

The University of Akron
G. W. Daverio School of Accountancy

6200:250



Spreadsheet Modeling & Decision Analysis
Course Syllabus

Fall 2018

Class Meeting Times and Locations

6200:250:005 Monday and Wednesday, 10:15am -- 11:30am CBA 101

6200:250:006 Monday and Wednesday, 02:45pm -- 04:00pm CBA 106

Note: This class meets in a computer lab regularly. Each case study will feature discussion and demonstration led by the instructor. Due to classroom resource constraints, students should plan attend only the section for which they have registered.

Professor Information

Professor: Kevin Brennan, MBA
Accountancy Office / Telephone: CBA 269 / 330-972-8446
E-mail Address: brennan@uakron.edu
Office Hours: Monday and Wednesday: 4:00 PM – 5:00 PM and 6:00 PM – 7:00 PM
By appointment

CBA Learning Goals and Expectations

Each student who graduates from the College of Business Administration will:

- Master integrated business knowledge
- Analyze data using quantitative techniques
- Be informed decision makers
- Develop leadership and collaboration competencies
- Use writing and oral communication skills to persuade and to mobilize action
- Demonstrate a global perspective and cross-cultural awareness
- Recognize and understand how to address ethical concerns

Mission of the Daverio School of Accountancy

The George W. Daverio School of Accountancy at The University of Akron provides students with the educational background to become competent and responsible accounting professionals. With a rich history of (i) accounting education that serves both traditional and non-traditional students and (ii) close relationships with the professional community in Northern Ohio, we emphasize undergraduate and master's-level education with an applied focus. The School offers a Bachelor of Science degree in Accountancy, a Master of Science in Accountancy, and a Master of Taxation.

The School stresses a learning environment that places primary importance on student success through effective teaching, complemented by faculty scholarship, interaction with the professional community, and service. Success in accomplishing our mission is evidenced by graduates who will:

1. Demonstrate knowledge, understanding, and ability to apply core accounting fundamentals in such areas as financial reporting, cost management, auditing, tax, and systems.
2. Have effective written and oral communication skills as applied to business and accounting.
3. Demonstrate ability to contribute to problem solving and decision-making through professional research, analysis of complex data, integration of information from multiple sources, use of information technology, and creative thinking.
4. Understand professional responsibilities and methods for identifying and addressing ethical dilemmas in business and accounting.
5. Work effectively in teams and in diverse settings that include individuals with varying educational background, experience, gender, age, race, or national origin.

To be responsive to the professional community that we serve, we endeavor to graduate well educated students who are prepared to contribute in an increasingly complex and diverse economy. To achieve this end, we seek to attract and retain high quality faculty and staff, and emphasize scholarship that contributes to practice and to teaching.

Course Description and Objectives

Prerequisite: Spreadsheet proficiency. In-depth study of spreadsheet applications and databases to support decision-making and problem-solving in business and accounting.

Objective: This course provides students with knowledge and skills to apply electronic spreadsheets and databases to support decision-making and problem-solving in business and accounting. Instructors make extensive use of MS Excel. MS Access is used for working with large datasets. The course is built around various business and accounting decision problems. Emphasis is on the application of information technology rather than the detailed aspects of the decision problem. It is assumed that students have some familiarity with electronic spreadsheets; thus instructors will not be discussing typing, basic arithmetic operations (addition, subtraction, division, etc.), text versus numbers, basic formulae, and other simple aspects of an electronic spreadsheet that students should know.

After completing this course, students will:

- Have extensive knowledge and skills to apply electronic spreadsheets in business decision-making and problem-solving;
- Understand and be able to apply in business and accounting selected intermediate and advanced features of electronic spreadsheets;
- Have the ability and skills to work with large data sets and integrate data from different tables and sources;
- Understand fundamental risks associated with using spreadsheets and be able to take basic precautions to address them;
- Understand the need for relational databases and use selected features of a relationship database to enhance the capabilities of your spreadsheet even more.

Required Text and Supplies

Required Material:

- SimNet Account
- University of Akron student microcomputer account for operating system, application software, e-mail, and Internet access.

