

Course Syllabus

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Welcome to MBA 787: Quantitative Business Analysis



MBA 787 Quantitative Business Analysis

Course Information

| | |
|-----------------------|---|
| Course Title: | MBA 787: Quantitative Business Analysis |
| Credit Hours: | 1.5 |
| Course Term: | Summer 2023 |
| Delivery Mode: | Online |
| Course Dates: | May 22, 2023 - July 9, 2023 |

If you are considering dropping this course, having a conversation with your academic advisor is a good place to start. You should also let the instructor know what your plans are. Click the following links, based on your home campus, to learn more about dropping this course: [Consortium/UW-Eau Claire](#)  (<https://help.wisconsinonlinemba.org/article/60-adding-dropping-classes>) | [UW Oshkosh](#)  (<https://uwosh.edu/registrar/students/add-drop-calendar/>) | [UW-Parkside](#)  (<https://www.uwp.edu/live/offices/registrarsoffice/adddrop.cfm>)

Instructor Information

| | |
|-------------------------|--|
| Instructor Name: | Andy Miller |
| Name: | https://uws.instructure.com/courses/578507/modules/items/18282402 MBA, PMP, CSM, DASM Senior Lecturer II, UW Oshkosh College of Business <i>Please address me as Andy</i> |
| Home Campus: | UW-Oshkosh |

Email: [milleraj@uwosh.edu \(mailto:milleraj@uwosh.edu\)](mailto:milleraj@uwosh.edu)

Please use this as the primary means of contacting me

If you email me, I will respond within 24 hours during the week and within 48 hours of messages received on a Saturday or Sunday. If circumstances make that undoable, I will post a announcement indicating so. The same applies to questions you pose in the [Raise Your Hand \(https://uws.instructure.com/courses/578507/discussion_topics/4330925\)](https://uws.instructure.com/courses/578507/discussion_topics/4330925) discussion (although a classmate may answer you before that).

Course Description

This course focuses on applied quantitative business analysis and uses Microsoft Excel. The course covers problem solving concepts and techniques, plus effective presentation of analysis results. Critical thinking and analytical problem solving will be stressed throughout the course, as well as development of Excel skills. Exercises for the course reflect a variety of business disciplines.

While students will learn to use Excel, this is not an Excel Course. The course only covers Excel functions that apply to analysis objectives. Excel has other capabilities that are beyond the scope of this class.

Learning Outcomes

- Build practical business analysis skills, focusing on spreadsheet analysis and some statistical analysis
- Organize data to represent business situations
- Solve common business problems (in a variety of subjects) using Microsoft Excel
- Report results from quantitative analysis, and develop reporting-communication skills so reports and presentations shine.
- Recognize how quantitative analysis can be used in business decision making and limitations of analysis.

Course Materials

Required Readings and Tutorials

There is no textbook for this course. Readings include the course commentaries and selected articles, websites, videos, and audio files that are embedded in each commentary reading.

Required readings and tutorials are posted in each weekly module. Each week there are required readings, video tutorials, websites, etc.

Additional Reading Material

The required readings and cases will get most people through the course just fine. Some people find it helpful to have supplemental readings, and I can recommend different books. If you want a book, then confer with me so I can try to recommend something based on your specific needs and interests.

Technology Requirements

Access to a computer and high-speed Internet connection that is capable of accessing Canvas is a requirement of this course.

Please review the minimum technology requirements and recommendations in the Online Course Resources link in the left-hand Course Navigation menu. To set yourself up for success, pay special attention to the sections on Your Responsibilities, Strategies for Success, Tech Tips, and Tech Support.

Microsoft Office Excel

We will use Microsoft Office Excel for this course. I suggest at least Excel 2016. If you do not own this version of Excel, you may be able to obtain it for free or at a reduced cost through the following sources:

- If you are a UW-Eau Claire or Consortium student (i.e., you have a "@uwec.edu" email), you should [download and install the latest version of Microsoft Office for free](https://www.uwec.edu/kb/article/office-365-downloading-office-365-software/)  (<https://www.uwec.edu/kb/article/office-365-downloading-office-365-software/>).
- If you do not have a "@uwec.edu" email: Contact the Helpdesk on your home campus for assistance obtaining the latest version of Microsoft Office.

