

Principles of Agribusiness Finance Syllabus

AEDECON 3103 Spring 2024

Course Information

- **Course times and location:** Tuesday and Thursday 12:45pm-2:05pm (Howlett Hall 164)
- **Credit hours:** 3
- **Mode of delivery:** In Person

Instructor

- **Name:** Daniel Martin
- **Email:** martin.919@osu.edu
- **Phone Number:** (614)288-8762
- **Preferred means of communication:**
 - My preferred method of communication for questions is **email**. Please email me directly at the address above, rather than through Carmen, as I will be able to respond more promptly.
 - My class-wide communications will be sent through the Announcements tool in CarmenCanvas. Please check your [notification preferences](https://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to be sure you receive these messages.

Teaching Assistant

- **Name:** Xufeng Liu
- **Email:** liu.7133@buckeyemail.osu.edu

Course Prerequisites/Co-Requisites

2001 (200), 2001H (200H), Econ 2001 (200), or 2001H (201H); and AEDEcon 2105 (412) or AcctMIS 2200 (211); and AEDEcon 2005 (205), AEE 387, AnimSci 2260 (260), ComLdr 3537, HCS 2260 (260), Stat 1430 (133), or 1450 (145). Not open to students with credit for 403.



Course Description

This course is about decision making by organizations with an eye toward value creation. Topics to be addressed include the accounting system, ratio analysis, time value of money, capital budgeting, risk analysis, hedging, and capital structure.

Course Learning Goals and Outcomes

Learning Outcomes

By the end of this course, students should successfully be able:

- To understand the difference between accounting data and financial data
- To understand the difference between book values and market values
- To appreciate the difference between income and cash flows
- To understand how to interpret numerous financial ratios
- To understand the importance of the time value of money
- To understand the purpose and techniques of the capital budgeting process
- To understand the relationship between risk and return
- To understand the importance of the capital structure decision
- To understand why capital structure matters and what factors determine its importance
- To understand how to measure the various cash flows to/from a business
- To calculate the present/future value(s) of varying streams of cash flows
- To calculate and interpret net present value, internal rate of return, profitability indices, etc.
- To resolve ranking conflicts between capital budgeting decision variables
- To conduct risk/uncertainty evaluations using scenario and sensitivity analyses and Monte Carlo simulation
- To estimate the costs of various sources of capital
- To estimate the weighted average cost of capital
- To appreciate the fundamental tenets of sound financial decision making
- To appreciate wide range of applications of for financial decision theory
- To appreciate the critical role the time value of money plays in our lives



How This Course Works

Mode of delivery: This course is 100% in person. Much of the coursework will be completed in the classroom during regularly scheduled class sessions. Homework assignments will be found in Carmen and can be completed according to your schedule throughout the course.

Pace of course activities: This course is divided into 5 thematic modules. Successive modules build upon the content of the prior modules. Each module will follow a consistent format consisting of individual and team quizzes instructor input, and in-class exercises completed in teams, along with homework assignments.

Credit hours and work expectations: This is a [3] credit-hour course. According to [Ohio State bylaws on instruction](https://go.osu.edu/credithours) (go.osu.edu/credithours), students should expect around [3] hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to [6] hours of homework (reading and assignment preparation, for example) to receive a grade of [C] average.

Attendance and participation requirements: Research shows regular participation is one of the highest predictors of success. With that in mind, I have the following expectations for everyone's participation:

- **Attendance: twice per week**
Attendance of class sessions is strongly recommended and has an impact on your final grade for the course.

TopHat: I will be using Top Hat to take attendance each day and on occasion to document engagement using polling and for quizzing (non-graded). Once you have registered in AEDE 3103 Spring 2024 in TopHat using our **Join Code of 881619** you will be able to document your attendance and participation. When you come into the classroom you will see the TopHat code for attendance that day on the screen or the chalkboard in the front of the room. You will use your phone or tablet to enter the code into Top Hat. When you do that, your attendance will be recorded. I will check the number of students present in the room against the Top Hat attendance record to assure accuracy. Sharing the code for attendance is not permitted. When polling or answering quiz questions, your answers will be recorded in TopHat and will demonstrate that you are in the room and actively participating. If you do not have your phone or tablet with you, just sign in with me at the start of class and when polled record your answers to submit to me at the end of class.

Getting Started: If you are new to Top Hat you can simply begin by navigating to www.tophat.com and clicking on "Sign Up". Our course Join Code in **TopHat is 881619**. If you have been using Top Hat in the past, you will only need to add in the course code above.

If you need help you can contact support@tophat.com



Course Materials, Fees and Technologies

Required Materials and/or Technologies

- Ross, S.A., R.W. Westerfield, B.D. Jordan. "Fundamentals of Corporate Finance. 13th ed. The McGraw-Hill/Irvin, 2022. ISBN 978-1-260-77239-5

Required Equipment

- **Computer:** current Mac (MacOS) or PC (Windows 10) with high-speed internet connection.
- **Webcam:** built-in or external webcam, fully installed and tested
- **Microphone:** built-in laptop or tablet mic or external microphone
- **Other:** a mobile device (smartphone or tablet) to use for BuckeyePass authentication

If you do not have access to the technology you need to succeed in this class, review options for [technology and internet access](https://go.osu.edu/student-tech-access) (go.osu.edu/student-tech-access).