Optional Material:

- USB Flash Drive for coursework
- Exploring Microsoft Office Excel 2016 Comprehensive - by Robert T. Grauer

Course Format / Expectations

Course Format / Effort Expectations: The course is designed to implement the CBA's "Problem Solving-Based Learning" initiative. It will consist of a combination of lectures, computer-based learning tools and a significant focus on using the tools to solve "real world" problems. These methods are complementary and not substitutes: students must work with all resources to master the material; thus, to perform well in this course, students must attend class regularly, work on their own outside of class, organize and schedule their work, and complete assignments accurately and on time. Students are responsible for reading the material and attempting the exercises prior to each lecture and should budget sufficient time outside of class to meet this responsibility.

Computing Skills Required: Students must exhibit basic microcomputer and keyboard proficiency skills to succeed in this course; it is the student's responsibility to attain this proficiency before enrolling.

Ethics in this Course

Ethics are incorporated into the course through class discussion and written question asked in case studies. One class period is devoted entirely to a hands-on exercise placing students in a position to make an ethical choice with consequences. This class concludes with a debriefing.

Academic Honesty and Student Conduct

It is every student's responsibility to understand and follow all policies set forth by the University of Akron, the College of Business Administration, and the School of Accountancy related to student conduct. If you are in doubt, do not assume anything. Read the syllabus carefully, check the web sites below, and/or talk to your instructor.

Ignorance of these policies is NOT a defense for violations.

<https://www.uakron.edu/soc/documents/policies/Academic%20Dishonesty.pdf>

Examples of academic dishonesty include, but are not limited to:

- Copying another student's working papers, printed output, or electronic files for a case studies, quiz, or final examination.
- Allowing another student to copy your working papers, printed output, or electronic files for a case study, quiz, or final examination.
- Allowing another student to complete your working papers, printed output, or electronic files for a case study, quiz, or final examination.
- Completing another student's working papers, printed output, or electronic files for a case study, quiz, or final examination.

If a student is caught in academic dishonesty (i.e., cheating) in this course, the instructor will impose a variety of sanctions. Examples of sanctions include the following:

- 0 points for the case study/quiz/final examination involved.
- A penalty of 70 points deducted from the total number of points available for the course.
- Grade F for the course.
- Refer the student to the School of Accountancy, College of Business Administration, and University administration for disciplinary hearing.
- Any combination of the sanctions above.

Course Grading

Successful learning in this course is demonstrated by frequent "hands-on" application of the concepts and techniques discussed during the lecture. Several methods are used to evaluate learning:

- **Quizzes:** Three in-class computer-based evaluations. The quizzes will be based on content covered in all course activities (i.e., readings from the text, outside reading materials, discussion questions, lab activities, and course case studies). Quizzes must be taken in class and worth 30 points each.
- **Case Studies:** 11 case studies implementing several related topics. Case study 1 is used to support the SimNet skills assessment
- **Simnet Skill Assessment:** All students must complete a 40-question skill assessment worth 30 points. Students must log in at <https://uakroncba.simnetonline.com> and complete the assessment. A score of 30 out of 40 or better is considered proficient. Students who fail to score 30 out of 40 will be required to take additional online training.
- **Attendance:** Attendance will be taken at the beginning and end of each lecture. *For each absence*, (1+number of absences to date) points will be deducted from the final point tally. For example, three absences will result in a deduction of 9 points -- 1st absence: (1+1) + 2nd absence: (1+2) + 3rd absence: (1+3) = 2 + 3 + 4=9.
- **Final Exam:** There is a final exam for this course worth 100 points.

Point allocation for these components of the course:

| Course Component | Points |
|-----------------------------------|------------|
| Scheduled Quizzes (3 @ 30 points) | 90 |
| Case Studies (10 @ 30 points) | 300 |
| Final (1 @ 100 points) | 100 |
| Attendance | 30 |
| SimNet Skill Assessment | 30 |
| Total Points | 550 |

All case studies and the final examination must be submitted electronically via Brightspace. They are due by 10:00 pm on the due date. Late case studies will be accepted with 50% credit; students with obligations that conflict with due dates are urged to plan in advance and budget sufficient time to complete their work on time. Similarly, make-up quizzes are not offered except in cases of conflicts with university-sanctioned activities, such as documented travel on university business.