Will prior versions of Excel work well enough? Yes, but you are taking a slight risk. During past semesters, most students using prior versions have told me they did fine with the software, while some students said they upgraded mid-course or wish they had upgraded at the start. The readings have a lot of screen captures and some things look a bit different in Excel 2016 compared to earlier versions. And a couple formulas have changed since Excel 2010.

Versions after Excel 2016 should work fine.

If you're uncomfortable with Excel, [Microsoft offers Excel tutorials](https://support.office.com/en-us/article/Excel-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb)  (<https://support.office.com/en-us/article/Excel-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb>) that may be helpful to you in this course.

The tutorials in this course were developed using the Windows version of Microsoft Office. There are differences between the Windows version and the Apple OS version of Excel. I have added some [links to help with Excel 2016 for Mac.](https://uws.instructure.com/courses/578507/modules/items/18282404) (<https://uws.instructure.com/courses/578507/modules/items/18282404>)

Course Topical Outline

- Week 1: Introduction
- Week 2: Quantitative Forecasting and Conditional Formatting
- Week 3: IF, LOOKUP, Goal Seek, and Solver
- Week 4: Tables, Text, and Time and Date

- Week 5: Excel Charting 101 and Finding Patterns
- Week 6: Data Cleaning and Cleansing and Pivot Tables
- Week 7: Excel Simulations and Monte Carlo Simulation

What I Expect

I want you to log in at least several times a week and check the Announcements area for any updates. By completing the readings, you will be prepared to contribute fully in assignments. I want you to contact me if you are having difficulty understanding any of the material or if you are having difficulty accessing it. I want you to succeed in this course and I can help you do so.

Learning quantitative analysis is NOT like riding a bicycle. When you learn to ride a bicycle, once you 'get it' you are good for life. With quantitative analysis, people gradually get better, and typically as a function of repetition. Assignments will give you some repetition.

Asking Questions

When you have general questions, please post them in the Ask the Class discussion area so others can see the questions/answers. For questions that are personal or you feel uncomfortable posting publicly, pose them to me via email or phone.

Instructor Expectations

Here are the expectations you can have for me:

- Develop course materials as needed.
- Keep Canvas content current.
- Post 'announcements' as needed
- Promptly answer questions sent my way.
- Stay on top of grading.
- Provide feedback on assignments.
- Read discussion posts and respond as necessary.

I will grade your assignments in a timely manner – certainly before an exam covering the material. If I can't do that, I'll let you know in an announcement.

Assignments and Grading

Homework

There are 12 cases where students will apply the instructor-developed materials to a business problem. Most weeks have two cases to complete. You will have two files for each case: an Excel file and a Word file. **You will submit both your Excel file and Word file.**

You will complete your analysis and develop tables and charts in an Excel file. Some cases, the Excel file is provided to you as a link within the case directions. Other cases, you will develop the Excel file on your own but I will provide you with the data to do so.

Each case has several conceptual questions for you to answer. You will copy these questions to a Word document and answer them in that document. The analysis that you completed in the Excel file should guide your response to these questions

Exams

There are two exams covering the topics on the readings and homework assignments. They will not be cumulative. You will complete analysis problems in multiple formats. You may be asked to create charts or tables, answer multiple choice and fill-in-the-blank questions, and write short responses (sentences and/or formulas).

Dashboard Project

There is a Dashboard Project integrating several topics and concepts we will cover. Details on this will be posted by the end of week 2.

Grading

Points are distributed as follows:

| | | |
|-----|--|------------|
| 160 | Midterm and Final Exams (80 Points each) | Individual |
| 240 | Weekly Cases (20 points each) | Individual |
| 50 | Final Project | Individual |

At the end of the semester the total points will be converted to a percent raw score (out of 450) and then compared to the table below:

| Percentage | Consortium/UW- Parkside | UW-Oshkosh |
|-------------------|------------------------------------|-------------------|
| 93-100% | A | A |
| 90-92.9% | A- | A- |
| 87-89.9% | B+ | B+ |

| | | |
|----------|----|----|
| 83-86.9% | B | B |
| 80-82.9% | B- | B- |
| 77-79.9% | C+ | C+ |
| 73-76.9% | C | C |
| 70-72.9% | C- | C |
| 67-69.9% | D+ | F |
| 63-66.9% | D | F |
| 60-62.9% | D- | F |
| 0-59.9% | F | F |

Based on the table above, each student's **preliminary** letter grade is determined by finding the row that specifies the number of points a student has scored, and the column where the student is domiciled. For example, a score of 91.3 would equate to an A- or AB. Rounding will not be applied; for example, a score of 89.9 will equate to a score of B+ or B, whereas a score of 90.1 will equate to a score of A- or A.

