

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: Data Analysis and Presentation

CODE NO. : NET 150 **SEMESTER:** 2

PROGRAM: Natural Environment Technician/Technologist

AUTHOR: Rob Routledge

DATE: June 2015 **PREVIOUS OUTLINE DATED:** Jan. 2015

APPROVED:

Colin Kirkwood	2015/2016
_____	_____
Dean	DATE

TOTAL CREDITS: 2

PREREQUISITE(S): NONE

HOURS/WEEK: 2

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**For additional information, please contact Colin Kirkwood,
Dean, Environment, Technology & Business
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I. COURSE DESCRIPTION:

This course provides students with an introduction to statistics and experience using the spreadsheet program Microsoft Excel to enter and manipulate data, generate descriptive statistics, create tables and graphs, and conduct basic inferential statistics. Students will also be introduced to the database program Microsoft Access. In addition, students will learn how to use PowerPoint as an effective visual communication tool.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will:

1. **Demonstrate ability to use PowerPoint to design an effective slide show and large format poster presentation.**

Potential Elements of the Performance:

- Discuss the advantages and limitations of using a PowerPoint slide show as an effective visual communication tool
- Define criteria which contribute to an effective poster presentation and PowerPoint slide show and establish “rules” to guide their preparation
- Use text, images, charts, etc. to create an effective PowerPoint slide show and poster presentation using established “rules”

2. **Demonstrate ability to use spreadsheet and database programs (Microsoft Excel and Access) for the purposes of data entry, organization, and analysis.**

Potential Elements of the Performance:

- Demonstrate ability to:
 - set up an Excel spreadsheet to accommodate data entry (e.g., create column headers to organize data into discrete records, create dropdown lists, embed data validation)
 - utilize the data form feature to enter additional data to a spreadsheet
 - utilize the database capabilities of Microsoft Excel to sort, filter and organize raw data sets in a meaningful way
- Demonstrate ability to use the data analysis tools available in Microsoft Excel
 - use descriptive statistics to explore data

- use basic parametric and non-parametric inferential statistics
- Prepare graphs and tables using Microsoft Excel to summarize descriptive data and statistical analyses
- Demonstrate knowledge of Microsoft Access by:
 - defining terms such as field, record, table, database, primary key, etc.
 - identifying the components of the Microsoft Access window
 - creating a blank database (create and save a table in Datasheet view, enter field names and records in a table datasheet)
- Demonstrate proficiency in measurement unit conversions (i.e., within and between english and metric systems)

3. **Demonstrate knowledge of elementary statistics and associated terminology.**

Potential Elements of the Performance:

- Define and distinguish between qualitative and quantitative data
- Describe the differences and strengths and weaknesses among the four levels of measurement: nominal (categorical), ordinal (rank order), interval, and ratio
- Define and distinguish between discrete and continuous variables
- Understand how descriptive statistics can be used to explore field data:
 - measures of central tendency (mean, median, mode)
 - measures of spread (range, standard deviation, variance)
 - skewness
 - tables and graphs (e.g., frequencies or percentages)
 - associations between two or more variables (contingency tables for categorical variables; scatterplots and correlation for quantitative variables)
- Understand concepts underlying inferential statistics
 - normal distribution
 - confidence intervals
 - standard error of the mean
 - hypothesis tests (e.g., t-test, Chi-squared, ANOVA)
 - regression analysis

III. TOPICS:

- measurement unit conversions
- statistical terminology
- qualitative and quantitative data
- levels of measurement (nominal, ordinal, interval, and ratio)
- discrete and continuous variables
- descriptive statistics
- inferential statistics
- data entry and organization
- tabular and visual display of data
- poster presentation
- Microsoft PowerPoint
- Microsoft Access
- Microsoft Excel

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- USB flash drive
- All reference material will be placed on LMS

V. EVALUATION PROCESS/GRADING SYSTEM:

- Tests 30%
- Assignments 70%

The following semester grades will be assigned to students:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
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.

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

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.

Conduct:

- Any student who in the judgement of the instructor behaves inappropriately in scheduled classes or copies the work of another student without the instructor's permission, will be subject to all the terms and conditions in the student's rights and responsibilities hand book and may after, reviewing the situation with the instructor, be asked to leave the course with an F grade.

Evaluation:

- To be eligible to make up for a missed test or quiz, the instructor must be contacted via phone or email ASAP to discuss make-up options. Students not contacting the instructor prior to a missed class or within a day afterwards will get a zero except under extenuating circumstances; e.g., doctor's note.
- Late assignments will only be accepted within 24 hours past the due date and will be penalized 20% except under extenuating circumstances, e.g., doctor's note
- The instructor cannot guarantee responses to questions in the 24-hour period prior to assignment deadlines and tests via phone message or email.

VII. COURSE OUTLINE ADDENDUM:

1. Course Outline Amendments:
The faculty member reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.
2. 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.
3. 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 Key Dates Calendar 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. Student Services, located in E1101, can provide information regarding the Prior Learning Assessment and Recognition policy or it can be viewed on the student portal.

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

4. 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, in addition to announcements, news, academic calendar of events, class cancellations, your learning management system (LMS), and much more. Go to <https://my.saultcollege.ca>.
5. Communication:
The College considers Desire2Learn (D2L) 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 this Learning Management System (LMS) communication tool.

6. Accessibility 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 the Accessibility Services office. Visit Room E1101, call Ext. 2703 or email studentsupport@saultcollege.ca so that support services can be arranged for you.

7. Audio and Video Recording 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. Students with disabilities who require audio or visual recording devices in the classroom as an accommodation will receive approval from their counsellor once the Audio and Video Recording Devices in the Classroom Policy has been reviewed by the student. Recorded classroom instruction will be used only for individual academic use and will not be used for any other purpose. Recordings may only be used for individual study of materials presented during class and may not be published or distributed. Intentional misuse of audio and video recordings or intentional misrepresentation when requesting the use of a device for recording shall constitute a violation of this policy and laws protecting intellectual property.

8. Academic Dishonesty:

Students should refer to the definition of “academic dishonesty” in the Student Code of Conduct. Students who engage in academic dishonesty will be issued a sanction under the Student Code of Conduct which could lead to and include expulsion from the course/program. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, students must use a documentation format for referencing source material.

9. 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 November (fall semester courses), first week of March (winter semester courses) or first week of June (summer semester courses) will be removed from placement and clinical activities due to liability issues. 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.