

**AEC 340: AGRICULTURAL FINANCE**  
**Texas A&M University-Commerce**  
**School of Agriculture**  
**Summer II, 2015**

**Syllabus**

**INSTRUCTOR:** Dr. Rafael Bakhtavoryan

Office: Agricultural Science Building, Room 154

Phone: (903) 886-5367

Email: [Rafael.Bakhtavoryan@tamuc.edu](mailto:Rafael.Bakhtavoryan@tamuc.edu) (please, use only this email address and put "AEC 340" in the subject of the email)

**CLASS SECTION:** 01W (Web-based)

**CLASS MEETING:** Web-based

**OFFICE HOURS:** By appointment only (email is the best way of communication for making appointments).

**REQUIRED READINGS:**

- **TEXTBOOK:** *Fundamentals of Agribusiness Finance* by Ralph W. Battles and Robert C. Thompson, Jr. Iowa State University Press, Iowa, 2000 (ISBN 0813820693).
- **POWERPOINT PRESENTATIONS:** These will be provided and are intended to supplement the textbook.

**FINANCIAL CALCULATOR:** A financial calculator is required for this course and it is strongly recommended that you get one for homework assignments and exams, where you will normally be required to deal quickly with cash flow problems. The *Texas Instrument BA II Plus* financial calculator is a good one to use for this course. Get one and learn how to use it right away. Step-by-step instructions on how to use the *Texas Instrument BA II Plus* financial calculator will be provided in the manual which will be made available to students at the beginning of the semester as well as in the PowerPoint presentations when numerical examples are discussed. Also, I strongly recommend that you watch YouTube videos on how to use *Texas Instrument BA II Plus* financial calculator. **Ultimately, it is the students' responsibility to know how to use financial calculator in this course.**

**PREREQUISITES:** MATH 1314 (MATH 141) or MATH 175 or Higher Math.

**COURSE DESCRIPTION:** The purpose of this course is to provide an understanding of financial concepts used in agribusiness, farming, and financial institutions including analysis based on financial statements, risk, and investment opportunities.

**STUDENT LEARNING OUTCOMES:** After studying all materials and resources presented in this course, students will be able to:

1. Describe the principle of time-value of money and apply this concept to valuing cash flows and capital investment opportunities.
2. Read and analyze financial statements for the purpose of evaluating investment decisions.
3. Understand the conceptual relationship between the expected return and the relevant risk of individual assets and a portfolio of assets.
4. Understand the concept of cost of capital and role of leverage and apply these concepts in the determination of the optimal capital structure.

## **LECTURE TOPICS:**

### **Chapter 1: Introduction to Agribusiness Finance**

The Role of the Financial Manager; Legal Forms of Business Organization; Objective of the Firm: Maximize Wealth; Agribusiness Finance; Agribusiness Producers; Flow of Funds in the Economy; Importance of Finance to Agribusiness; Domestic Trends in Agribusiness Finance; International Trends.

### **Chapter 2: Agribusiness Loans: Legal Issues, Terms, and Interest Rates**

Promissory Note; Parties to Loan Transactions; Security Agreement; Mortgages Versus Deeds of Trust; Other Loan Terminology; Life Cycle of a Loan; Default and Foreclosure; Determinants of Interest Rates.

### **Chapter 3: Time Value of Money, Loan Calculations, and Analysis**

Part 1: The Time Value of Money; The Process of Compounding; The Process of Discounting; Simple Interest vs. Compound Interest; Intraproduct Compounding and Discounting; Inflation or Purchasing Power Implications; Effective Annual Rate (EAR or EFF); Calculating Interest Rate and the Number of Periods; The Rule 72.

Part 2: Annuities; Future Value of Annuities; Present Value of Annuities; Perpetuities; Annuities with Intraproduct Compounding; Amortized Loans; Building a Loan Amortization Schedule; Finding an Interest Rate and the Number of Periods with Annuities.

Part 3: Determining the Annual Percentage Rate; Refinance Analysis; Cash Budgeting.

### **Chapter 4: Capital Budgeting and Leasing**

Part 1: The Cost of Capital; The Payback Method; Simple Rate of Return.

Part 2: Net Present Value; Benefit-Cost Ratio; Internal Rate of Return; Income Taxes and Capital Budgeting; Leases and Leasing; Real Property; Personal Property.