After preliminary letter grades are determined, a mean GPA will be calculated, based on GPAs found in the rightmost column of the table above.

If the mean GPA is lower than a 3.5, and if the overall class performance seems reasonable, then a curve may be applied by multiplying raw scores by a constant, and increasing this constant potentially until the mean GPA reaches 3.5. One caveat to the curve is that each school specifies a performance level that results in retaking the course. The curving of raw scores below those levels is not automatic and will be done on a case-by-case basis.

Late Work Policy and Excused Absences

Late Work Policy

Specific deadlines exist, per the Course Calendar. **Assignments will not be accepted after the scheduled due date (without prior instructor consent) and will receive a 0. The reason for this is keys for the homework will appear the morning after they are due.**

This includes corrupt files. It is your responsibility to verify that your file submitted successfully.

Consortium's Excused Absence Policy

An absence will be considered excused or authorized according to the following institutional policies:

1. The student's home campus policy on excused absences will apply.
 - o [UW Oshkosh](https://www.uwosh.edu/registrar/policies/attendance-policy)  (<https://www.uwosh.edu/registrar/policies/attendance-policy>)
 - o [UW-Parkside](https://www.uwp.edu/learn/academiccatalog/2019-2021/upload/201921-ACADEMIC-CATALOG-082619.pdf)  (<https://www.uwp.edu/learn/academiccatalog/2019-2021/upload/201921-ACADEMIC-CATALOG-082619.pdf>) (see page 31)
2. UW MBA Consortium students will follow the [UW-Eau Claire Authorized Absence Policy](https://www.uwec.edu/kb/article/class-attendance-and-authorized-absence-policies/#authorized-absences).  (<https://www.uwec.edu/kb/article/class-attendance-and-authorized-absence-policies/#authorized-absences>)

If your absence falls into the excused absence category, please contact me as soon as possible. I may request that you provide documentation, and I may need time to make alternative assessments available to you.

Accommodations for Students with Disabilities

In order to ensure that all of our students have equitable access to our online course materials, we strive to meet the guidelines set by Section 508 of the Rehabilitation Act, which requires the public to provide reasonable accommodations to individuals with disabilities when posting web-based materials. Canvas is [compliant with W3C's Web Accessibility Initiative](https://community.canvaslms.com/docs/DOC-2061-accessibility-within-canvas)  (<https://community.canvaslms.com/docs/DOC-2061-accessibility-within-canvas>) and with [Section 508](https://www.section508.gov/)  (<https://www.section508.gov/>) guidelines.

Additionally, Canvas was certified as a [substantially conformant LMS](https://webaim.org/services/certification/canvas)  (<https://webaim.org/services/certification/canvas>) by WebAIM, a third party authority in web accessibility. If you find that course materials are not posted in a format that meets your needs, or you need testing accommodations, please contact Online Course Support at [BIZHelp@uwec.edu](mailto:bizhelp@uwec.edu) (<mailto:bizhelp@uwec.edu>) and we will work with you to find a reasonable accommodation.

Academic Conduct

To foster a productive learning environment, all students are required to accept and adhere to the Student Code of Conduct agreement in order to participate in this course.

Academic Integrity Policy

Integrity is an important component of students' academic experience. The academic evaluation a student receives for a course becomes a permanent University student record and it is critical such records be accurate and consistent. In addition, the integrity students learn and exhibit at the University will be the model for the professional integrity they practice when they complete their academic work. The University believes unquestionable character and integrity are essential for successful careers.

Whatever role you may play in an organization, be it publicly or privately owned, you will occupy a position of trust. High ethical standards, therefore, are not only necessary but are fundamentally part of all the University represents when it grants a degree.

