

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



**COURSE OUTLINE**

**COURSE TITLE:** Databases and Spreadsheets

**CODE NO. :** CSA102 **SEMESTER:** 2

**PROGRAM:** All Computer Programs

**AUTHOR:** M.VanLandeghem

**DATE:** Jan 2010 **PREVIOUS OUTLINE DATED:** Jan 2009

**APPROVED:** "B. Punch"

\_\_\_\_\_  
**CHAIR**

\_\_\_\_\_  
**DATE**

**TOTAL CREDITS:** 4

**PREREQUISITE(S):**

**HOURS/WEEK:** 4

Copyright ©2009 The Sault College of Applied Arts & Technology  
*Reproduction of this document by any means, in whole or in part, without prior  
written permission of Sault College of Applied Arts & Technology is prohibited.  
For additional information, please contact Brian Punch, Chair  
School of Natural Environment/Outdoor Studies & Technology Programs  
(705) 759-2554, Ext. 2681*

**I. COURSE DESCRIPTION :**

- A. In this course students will learn the basic to intermediate features of Microsoft Excel. Students will learn to develop spreadsheet applications involving formulas and statistical charting.
- B. A major component of this course will be to focus on database technologies. Students will learn database concepts in order to develop functional database systems. Students will be introduced to system design, table structures, forms, queries and reports in order to develop database applications.

In addition, students will be introduced to the basic SQL structure to generate queries from standard database applications.

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

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

**Microsoft Excel 2007****1. Demonstrate an understanding of spreadsheet concepts, terminology and screen layouts.****Potential elements of the performance:**

- Learn the basic structure of a spreadsheet – rows, columns, cells
- Learn why spreadsheet applications are used
- Learn to use screen menus, options and toolbars
- Open and save a workbook
- Enter labels and values
- Name and move a sheet
- Preview and print a worksheet

**2. Demonstrate an understanding of how to use formulas and perform calculations.****Potential elements of performance:**

- Plan and design a worksheet
- Edit cell entries
- Enter numbers and formulas
- Use formula functions
- Copy and move cell contents
- Absolute and relative addressing
- Copy formulas with both relative and absolute cell references

**3. Demonstrate an understanding of how to format a worksheet.**

Potential elements of performance:

- Format values
- Use fonts and font sizes
- Change attributes and alignment
- Adjust column widths
- Use AUTOFORMAT
- Insert and delete columns and rows
- Apply colours, patterns, and borders
- Use conditional formatting
- Check Spelling

**4 . Demonstrate an understanding of how to create and edit charts.**

Potential elements of performance:

- Plan and design a chart
- Create a Pie, Column and Bar chart
- Edit and make changes to charts
- Annotate and draw on a chart
- Preview and print a chart

**5 . Demonstrate an understanding of advanced features of formulas and functions.**

Potential elements of performance:

- Create a formula with several operators
- Use names in a formula
- Generate multiple totals with AutoSum
- Use dates in calculations
- Build a conditional formula with the IF function
- Use statistical functions
- Calculate and print formula contents

**6. Demonstrate an understanding of managing workbooks and preparing them for the WEB.**

Potential elements of performance

- Freeze columns and rows
- Insert and delete worksheets
- Consolidate worksheets
- Hide and protect worksheet areas
- Control page breaks and page numbering
- Create a hyperlink between Excel files
- Save an Excel file as a Web page

**7. Demonstrate an understanding of automating worksheet tasks.**

Potential elements of performance

- Plan, record, run and edit a macro
- Use shortcut keys with macros
- Use the Personal Macro Workbook
- As a macro as a menu item
- Create a toolbar for macros

**8. Demonstrate an understanding of lists.**

Potential elements of performance

- Plan and create a list
- Add records with the data form
- Find records
- Delete records
- Sort a list on one or more fields
- Print a list

**Microsoft Access 2007**

**1. Demonstrate an understanding of database concepts, terminology and screen layouts.**

Potential elements of performance

- Understand Relational database structure and setup
- Add, delete and change records in a table
- Open a database and work with the database window
- Preview and print a datasheet

**2. Demonstrate the use of tables and queries.**

Potential elements of performance

- Organize fields
- Plan, create and modify tables
- Format a datasheet
- Sort records and find data
- Filter records
- Create and modify queries

**3. Demonstrate the use of forms and reports**

Potential elements of performance

- Plan and create a form
- Move and resize controls
- Modify labels
- Use text boxes for calculations
- Modify tab order
- Enter, edit and print records
- Insert an image
- Plan and create a report
- Use group sections
- Change sort order
- Add calculations
- Align and format controls
- Change page layout

**4. Demonstrate the ability to modify database structure.**

Potential elements of performance

- Understand relational database components
- Create related tables using one-to-many relationships
- Create lookup fields
- Modify text, number, currency and date fields
- Modify field validation properties

**5. Demonstrate the ability to create multiple table queries**

Potential elements of performance

- Build select queries
- Sort a query on multiple fields
- Develop AND and OR criteria
- Create calculated fields
- Build summary and crosstab queries

