

ITE 140

Spreadsheets for Business

Course Syllabus

Instructor	Chris Jones
Sessions	Fall 2024
Meeting (A Day)	None
Meeting (B Day)	8:00 am to 9:24 am
Location	Arlington Career Center, Room TBD
Contact	cmj2310@email.vccs.edu

Course Description

Provides a working knowledge of a commercial spreadsheet package to include designing a variety of worksheets, preparing graphs, working with database query, macro writing, and menu techniques. 3 Credits.

General Course Purpose

This course is designed to provide students with a working knowledge of a major microcomputer spreadsheet program. Emphasis is on the functional rather than the technical approach to understanding, using, and managing electronic spreadsheets.

Course Prerequisites/Co-Requisites

- College level reading and writing ability

Course Objectives

Upon completing the course, the student will be able to:

1. Design and create spreadsheets
2. Effectively use functions and formulae within spreadsheets
3. Present data using charts
4. Create and use formatting that enhances the usability of charts and spreadsheets
5. Use macros as a time-effective way to prepare and maintain spreadsheets
6. Effectively use decision analysis tools within spreadsheets

Major Topics to be Included

1. Designating and working with ranges
2. Applying functions and formulae such as HLOOKUP and VLOOKUP
3. Formatting spreadsheets, including conditional formatting
4. Using graphics to enhance the visual appeal of spreadsheets
5. Executing file operations, including printing and publishing
6. Working with charts
7. Working with multiple worksheets and workbooks and consolidated spreadsheets
8. Working with ranges, lists, and tables
9. Working with Pivot Tables and Pivot Charts
10. Performing What-If Analyses
11. Using a spreadsheet as a database; using data tools to manipulate data
12. Working with features that enable collaboration
13. Using Macros and Visual Basic for Applications
14. Importing data from other application programs such as MS-Word and MS-Access

Student Outcomes

Designating and working with ranges

- Selecting cells, images, and charts
- Performing Move, Copy, and Paste operations
- Using reviewing tools such as spell check
- Using Find and Replace features for content and formats
- Inserting special characters and symbols
- Navigating through a data range
- Printing a data range
- Creating and using range names

Applying functions and formulas

- Creating formulae using the SUMIF, COUNTIF, MATCH and INDEX functions
- Moving and copying functions and formulae
- Using operator precedence in formulae
- Using relative, absolute and mixed references
- Using math and statistical functions
- Using logical and financial functions such as PMT, FV, and PV
- Using text functions
- Using nested functions such as IF
- Validating data
- Auditing worksheet formulas

Formatting spreadsheets, including conditional formatting

- Changing fonts and page setup
- Using AutoFill, AutoFormat and series
- Formatting columns and rows
- Merging cells and working with cell alignment
- Applying borders and shading
- Adding headers and footers
- Applying conditional formatting

Using graphics to enhance the visual appeal of spreadsheets

- Inserting and formatting Clip Art
- Inserting and formatting Pictures
- Inserting and formatting SmartArt
- Inserting and formatting WordArt
- Inserting and formatting Shapes

Executing file operations, including printing and publishing

- Saving a worksheet using the default type or different format
- Using page setup features to change settings
- Creating and deleting manual and automatic page breaks
- Previewing and printing or publishing a worksheet

Working with charts

- Analyzing worksheet data in order to apply appropriate chart type
- Creating charts
- Editing chart data and objects
- Moving and copying charts

Working with multiple worksheets and workbooks

- Renaming and rearranging worksheet tabs
- Moving and deleting worksheets
- Grouping and ungrouping worksheets
- Moving and copying worksheet groups
- Managing the workspace
- Using links with multiple worksheets and workbooks
- Creating 2-D and 3-D references

Working with Ranges, Lists, and Tables

- Sorting a range/list/table
- Applying Auto filter to a range/list/table
- Applying an Advanced filter to a range/list/table
- Using AutoFilter to select data based on content and format
- Applying subtotals to a list of data
- Creating custom views

Working with PivotTables and PivotCharts

- Creating and manipulating PivotTables
- Creating and manipulating PivotCharts
- Applying Trendlines to a PivotChart

Performing What-If Analysis

- Using Goal Seek to perform a What-If Analysis
- Using Solver to find the optimal solution for a complex problem
- Using the Scenario Manager to analyze data involving multiple scenarios
- Using the Scenario Manager to create Summary Reports and Scenario PivotTable
- Creating One Variable and Two Variable Data Tables

Using a spreadsheet as a database and using data tools to manipulate data

- Applying proper design of a spreadsheet database
- Manipulating columns of data
- Filtering and extracting data
- Sorting data

- Applying data validation features within a spreadsheet database
- Finding and eliminating duplicate records

Working with features that enable collaboration

- Protecting worksheets and workbooks
- Sharing workbooks
- Using tools such as Tracking Changes and adding Comments
- Creating and using Templates
- Uploading a workbook to SkyDrive