Required Software

Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Visit the [installing Office 365](https://go.osu.edu/office365help) (go.osu.edu/office365help) help article for full instructions.

CarmenCanvas Access

You will need to use [BuckeyePass](https://buckeyepass.osu.edu) (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](https://go.osu.edu/add-device) (go.osu.edu/add-device) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes, good for 365 days, that can each be used once.
- [Install the Duo Mobile application](https://go.osu.edu/install-duo) (go.osu.edu/install-duo) on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at [614-688-4357 \(HELP\)](tel:614-688-4357) and IT support staff will work out a solution with you.



Technology Skills Needed for This Course

- Basic computer and web-browsing skills
- [Navigating CarmenCanvas](https://go.osu.edu/canvasstudent) (go.osu.edu/canvasstudent)
- [CarmenZoom virtual meetings](https://go.osu.edu/zoom-meetings) (go.osu.edu/zoom-meetings)
- [Recording a slide presentation with audio narration and recording, editing and uploading video](https://go.osu.edu/video-assignment-guide) (go.osu.edu/video-assignment-guide)

Technology Support

For help with your password, university email, CarmenCanvas, or any other technology issues, questions or requests, contact the IT Service Desk, which offers 24-hour support, seven days a week.

- **Self Service and Chat:** go.osu.edu/it
- **Phone:** [614-688-4357 \(HELP\)](tel:614-688-4357)
- **Email:** servicedesk@osu.edu



Grading and Faculty Response

How Your Grade is Calculated (more to come on this)

Assignment Category	Weight
Homework assignments	25 – 50%
Individual Quizzes	5 – 15%
Team Quizzes	20 – 30%
In-class exercises	10 – 30%
Attendance/Participation/Peer evaluations	5 – 10%
Total	100%

See [CarmenCanvas](#) for due dates.

Descriptions of Major Course Assignments

Homework assignments

Description: There will be several homework assignments throughout each module. You may work with other students on the homework assignments, but you have to submit a separate assignment.

Quizzes

Description: There will be 5 in-class quizzes. These quizzes will be taken both individually and in teams, that I will assign. Team assignments will be the same throughout the semester and can be found in Carmen.

In class exercises

Description: Given the emphasis on “learning-by-doing” in this course, a significant portion of class time will be devoted to working in your teams to solve problems, make decisions, evaluate scenarios, etc.



Academic integrity and collaboration: Although collaboration is encouraged, your written assignments, including homework assignments, must be your own original work. In formal assignments, you should follow APA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in but no one else should revise or rewrite your work.

Late Assignments

Please refer to Carmen for due dates. Due dates are set to help you stay on pace and to allow timely feedback that will help you complete subsequent assignments.

Homework assignments submitted within 24 hours after the deadline will receive a grade penalty equal to 10% of the total points except in documented emergencies (illness, family emergency, etc.). Work submitted after 24 hours past the deadline will receive zero points (0). Students who have missed assignments or know that they will miss an assignment should contact their instructor to discuss any missed assignments.

Instructor Feedback and Response Time

[Example: I am providing the following list to give you an idea of my intended availability throughout the course. Remember that you can call [614-688-4357 \(HELP\)](tel:614-688-4357) at any time if you have a technical problem.

- **Preferred contact method:** If you have a question, please contact me first through my Ohio State email address. I will reply to emails within **24 hours on days when class is in session at the university**.
- **Class announcements:** I will send all important class-wide messages through the Announcements tool in CarmenCanvas. Please check [your notification preferences](https://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to ensure you receive these messages.
- **Grading and feedback:** For assignments submitted before the due date, I will try to provide feedback and grades within **seven days**. Assignments submitted after the due date may have reduced feedback and grades may take longer to be posted. Homework solutions will be posted to Carmen promptly after their respective due dates.



Grading Scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E



Other Course Policies

Discussion and Communication Guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online. I will provide specific guidance for discussions on controversial or personal topics.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

Academic Integrity Policy

See [Descriptions of Major Course Assignments](#) for specific guidelines about collaboration and academic integrity in the context of this online class.

Ohio State's Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute Academic Misconduct.

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: Any activity that tends to compromise the academic integrity of the University, or subvert the educational process. Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an excuse for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.



If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- [Committee on Academic Misconduct](http://go.osu.edu/coam) (go.osu.edu/coam)
- [Ten Suggestions for Preserving Academic Integrity](http://go.osu.edu/ten-suggestions) (go.osu.edu/ten-suggestions)
- [Eight Cardinal Rules of Academic Integrity](http://go.osu.edu/cardinal-rules) (go.osu.edu/cardinal-rules)

Copyright for Instructional Materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or Email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Diversity

The Ohio State University affirms the importance and value of diversity of people and ideas. We believe in creating equitable research opportunities for all students and to providing programs and curricula that allow our students to understand critical societal challenges from diverse perspectives and aspire to use research to promote sustainable solutions for all. We are committed to maintaining an inclusive community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among all members; and encourages each individual to strive to reach their own potential. The Ohio State University does not discriminate on the basis of age, ancestry, color, disability, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, race, religion, sex, gender, sexual orientation, pregnancy, protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment.

