# COURSE SYLLABUS

Introduction to Data Mining

CAP2762, Section # 1720

Online Instruction

0625: Fall, 2023

View [How to Be a Successful Student](https://go.spcollege.edu/Addendum/) which provides details about success factors and links to the most current version of fluid information, such as the academic calendar.

## WELCOME

Please read the syllabus in its entirety prior to beginning the course.

After taking the syllabus quiz with a score of 100%, the first module will be available.

We will be using an Excel like tool: JMP Pro and R for several assignments.

R-Studio is open source. Download using the link provided below:

<https://rstudio.com/>

If you have already installed R-Studio on your computer there is no need to reinstall.

Good luck and enjoy the course.

Prof Ellis

## INSTRUCTOR

**Name:** Dawn Ellis

**Email:** Please e-mail via MyCourses for all inquiries.

**Phone:** 727-614-7025

**Office and Online Hours:** Hours are available on my SPC Faculty Page

**Office Location:** Clearwater Campus, ES Building, Office 213B

**Instructor Webpage:**[Dawn Ellis](https://web.spcollege.edu/instructors/id/Ellis.Dawn)

## ACADEMIC DEPARTMENT

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### Website

[College of Computers and Information Technology Website](https://go.spcollege.edu/CCIT/)

## COURSE INFORMATION

### Course Description

This course prepares students for the application of selected data mining methods, which are used for the retrieval and extraction of relevant and potentially useful information or patterns, stored in large databases, data warehouses, and other sources of information.

### Course Goals & Objectives

1. The student will identify the basic ideas and principles of data mining by:

a. describing the steps for the process of knowledge discovery in databases.

b. describing problems for predictive data mining.

c. describing problems for descriptive data mining.

2. The student will transform different types of data for analysis by:

a. describing the different types of data sets.

b. applying data cleaning techniques to data sets.

c. cleansing data through traditional preprocessing techniques,

3. The student will apply descriptive data mining algorithms by:

a. comparing and contrasting clustering and association techniques.

b. implementing the k-means clustering algorithm.

4. The student will apply predictive data mining algorithms by:

a. comparing and contrasting classification and regression techniques.

b. implementing a simple classifier

5. The student will interpret and present the results of the data mining process by:

a. determining the validity of a model.

b. estimating a confidence level for accuracy.

c. describing the concept of over and underfitting.

Prerequisites

CTS2450 with a minimum grade of C.

### Availability of Course Content

After taking the syllabus quiz with a score of 100%, all course modules will be open. Although you may work ahead, you may not work behind. If there is any reason you are going to not make an assignment deadline, please talk with me first.

### Proctored Testing

Not required for this course.

## REQUIRED TEXTBOOK & OTHER RESOURCE INFORMATION

Required Textbook

Business Analytics MindTap Cengage Unlimited | Edition: 4th 2021

Publisher Information: Cengage

ISBN: 9780357131800 (instant access)

View the [Textbooks](https://go.spcollege.edu/textbooks/) site.

View the [Learning Resources](http://www.spcollege.edu/current-students/learning-resources) site.

## LEARNER SUPPORT

Answers to questions regarding accommodations may be found at the [Accessibility Services](https://go.spcollege.edu/Accessibility/) site. If you are in need of accommodations, please contact a campus [Accessibility Services Coordinator](https://go.spcollege.edu/Contact-AccessibilityServices/). If you need a Sign Language Interpreter, complete the form at [web.spcollege.edu/survey/664](https://web.spcollege.edu/survey/664).

View the [Learning Resources](http://www.spcollege.edu/current-students/learning-resources) site.

View the [Learning Center Tutoring Schedules](http://spcollege.libguides.com/c.php?g=609501&p=4230937).

View the [Student Services](https://go.spcollege.edu/services/) site.