All class materials are the intellectual property of the instructor and may not be shared outside of this course (e.g., to commercial "study sites") without my permission.

Unless I specify otherwise, all work that you turn in to me should be an individual effort. The sentence structure, wording, and content for your assignments and discussions must be your original work.

Academically dishonest behaviors include (but may not be limited to) the following:

- Intentionally or unintentionally presenting someone else's ideas or words as your own, either as a direct quote or paraphrased or summarized material, without the proper citation. All quotes and direct references must include citations. Remember to use APA format for citations. See the [OWL website from Purdue](http://owl.english.purdue.edu/owl/resource/560/01/)  (<http://owl.english.purdue.edu/owl/resource/560/01/>) for APA citation guidelines.
- Submitting work that is identical to or so similar to that of another's in its wording, sentence structure, and content that it cannot be considered original.
- Plagiarizing yourself by submitting work for evaluation in this course that was previously graded or otherwise evaluated in another course. You can cite your previous work. If you want to use your previous work, contact me first.
- Making up data or citations.
- Consulting resources to complete a graded course assessment other than those allowed in the assessment directions. If you are unsure what is considered as an authorized resource, consult with your instructor.
- Navigating off an exam screen to research answers online during a timed exam (Note: The activity log that Canvas generates during each student's exam denotes when a student leaves his/her/their exam screen!)
- Helping someone else engage in academically dishonest behavior, including posting course materials online.
- Violating copyright laws. In some cases, citing a source is not sufficient; you also have to obtain permission from the original source for the materials you use. Likewise, if you use any materials from this course outside this course, you may need permission to use them (e.g., in your company's training manuals, publications, or style guides).

Any investigation into any form of academic misconduct will result in a report to the dean of students and in student academic disciplinary sanctions as established by the UW System Board of Regents ([UWS Chapter 14](https://docs.legis.wisconsin.gov/code/admin_code/uws/14.pdf)  (https://docs.legis.wisconsin.gov/code/admin_code/uws/14.pdf)). Disciplinary procedures from the student's home campus dictate the disciplinary action against students who engage in academic misconduct.

Some particular things to be careful of in this course is:

- Complete weekly Excel work and midterm and final exams individually. Please do not get help from others; this would be viewed as cheating.
- Don't reuse materials from other courses (including previous offerings of this course).

Tips/Suggestions Related to Success in This Course

1. Due dates for deliverables are similar across weeks! Just check the pattern of deliverables and get into a rhythm.
2. Shortly after Excel case submission deadlines pass, you'll see one or two sample solutions available. These will be good submissions and you can check your work against them. If your Excel solution is not uploaded when solutions are posted, then you'll get a score of zero; I do not want to accept solutions after samples have been posted. So please make sure to submit on time.
3. A large part of how submissions are scored is their appearance, and you'll see some submission tips/guidelines in the Excel Basics reading. You might have brilliant ideas, but if you fail to convey them in an appealing way, you might as well not have the ideas. Just follow the formatting tips and look at the strong submissions. This is a quantitative analysis class but is moreover a business class, so it's important to get good answers and convey them effectively.

Other Topics for Exploration

This course only covers a few of the many features/topics Quantitative Analysis could cover, as covering all of them would be, well, waaaaaaay more than 1.5 credits. If you are looking to learn more, here are some areas for further exploration:

- Business Intelligence (BI)
- Data Analytics
- Excel 3rd Party Add On's
- Excel Macros
- Excel Visual Basic for Applications (VBA)
- Excel's Formula Auditing Tools
- Importing Data From Other Programs (for example, Access)
- Power Queries
- PowerPivot
- Protecting and Sharing Workbooks

If you have additions for this list (as it may turn into topics for a future elective), please email me.