Maximum percentage grading scale based on total points for the course (based on the University of Akron guidelines and rounded to nearest whole point):

| Grade | Percentage | Grade | Percentage |
|-------|------------|-------|------------|
| A | 92 to 100 | C | 72 to 77.9 |
| A- | 90 to 91.9 | C- | 70 to 71.9 |
| B+ | 88 to 89.9 | D+ | 68 to 69.9 |
| B | 82 to 87.9 | D | 62 to 67.9 |
| B- | 80 to 81.9 | D- | 60 to 61.9 |
| C+ | 78 to 79.9 | F | Below 60 % |

Student Responsibilities

A student's investment in higher education represents a significant commitment of time, resources and energy. Learning is not a passive activity – while the faculty at the CBA are committed to creating an effective learning environment, students should understand and honor their responsibilities to learning in order to achieve the most valuable outcomes. These responsibilities include:

- **Attendance:** Students should expect to attend every class. While emergencies are sometimes unavoidable, students will not be able to maximize the learning value of their investment without attending class. In addition, point penalties are assessed for missing class.
- **Professional Ethics:** Ethical professional conduct is an essential element for success in business and management. Students are expected to conduct themselves with professionalism at all times. Examples of professional conduct include arriving to class on time or early, listening and participating in discussions, and not disrupting others.
- **Please Do Not Use Cell Phones, Pagers, MP3 Players, Instant Messaging, E-Mail or Web Browsers During Class.** Students are asked to refrain from using the aforementioned technologies during lecture. In addition to reducing the student's attention and compromising their learning, these technologies can create a significant distraction for other members of the class. Students observed ignoring this policy will be asked to stop.
- **Preparation:** In order to maximize their learning, potential, students are expected to read textbook material and relevant case studies before class in order to discuss them effectively.
- **Meet Deadlines:** Students are expected to turn in their work on time; late submissions are accepted at 50% credit.
- **Effective Management of Personal Technology:** The availability of resources such as the Internet, student personal computers, lab hardware, e-mail, and other tools necessary to complete case studies may be

unavailable without warning due to circumstances beyond the student's or instructor's control. Students are advised to take appropriate precautions (such as allowing sufficient time to complete case studies, making regular backups of work files) to ensure that they can successfully meet their responsibilities in the course.

Other Administrative Matters

Photo ID during Exams: During examinations, students may be asked to display their University of Akron photo ID by placing them on their desks.

Withdrawals: A student who chooses to withdraw from this course must comply with university procedures and complete the process by the university deadline; otherwise the student will receive a score that reflects his/her accumulated points.

Students with Disabilities: Students who believe that they require special accommodations as a result of a disability are urged to contact the Office of Accessibility (330-972-7928) to make appropriate arrangements.

Taking an Incomplete for the Class: If you need to take an incomplete for the class, please notify your instructor. It is your responsibility to know the University policy.

Course Schedule and Course Work

| Date | Tool | Detailed Topical Area | Course Work and Due Dates |
|-------|-------|---|---------------------------|
| 08/27 | | Welcome Syllabus Online Skill Assessment | |
| 08/29 | Excel | Module 1: Introduction to Spreadsheet Modeling <ul style="list-style-type: none"> Deterministic, Stochastic and Optimization Models Formulas/Formatting/Printing/Functions | |
| 09/05 | Excel | Module 1: Introduction to Spreadsheet Modeling (continued) Lab | |
| 09/10 | Excel | Module 2: Applications in Marketing, Sales and Supply Chain Case Study 2: New Product Decision Making Techniques Covered: <ul style="list-style-type: none"> Relative/absolute cell references Structural referencing (named ranges) Advanced formulae LookUp Tables Linking disparate workbooks Dynamic linking Updating links Integrating and manipulating data from external sources Data Validation | SimNet Assessment |
| 09/12 | Excel | Case Study 2 (continued) | |
| 09/17 | Excel | | Quiz 1 |