As an SPC student, it's vital that you know Titans Care. You can access resources through SPCâ€™s Student Assistance Program (SAP) (https://mycoursessupport.spcollege.edu/student-assistance-program), a collaborative resource for students with mental health or general life issues. SAP provides help and education in suicide prevention, mental health, substance abuse awareness and more. It is SPCâ€™s belief that supporting mental wellness is everyoneâ€™s charge and that one loss as a result of substance abuse, mental illness, or suicide is one too many. If you or a loved one are considering suicide, please call the National Suicide Prevention Lifeline at 1-800-273-8255.

## IMPORTANT DATES

**Course Dates:** October 9, 2023 - December 7, 2023

**Drop Date:** View the [Academic Calendar](https://go.spcollege.edu/calendar/).

**Withdrawal Date:** View the [Academic Calendar](https://go.spcollege.edu/calendar/).

**Financial Aid Dates:** View the [Financial Aid Dates](https://go.spcollege.edu/fadates/).

## ATTENDANCE

View the college-wide attendance policy included in [How to Be a Successful Student](https://go.spcollege.edu/Addendum/).

The policy notes that each instructor is to exercise professional judgment and define "active participation" in class (and therefore "attendance"), and publish that definition in each syllabus.

For this class, attendance is defined as follows. Week 1 attendance is based on the completion of the syllabus acceptance quiz and your introductory post. Week 2 attendance is based on the completion of module 1 activities. To be considered actively participating at the 60% mark, you must have an average of 68% or higher.

## GRADING

Each module contains a variety of assignments including, quizzes, practical application of the skills via MindTap, dropbox assignments, and discussions. Each assignment has an assigned point value and that value is listed in the assignment itself and within the course content. A breakdown of course points by the module are below.

This is subject to change.

|  |  |
| --- | --- |
| **Module** | **Available Points** |
| Module 1 | 100 points |
| Module 2 | 25 points |
| Module 3 | 25 points |
| Module 4 | 110 points |
| Module 5 | 75 points |
| Module 6 | 75 points |
| Module 7 | 75 points |
| Module 8 | 50 points |
| **Total Course Points** | **535 points** |

### How to check your Grades and review feedback:

* [Checking Your Grades](http://mycoursessupport.spcollege.edu/checking-your-grades)
* [Reviewing Dropbox Submissions](http://mycoursessupport.spcollege.edu/reviewing-a-dropbox-submission)
* [Checking Discussion Grades and Feedback](http://mycoursessupport.spcollege.edu/checking-discussion-grades-feedback)
* [Reviewing Quiz Submissions](http://mycoursessupport.spcollege.edu/reviewing-a-quiz)

### Grading Scale

|  |  |  |
| --- | --- | --- |
| **Grade** | **Percentage** | **Points** |
| A | 90-100% | 482 - 535 points |
| B | 80-89% | 428 - 481 points |
| C | 70-79% | 375 - 427 points |
| D | 60-69% | 321 - 374 points |
| F | 0-59% | 0 - 320 points |

## ASSIGNMENTS

This course has seven modules, each containing a number of assignments, including readings, MindTap activities, Discussions, Quizzes, and R/Python assignments. Most assignments are due Monday evening, no later than 11:59 p.m. See the [Assignment Schedule](file:///C%3A%5Ccontent%5Cenforced%5C235749-OFR_CAP2762_3739_0570%5CFaculty%20Resources%5CAssignment%20Schedule.html) for specifics.

## STUDENTS' EXPECTATIONS AND INSTRUCTOR'S EXPECTATIONS

### Student Expectations

* If there are problems with the completion of the assignment by the appointed date, the student must discuss the matter with the instructor PRIOR to the due date.
* It is the student's responsibility to follow the schedule of class assignments.
* Late work will not be accepted, graded, or reviewed unless permission is granted PRIOR to assignment due dates. In the event an emergency occurs, please contact your instructor regarding college policy for submitting documentation.

### Instructor Expectations

* I will provide meaningful activities to develop your technical and software skills.
* I will be available to you if you have questions or concerns.
* I will respond to emails with 1 school day. If I anticipate a delay in communications, I will indicate so in an email prior to my absence.
* I will evaluate your coursework within 5 school days after the due date of an assignment.
* As the field of computers and information technology is vast and constantly changing, I will be your fellow learner.