Course Summary:

| Date | Details | Due |
|------------------|--|------|
| Mon May 22, 2023 |  Complete the UW MBA Consortium Student Code of | 12am |

| Date | Details | Due |
|------------------|---|----------------|
| | Conduct Agreement (https://uws.instructure.com/calendar?event_id=1421345&include_contexts=course_578507) | |
| Tue May 23, 2023 |  1.0 Week 1 Overview and Required Readings | to do: 11:59pm |
| |  1.1 Introduction Discussion | to do: 11:59pm |
| |  1.2 Excel Basics | to do: 11:59pm |
| Wed May 24, 2023 |  1.4 Week 1 Case 1 (https://uws.instructure.com/courses/578507/assignments/6000155) | due by 11:59pm |
| Sun May 28, 2023 |  1.5 Week 1 Case 2 (https://uws.instructure.com/courses/578507/assignments/6000156) | due by 11:59pm |
| Tue May 30, 2023 |  2.0 Week 2 Overview and Required Readings | to do: 11:59pm |
| Wed May 31, 2023 |  2.15 Week 2 Case 1 (https://uws.instructure.com/courses/578507/assignments/6000157) | due by 11:59pm |
| Sun Jun 4, 2023 |  2.16 Week 2 Case 2 (https://uws.instructure.com/courses/578507/assignments/6000158) | due by 11:59pm |
| Tue Jun 6, 2023 |  3.0 Week 3 Overview and Required Readings | to do: 11:59pm |
| Wed Jun 7, 2023 |  3.12 Week 3 Case 1 (https://uws.instructure.com/courses/578507/assignments/6000159) | due by 11:59pm |
| Sun Jun 11, 2023 |  3.13 Week 3 Case 2 (https://uws.instructure.com/courses/578507/assignments/6000160) | due by 11:59pm |
| Tue Jun 13, 2023 |  4.0 Week 4 Overview and Required Readings | to do: 11:59pm |
| Wed Jun 14, 2023 |  4.11 Week 4 Case 1 (https://uws.instructure.com/courses/578507/assignments/6000161) | due by 11:59pm |
| Fri Jun 16, 2023 |  Midterm Course Evaluation | to do: 11:59pm |

| Date | Details | Due |
|------------------|---|----------------|
| Sun Jun 18, 2023 |  Exam 1 (https://uws.instructure.com/courses/578507/assignments/6000169) | due by 11:59pm |
| Mon Jun 19, 2023 |  D.0 Dashboard Project Introduction | to do: 11:59pm |
| |  D.1 Dashboard Project Overview and Required Readings | to do: 11:59pm |
| Tue Jun 20, 2023 |  5.0 Week 5 Overview and Required Readings | to do: 11:59pm |
| Wed Jun 21, 2023 |  5.9 Week 5 Case 1 (https://uws.instructure.com/courses/578507/assignments/6000163) | due by 11:59pm |
| Sun Jun 25, 2023 |  5.10 Week 5 Case 2 (https://uws.instructure.com/courses/578507/assignments/6000162) | due by 11:59pm |
| |  D.9 Dashboard Project Part 1 (https://uws.instructure.com/courses/578507/assignments/6000168) | due by 11:59pm |
| Tue Jun 27, 2023 |  6.0 Week 6 Overview and Required Readings | to do: 11:59pm |
| Wed Jun 28, 2023 |  6.15 Week 6 Case 1 (https://uws.instructure.com/courses/578507/assignments/6000164) | due by 11:59pm |
| |  6.16 Week 6 Case 2 (https://uws.instructure.com/courses/578507/assignments/6000165) | due by 11:59pm |
| Sun Jul 2, 2023 |  D.10 Dashboard Project Part 2: Review/Feedback Discussion (https://uws.instructure.com/courses/578507/assignments/6000154) | due by 11:59pm |
| Tue Jul 4, 2023 |  7.0 Week 7 Overview and Required Readings | to do: 11:59pm |
| Wed Jul 5, 2023 |  7.7 Week 7 Case 1 (https://uws.instructure.com/courses/578507/assignments/6000166) | due by 11:59pm |

| Date | Details | Due |
|-----------------|--|----------------|
| Sat Jul 8, 2023 |  D.11 Dashboard Project Part 3 (https://uws.instructure.com/courses/578507/assignments/6000167) | due by 11:59pm |
| |  Exam 2 (https://uws.instructure.com/courses/578507/assignments/6000170) | due by 11:59pm |
| |  Final Course Evaluation | to do: 11:59pm |
| |  Final Grade (https://uws.instructure.com/courses/578507/assignments/6000171) | |