To learn more about diversity, equity, and inclusion and for opportunities to get involved, please visit:

- <https://odi.osu.edu/>
- <https://odi.osu.edu/racial-justice-resources>
- <https://odi.osu.edu/focus-on-racial-justice>
- <https://cbssc.osu.edu/>

In addition, this course adheres to **The Principles of Community** adopted by the College of Food, Agricultural, and Environmental Sciences. These principles can be found at <https://cfaesdei.osu.edu/about-us/cfaes-principles-community>. For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (<https://cfaesdei.osu.edu/>). If you have been a victim of or a witness to harassment or discrimination or a bias incident, you can report it online and anonymously (if you choose) at <https://equity.osu.edu/>.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing.

If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th floor of the Younkin Success Center and 10th floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available 24/7 **by dialing 988 to reach the Suicide and Crisis Lifeline.**

For students in the College of Food, Agricultural, and Environmental Sciences, David Wirt, wirt.9@osu.edu, is the CFAES embedded mental health counselor on the Columbus campus. To contact David, please call 614-292-5766. Students should mention their affiliation with CFAES if interested in speaking directly with David.

Religious Accommodations

It is Ohio State's policy to reasonably accommodate the sincerely held religious beliefs and practices of all students. The policy permits a student to be absent for up to three days each academic semester for reasons of faith or religious or spiritual belief.

Students planning to use religious beliefs or practices accommodations for course requirements must inform the instructor in writing no later than 14 days after the course begins. The instructor is then responsible for scheduling an alternative time and date for the course requirement, which may be before or after the original time and date of the course requirement. These alternative accommodations will remain confidential. It is the student's responsibility to ensure that all course assignments are completed.

Weather or other short-term closing

Should in-person classes be canceled, I will notify you as to which alternative methods of teaching will be offered to ensure continuity of instruction for this class. Communication will be via CarmenCanvas, email and/or other mode of communication.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting Accommodations

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are isolating while waiting for a COVID-19 test result, please let me know immediately. Those testing positive for COVID-19 should refer to the Safe and Healthy Buckeyes site for resources. Beyond five days of the required COVID-19 isolation period, I may rely on Student Life Disability Services to establish further reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu.

Disability Services Contact Information

- Phone: [614-292-3307](tel:614-292-3307)
- Website: slds.osu.edu
- Email: slds@osu.edu
- In person: [Baker Hall 098, 113 W. 12th Avenue](#)



Accessibility of Course Technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations as early as possible.

- [CarmenCanvas accessibility](https://go.osu.edu/canvas-accessibility) (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- [CarmenZoom accessibility](https://go.osu.edu/zoom-accessibility) (go.osu.edu/zoom-accessibility)



Course Schedule

Refer to the CarmenCanvas course for up-to-date due dates.

Module	Topics	Weeks	Text Reference
1	Accounting, Cash Flows, and Ratio Analysis	1 - 3	Chapters 1 - 3
2	Time Value of Money	4 - 6	Chapters 5 and 6
3	Capital Budgeting	7 - 9	Chapters 9 and 10
Spring Break			
4	More on Capital Budgeting	10 - 12	Chapter 11
5	Capital Structure	13 - 14	Chapters 14 and 16

Course Topics

1. Module 1

- a. Goals of financial management
- b. Review of accounting principles such as accrual and historical cost-based accounting along with accounting for long-lived assets
- c. Income statement and balance sheet construction
- d. Differences between GAAP accounting and cash basis accounting
- e. Ratio analysis for performance evaluation through time and across companies

2. Module 2

- a. Time value of money relationships
- b. Discounting of a future cash flow(s) to an equivalent present value
- c. Compounding of a current cash flow(s) into an equivalent future value
- d. Comparison of single versus multiple cash flow scenarios
- e. Evaluation of annuities, growing annuities, perpetuities, and growing perpetuities
- f. Assessment of scenarios involving multiple distinct time frames, varying interest/growth rates, and variable cash flow patterns



3. Module 3

a. Capital budgeting

i. Project evaluation metrics and decision rules

1. Payback and discounted payback periods
2. Average accounting return
3. Net present value
4. Internal rate of return
5. Profitability index
6. Equivalent annual cost(s)

ii. Pro forma financial statements and cash flow forecasting

iii. Project ranking methods

1. Independent versus mutually exclusive projects
2. Capital rationing

iv. Constrained optimization

4. Module 4

a. Capital budgeting risk analysis

- i. Scenario analysis
- ii. Sensitivity analysis
- iii. Monte Carlo simulation

b. Breakeven analysis

- i. Accounting breakeven
- ii. Cash flow breakeven
- iii. Financial breakeven



5. Module 5

- a. Equity valuation
- b. Fixed income valuation
- c. Capital asset pricing model
- d. Weighted average cost of capital
- e. Miller and Modigliani theorems of capital structure
- f. The static theory of capital structure

