. EVALUATION METHODS:**

Tests & Quizzes	40%
Assignments and Lab Work	60%

The tentative breakdown is as follows:

2	Formal Theory Tests	at 15 % each
2	Quizzes (best 2 out of 3)	at 5 % each
5	Mini Participation Assignments	at 4 % each
4	Minor Assignments	at 5 % each
2	Major Assignments	at 10 % each

Some minor modifications to the above percentages may be necessary. 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. Students must have passing grades in the tests and assignments portion to pass the entire course.

\* 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.

- \* 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.

### **GRADING DETAILS**

The following semester grades will be assigned to students in postsecondary courses:

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

**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 493 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.

**PLAGARISM:**

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.

**TESTS**

Written tests will be conducted as deemed necessary; generally at the end of each block of work. They will be announced about one week in advance. Quizzes may be conducted without advance warning.

**ASSIGNMENTS**

Assignments not completed by the assigned due-date will be penalised by 5% per day late. All assignments must be completed satisfactorily to complete the course.

**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.