Using Macros and Visual Basic for Applications

- Recording and executing a macro
- Viewing and printing the VBA code for a macro
- Applying appropriate security levels within Excel to control macro execution
- Customize the Quick Access Toolbar with a Macro button
- Add Form Controls and ActiveX Controls
- Edit properties of Form Controls and ActiveX Controls

Interchanging data with other application programs

- Using Object Linking and Embedding to share data between worksheets and files
- Creating and editing Hyperlinks
- Merging data with other documents

EXTRA TOPICS (optional)

- Macro programming using the Visual Basic language

Time Allocation Per Topic

In order to standardize the core topics so that a course taught at one campus is equivalent to the same course taught at another campus, the following student contact hours per topic are required. Each syllabus should be created to adhere as closely as possible to these allocations. Of course, the topics cannot be followed sequentially. Many topics are taught best as an integrated whole, often revisiting the topic several times, each time at a higher level. There are normally 45 student-contact-hours per semester for a three credit course. (This includes 15 weeks of instruction and does not include the final exam week so $15 \times 3 = 45$ hours. Sections of the course that are given in alternative formats from the standard 16 week section still meet for the same number of contact hours.) The final exam time is not included in the time table. The category, Miscellaneous, leaves ample time for an instructor to tailor the course to special needs or resources.

Topic	Hours	Percentage
Designating and working with ranges	2	4%
Applying functions and formulae	4	9%
Formatting spreadsheet, including conditional formatting	3	7%
Using graphics to enhance the visual appeal of spreadsheets	1	2%
Executing File operations, including printing and publishing	1	2%
Working with charts	2	4%
Working with multiple worksheets and workbooks	3	7%
Working with ranges, lists, and tables	3	7%
Working with Pivot Tables and Pivot Charts	3	7%
Performing What-If Analyses	3	7%

Topic	Hours	Percentage
Using a spreadsheet as a database; using data tools to manipulate data	3	7%
Working with features that enable collaboration	2	4%
Using Macros and Visual Basic for Applications	3	7%
Interchanging data with other application programs	2	4%
Assessment Activities	5	11%
Miscellaneous	5	11%
Total	45	100%

Required Instructional Materials

- Python for Excel: A Modern Environment for Automation and Data Analysis by Felix Zumstein (Available through your NVCC O'Reilly for Higher Education)
- Other freely available resources as provided by instructor

Course Credit: 3 Credits

Policies

I. Expectations

- A. Web Page Design I is a rigorous, college level course that will require sustained and consistent engagement from students.
- B. An average of 40 minutes of homework will be assigned for each 90 minutes in class. We will be utilizing a flipped classroom learning environment, where the lecture portion of the course material will be viewed individually at home before class meets, and class time will be used for collaborative engagement and discussion.
- C. Frequent “mini quizzes” at the beginning of class will be used to be sure homework readings and practice have been completed. To be successful in this class, students will be expected to be prepared for these quizzes when they arrive in class.

II. Grading Policies

- A. Grading Scale: A= 100 - 90 B= 89 - 80 C= 79 - 70 D=69 - 60 F= 59 and below
- B. Students will receive a weekly cumulative letter grade that will incorporate daily quizzes, tests, projects, and presentations. These weekly evaluations can be challenged by the student, but only during the week immediately following when the evaluation is given.
- C. The average of the weekly evaluations will make up 60% of the final grade, with the course final exam making up 40%.
- D. In cases where district grading policies conflict with college grading policies, the high school and college grades may differ; this may include assignment/test retakes, extended assignment due dates, capped minimum grade allowed, among other such district policies.
- E. It is important that students check their final NOVA grades in SIS as soon as their course is completed.
- F. Course Grade Appeals
 - i. Students who think that a semester grade is in error should contact the instructor immediately to present their concerns. Students who wish to appeal their grade or otherwise report a grievance will need to submit Form 125-021 within 20 days of the end of the semester. The original grade will stand if the student delays in submitting their appeal.

- ii. NOVA's Student Grievance policy can be found here: https://www.nvcc.edu/policies/_files/608-Student-Grievances.pdf
- iii. Form 125-021 can be found here: <https://www.nvcc.edu/forms/>

III. Course Policies

A. Student Rights and Responsibilities

- i. Students should be familiar with the college's specific expectations concerning the conduct of its students. These expectations apply to all students, including Dual Enrollment students.
- ii. Student Rights and Responsibilities are outlined in the Student Code of Conduct, found here: <https://www.nvcc.edu/students/handbook/conduct.html>

B. Academic Integrity

- i. Academic integrity requires that you recognize and acknowledge information derived from others and take credit only for ideas and work that are yours. It should be the guiding principle for all that you do, from taking assessments and making presentations to writing papers. More about academic integrity at NOVA can be reviewed on the Student Conduct and Integrity page on the NOVA website: <https://www.nvcc.edu/students/handbook/conduct.html>.
- ii. Violating the Academic Integrity Policy will incur consequences. Your instructor may give you a failing grade for the assignment or for the course. Further, you may be referred to NOVA Cares, reported to an academic dean, or even referred to the Dean of Students for disciplinary action depending on how serious an infraction was committed.
- iii. Please review NOVA's Academic Integrity Policy here: https://www.nvcc.edu/policies/_files/224-Academic-Integrity.pdf.