| Date | Tool | Detailed Topical Area | Course Work and Due Dates |
|-------|-------|--|---------------------------|
| 09/19 | Excel | Case Study 3: Sales and Marketing and Sales Data Analysis Techniques Covered: <ul style="list-style-type: none"> • Research Insight • Importing • Defining, computing & applying measures of central tendency/dispersion (mean, median, quartiles, mode) • Basic measures of dispersion (standard deviation and range) • Differences and uses of different forms of data (nominal, ordinal, interval, ratio) • Populations vs. Samples • Charting • Filtering • Sorting • Subtotals, including frequency counts • Pivot Tables | Case Study 2 |
| 09/24 | Excel | Case Study 3 (continued) | |
| 09/26 | Excel | Case Study 4: Warehousing and Distribution Decision Making Techniques Covered: <ul style="list-style-type: none"> • Solver • Goal-Seek • Advanced formulae | Case Study 3 |
| 10/01 | Excel | Case Study 4 (continued) | |
| 10/03 | Excel | Module 3: Applications in Corporate Finance & Investments Case Study 5: Investment Portfolio Analysis Techniques Covered: <ul style="list-style-type: none"> • Advanced formulae • Charting & Presentations • Grouping data • Scenarios/What-if Analysis • Data Tables/Break Even Analysis | Case Study 4 |
| 10/08 | | Case Study 5 (continued) | |
| 10/10 | Excel | Case Study 6: Loan Analysis Techniques Covered: <ul style="list-style-type: none"> • Advanced Formulae • Functions • Goal Seek | Case Study 5 |
| 10/15 | | Case Study 6 (continued) | |
| 10/17 | Excel | | Quiz 2 |

| Date | Tool | Detailed Topical Area | Course Work and Due Dates |
|-------------|-----------------|---|----------------------------------|
| 10/22 | Excel | Case Study 7: Depreciation Schedule Analysis Techniques Covered: <ul style="list-style-type: none"> • Functions • What-if analysis • Change tracking and collaboration • Goal seek | Case Study 6 |
| 10/24 | | Case Study 7 (continued) | |
| 10/29 | Excel | Module 4: Applications in Accounting Case Study 8: Accounting Transactions Summary and Analysis Techniques Covered: <ul style="list-style-type: none"> • Advanced Formulae • Breakeven analysis • What if analysis • Applying measures of central tendency | Case Study 7 |
| 10/31 | | Case Study 8 (continued) | |
| 11/05 | Excel | Case Study 9: Income Tax Analysis (continued) Techniques Covered: <ul style="list-style-type: none"> • Advanced Formulae • Lookup Tables • Goal Seek • Macros | Case Study 8 |
| 11/07 | | Case Study 9 (continued) | |
| 11/12 | Excel | Module 5: Applications in Human Resources Case Study 10: Employee and Payroll Decision Making Techniques Covered: <ul style="list-style-type: none"> • Working with large datasets • Lookup Tables • Filtering • Multiple worksheets linking • Advanced formulas and macros • Charting and presentations | Case Study 9 |
| 11/14 | Excel | Case Study 10 (continued) | |
| 11/19 | Access Excel | Module 6: Linking Multiple Spreadsheets & Datasets with Access Case Study 11: Import, Link and Integrate Spreadsheets into Tables Techniques Covered: <ul style="list-style-type: none"> • The need for more powerful databases • Relational database concept • Excel vs. a relational database • Table creation & table field properties • Importing spreadsheets • Table relationships | Case Study 10 |

| Date | Tool | Detailed Topical Area | Course Work and Due Dates |
|-------------|-----------------|--|----------------------------------|
| 11/21 | Access Excel | Case Study 11 (continued) | |
| 11/26 | Access Excel | | Quiz 3 |
| 11/28 | Excel | <p>Module 7: Data Warehouses & Integrating Data from Multiple Sources</p> <p>Case Study 12: Conduct Benchmark Comparisons</p> <p>Techniques Covered:</p> <ul style="list-style-type: none"> • Linking disparate spreadsheets & datasets from Research Insight & Audit Analytics • Building and working with sets in Research Insight • Lookup Tables • Auto, advanced and custom filters • Conditional formatting • Concatenation • Text to columns • Transposing data • Converting soft text to hard text • Summarizing data with measures of central tendency, frequency tables, charts & graphs • Pivot Tables & Pivot Charts | Case Study 11 |
| 12/03 | Access Excel | Case Study 12: Analyze Large Datasets with Access Queries (continued) | |
| 12/05 | Excel | Ethics Exercise | Case Study 12 |
| 12/10 | | Course wrap-up / Review for Final | |
| TBD | | Final Exam During Exam Week | |