**6. Demonstrate the ability to create forms and subforms.**

Potential elements of performance

- Understand the form/subform relationship
- Create subforms using both the Form Wizard and queries
- Modify subforms
- Add a combo box for data entry and to find records
- Add option groups
- Add command buttons

**7. Demonstrate an understanding of basic SQL commands.**

Potential elements of performance

- Define and use SQL with Access
- Create SQL standard queries using single and multiple tables
- Update, delete and change records
- Perform calculations using SQL
- Use SQL to sort records

**III. TOPICS**

1. Basic Spreadsheet Concepts
2. Using Calculations and Formulas
3. Create and Edit Charts
4. Introduction to Database Concepts
5. Working with Tables, Forms, Queries and Reports
6. Basic SQL Command Structure

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

Internet Resource

Instructor Supplied Resources/Web based material

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

9 Assignments	@ 2%	18%
1 Test	@ 15%	15%

**Access**

7 Assignment	@ 1%	7%
7 Assignments	@ 2%	14%
1 Test	@ 15%	15%

**SQL**

3 Assignments	@ 2%	6%
1 Test	@ 5%	5%

**Project**

		<u>20%</u>
	TOTAL	100%

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.

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.

- Successful completion of this course is greatly improved with a disciplined approach and consistent attendance to both the lab and lecture / theory classes.
- Students must complete and pass both the test and assignment portion of the course in order to pass the entire courses.
- 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. It is not acceptable to miss classes and / or labs without a reasonable explanation.
- There will also be a lab exercise each and every week that will be due during that lab period. In the event that it cannot be completed during lab time, you will be allowed to complete it as a homework exercise and demonstrate it the following lab with no penalty.



**ATTENDANCE:**

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 professor. Students are required to be in class on time and attendance will be taken within the first five minutes of class. A missed class will result in a penalty in your marks unless you have discussed your absence with the professor as described above. The penalty depends on course hours and will be applied as follows:

<b>Course Hours</b>	<b>Deduction</b>
5 hrs/week (75 hrs)	1% per hour
4 hrs/week (60 hrs)	1.5% per hour
3 hrs/week (45 hrs)	2% per hour
2 hrs/week (30 hrs)	3% per hour

The following semester grades will be assigned to students:

<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:****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.

**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.

**Prior Learning Assessment:**

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question. Please refer to the Student Academic Calendar of Events for the deadline date by which application must be made for advance standing.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.

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

**Disability Services:**

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

**Communication:**

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

**Plagiarism:**

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. A professor/instructor may assign a sanction as defined below, or make recommendations to the Academic Chair for disposition of the matter. The professor/instructor may (i) issue a verbal reprimand, (ii) make an assignment of a lower grade with explanation, (iii) require additional academic assignments and issue a lower grade upon completion to the maximum grade “C”, (iv) make an automatic assignment of a failing grade, (v) recommend to the Chair dismissal from the course with the assignment of a failing grade. 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.

**Student Portal:**

The Sault College portal allows you to view all your student information in one place. **mysaultcollege** gives you personalized access to online resources seven days a week from your home or school computer. Single log-in access allows you to see your personal and financial information, timetable, grades, records of achievement, unofficial transcript, and outstanding obligations. Announcements, news, the academic calendar of events, class cancellations, your learning management system (LMS), and much more are also accessible through the student portal. Go to <https://my.saultcollege.ca>.

**Electronic Devices in the Classroom:**

Students who wish to use electronic devices in the classroom will seek permission of the faculty member before proceeding to record instruction. With the exception of issues related to accommodations of disability, the decision to approve or refuse the request is the responsibility of the faculty member. Recorded classroom instruction will be used only for personal use and will not be used for any other purpose. Recorded classroom instruction will be destroyed at the end of the course. To ensure this, the student is required to return all copies of recorded material to the faculty member by the last day of class in the semester. Where the use of an electronic device has been approved, the student agrees that materials recorded are for his/her use only, are not for distribution, and are the sole property of the College.

**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. *It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.>*

**Tuition Default:**

Students who have defaulted on the payment of tuition (tuition has not been paid in full, payments were not deferred or payment plan not honoured) as of the first week of *March* will be removed from placement and clinical activities. This may result in loss of mandatory hours or incomplete course work. Sault College will not be responsible for incomplete hours or outcomes that are not achieved or any other academic requirement not met as of the result of tuition default.

Students are encouraged to communicate with Financial Services with regard to the status of their tuition prior to this deadline to ensure that their financial status does not interfere with academic progress.

**Special Notes – Additional**

In order to pass this course the student must obtain an overall test/quiz average of 50% or better.

Assignments must be submitted by the due date according to the specifications of the instructor. Late assignments will normally be given a mark of zero. Late assignments will only be marked at the discretion of the instructor in cases where there were extenuating circumstances. Ask for permission from your instructor to hand assignments in late before the due date

**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:

1. The student's attendance has been good.
2. An overall average of at least 45% has been achieved by semester's end.
3. The student has made reasonable efforts to participate in class and maintain the recommended schedule for assigned activities.

The nature of the upgrading requirements will be determined by the instructor and may involve re-testing and/or additional lab assignments