C. Accommodations and Accessibility Services

- i. NOVA is committed to ensuring all students have an opportunity to pursue a college education regardless of the presence or absence of a disability. Information on NOVA's Accommodations and Accessibility Services, including how to reach a Accommodations and Accessibility Services counselor, can be found here: <https://www.nvcc.edu/accommodations>.
- ii. Students must reach out to contact NOVA's Accommodations and Accessibility Services to apply for accommodations. A student with a 504 plan or IEP at their high school will still need to apply with NOVA's Accommodations and Accessibility Services – those plans do not automatically carry over to your Dual Enrollment course. If accommodations are agreed upon, students will receive a Memorandum of Accommodation (MOA) by AAS. All information is kept confidential and may increase your chances of success in the academic setting.

D. Advocacy and Privacy of Student Records

- i. Students are expected to reach out to their instructor if they do not understand content or expectations.
- ii. You, as a NOVA student, have a right to review your NOVA grades and other records. Your high school may share grades and other records with NOVA, and NOVA will share your post-secondary (college) grades with your high school. The grades you earn at NOVA are part of a permanent transcript, and you will be required to include your NOVA transcript as part of any future college or graduate school application. NOVA instructors and other college personnel generally may not release a student's educational records without written consent of the student. For dual enrolled students under 18, parents or guardians may generally access records and grades which are created by or shared with a student's high school. For the purposes of these privacy rules, your Dual Enrollment instructor is considered a NOVA employee.
- iii. To grant parents or guardians direct access to NOVA records, students will be required to submit a notarized copy of NOVA Form 125-356, found here: <https://www.nvcc.edu/forms/pdf/125-356.pdf>.

- iv. For more information about student privacy, parent limitations of access to students' educational records, and other restrictions on sharing students' personally identifiable information, please review NOVA Policy 613 (FERPA): https://www.nvcc.edu/policies/_files/613-FERPA.pdf.
- E. Campus Services
 - i. Dual enrolled students have access to full NOVA campus services to include tutoring, library, and counseling services; student resources are found here: <http://www.nvcc.edu/students/index.html>.
- F. Office of Wellness and Mental Health
 - i. During your time at NOVA, you may experience challenges including struggles with academics, finances, or your personal well-being. NOVA has support resources available. If you are seeking resources and support or if you are worried about a friend or classmate: <https://www.nvcc.edu/wellness/index.html>.
- G. Course Drop and Withdrawal Policy
 - i. Please note two important dates related to your enrollment in a course:
 - a. The "Drop" date (also known as census date) for a course is the last day to drop a course. Dropping a course before the drop date will not appear on your NOVA transcript.
 - b. The "Withdrawal" date is the last day to withdraw without a grade penalty. Dropping a course after the drop date and before the withdrawal date will result in a 'W' grade appearing on your transcript.
 - c. To identify these dates for your dual enrollment course, please see below on the 'Course Schedule' chart or log into your myNOVA account and SIS.
 - ii. Withdrawal Process
 - a. Dual enrolled students are responsible for requesting to drop or withdraw from their DE classes, using Form 125-03, found at the following link: <https://dashboard.nvcc.edu/Forms/125-03>
 - b. Dual enrolled students will use their myNOVA credentials to access the withdrawal form and will select one or more enrolled DE classes to withdraw.
 - c. The withdrawal form is then routed to the assigned DE instructor and the Office of Dual Enrollment for review and approval.
 - d. Check your VCCS email for the status of your request.
- H. Communication
 - i. Students are required to use their VCCS email accounts (____@email.vccs.edu) to communicate with college personnel and should check their email accounts regularly. Students may access their VCCS email accounts through myNOVA.
- I. Title IX
 - i. Title IX is a civil rights law that prohibits discrimination on the basis of sex in educational programs, activities, admission and employment. Complaints of sex-based discrimination, sexual violence, domestic violence, and sexual or gender-based harassment are governed by the Title IX Policy. For more information about Title IX or to make a report: <https://www.nvcc.edu/titleix/index.html>.
- IV. Additional Course Information
 - A. DE students are expected to engage in college level course contents and discussions appropriate for adult learners. Mature topics may be discussed.
- V. Course Schedule
 - A. Critical Course Dates
 - Course Start Date: Monday, August 26, 2024
 - Course Drop Date: Wednesday, September 18, 2024
 - Course Withdrawal Date: Tuesday, November 26, 2024
 - Final Exam Date: Week of January 27 to 30, 2025

- Course End Date: Thursday, January 30, 2025
- B. Final Exam Date: The final exam will be given during the last week of class, between Monday, January 27 and Thursday, January 30.