Required Interaction (e.g., expectations on communication between and among students and the instructor).

### Participation, Conduct, and Netiquette

SPC has outlined expectations for student behavior and interaction for online discussions, email, and other forms of communication. View the Student Expectations in [How to Be a Successful Student](https://go.spcollege.edu/Addendum/).

### Academic Honesty

View the [Academic Honesty Policy](https://go.spcollege.edu/AcademicHonesty/).

### Copyright

Copyrighted material within this course, or posted on this course website, is used in compliance with United States Copyright Law. Under that law, you may use the material for educational purposes related to the learning outcomes of this course. You may not further download, copy, alter, or distribute the material unless in accordance with copyright law or with permission of the copyright holder. For more information on copyright visit: [Copyright.gov](http://www.copyright.gov).

## TURNITIN

The instructor of this course may require the use of Turnitin.com as a tool to promote learning. The tool flags similarity and mechanical issues in written work that merit review. Use of the service enables students and faculty to identify areas that can be strengthened through improved paraphrasing, integration of sources, or proper citation. Submitted papers remain as source documents in the Turnitin database solely for the purpose of detecting originality. Students retain full copyright to their works. Review the [Turnitin Usage Agreement](https://turnitin.com/agreement.asp). Students who do not wish to submit work through Turnitin must notify their instructor via course email within the first seven days of the course. In lieu of Turnitin use, faculty may require a student to submit copies of sources, preliminary drafts, a research journal, or an annotated bibliography.

View the [Reviewing a TurnItIn/Originality Report](https://mycoursessupport.spcollege.edu/reviewing-a-turnitin-report) tutorial.

## STUDENT SURVEY OF INSTRUCTION

The Student Survey of Instruction is administered in courses each semester. It is designed to improve the quality of instruction at St. Petersburg College. All student responses are confidential and anonymous and will be used solely for the purpose of performance improvement.

## TECHNOLOGY

### Minimum Technology Requirements

View the [Technical Requirements for MyCourses](https://mycoursessupport.spcollege.edu/technical-requirements-for-mycourses).

SPC offers Microsoft Office software to current students at no additional cost. The software is available for both Windows and Mac computers. View the [How to Download Microsoft Office 2016](https://mycoursessupport.spcollege.edu/download-office-2016) tutorial.

### Minimum Technical Skills

For online and blended classes, students should have a computer available with Microsoft Windows 10 installed with at least 4GB of memory. A high speed internet connection is required. We recommend downloading the latest version of Microsoft Office available through your MySPC account.

Students should know how to navigate the course and use the course tools. Dropbox-style assignments may require attachments in either Microsoft Word (.doc or .docx) or Rich Text Format (.rtf) so that they can be properly evaluated. If an attachment cannot be opened by the instructor, students will be required to re-format and re-submit an assignment so that it can be evaluated and returned with feedback.

MyCourses tutorials are available to students new to this LMS and are located at the beginning of the course. Most features on MyCourses are accessible on mobile devices, although it is recommended that you use a computer for quizzes, tests, and essay assignments.

### Technical Support

Technical support is available via the [SPC Technical Support Center](https://support.spcollege.edu/_layouts/15/start.aspx#/SitePages/Home.aspx).

### Accessibility of Technology

* [MyCourses (Brightspace by Desire2Learn) Accessibility](https://www.d2l.com/accessibility/)
* [Google (YouTube) Accessibility](https://www.google.com/accessibility/)

### Privacy

* [MyCourses (Brightspace by Desire2Learn) Privacy](https://www.d2l.com/legal/privacy/)
* [YouTube Privacy](https://www.youtube.com/static?template=privacy_guidelines)
* [R Studio Privacy](https://www.rstudio.com/about/privacy-policy/)

### Instructional Continuity Plan

To be prepared in the event of weather or other emergency disruptions, review the [Emergency Preparedness Procedures for Students](https://mycoursessupport.spcollege.edu/emergency-preparedness-procedures-for-students).

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