### **Chapter 5: Financial Statements**

Financial Statements; The Income Statement; The Statement of Owner's Equity; The Balance Sheet; Generally Accepted Accounting Principles and the Farm Financial Standards Council; The Accrual-Adjusted Income Statement; The Statement of Cash Flows.

### **Chapter 6: Financial Statement Analysis**

Ratio Analysis; Liquidity Ratios; Solvency Ratios; Profitability Ratios; Repayment Capacity Ratios; Financial Efficiency Ratios; Loan-to-Value Ratio; Common-Size Statements; Horizontal Analysis.

### **Chapter 7: Risk in Agribusiness**

Financial and Business Risk; Risk and Return; Attitudes toward Risk; Sources of Business Risk in Agriculture; Risk Management in Agriculture.

**GRADING POLICY:** Your grade for the semester will be a weighted average of homework assignments and four equally weighted exams.

|                      |     |
|----------------------|-----|
| Homework assignments | 20% |
| Exam 1               | 20% |
| Exam 2               | 20% |
| Exam 3               | 20% |
| Exam 4               | 20% |

Note: The lowest exam grade can be replaced with an optional comprehensive final exam, if you decide to take it.

**GRADING SYSTEM:** Course grading is done according to the following scale:

| <u>Range</u> | <u>Letter Grade</u> |
|--------------|---------------------|
| 90-100       | A                   |
| 80-89.99     | B                   |
| 70-79.99     | C                   |
| 60-69.99     | D                   |
| Less than 60 | F                   |

**HOMEWORK ASSIGNMENTS (HAs):** Homework assignments are assigned regularly (see the course schedule below) and must be completed individually. As a form of experiential learning, HAs help students sharpen their analytical skills. Students must turn in their HAs via eCollege according to the course schedule. HAs will become active when a new chapter is started and must be completed by 11:59 p.m. (Central Time) on the due date. While it is my strong belief that you should be able to do the HAs after reading the chapter both in the textbook and the PowerPoint presentation, you can ask questions related to HAs by emailing them to me. I will do my best to answer them **only during business hours** by guiding you in the right direction or providing you with hints. No late HAs will be accepted and a grade of zero will be assessed for missed HAs.

**EXAMS:** Exams will be administered through eCollege (see the course schedule below for specific exam dates). Exams will be made available for taking at 9:00 a.m. (Central Time) on the due date and have to be completed by 11:59 p.m. (Central Time) on the due date. Exams will be timed and you will have 1 hour and 30 minutes to complete the exam. Make sure you have internet access ahead of time and that your laptop battery is fully charged. No make-up exams will be given. If an exam is missed a grade of zero will be assessed for it. Exams have to be completed individually using your own student account and there should be no collaboration or sharing of work with your classmates on the exams.

**PROCEDURE FOR APPEALING GRADES:** You may appeal a grade received on any assignment within 2 days after you receive the grade. There must be sufficient documentation (the graded assignment) to substantiate your claim. If there is no documentation, no grade change will occur.

## **A ROADMAP FOR SUCCESS IN AEC 340 & MY EXPECTATIONS OF YOU:**

1. Read the assigned textbook readings and PowerPoint slides.
2. Complete and turn in course assignments and exams at the scheduled time.
3. Use the web to actively seek out other finance sources that fit your learning style and help you better understand the material.
4. Be prepared for exams.

**COURSE SCHEDULE:** A tentative course schedule detailing the material that will be covered in each class and the dates of HAs and exams is provided at the end of the syllabus. This course schedule is subject to change and we will make adjustments as needed. Students will be notified of any changes ahead of time.

**eCOLLEGE:** Class-related material and information will be available on eCollege website (<http://www.online.tamuc.org/>). It is your responsibility to check the website and download the appropriate class material. You will need your CWID and password to log in to the course. If you do not know your CWID or have forgotten your password, contact Technology Services at 903.468.6000 or [helpdesk@online.tamuc.org](mailto:helpdesk@online.tamuc.org).

The Student Orientation/Tutorial link for eCollege is available under the “My Course List” subtab of the “My Courses” tab of the eCollege website. There you will see the following link: “.NExT Student Orientation Tutorial”. The main objective of this tutorial is for you to learn how to submit documents, take online exams, post comments on discussion boards, and do many other things on eCollege.

## **IMPORTANT DATES:**

**July 13<sup>th</sup>**, Monday: First day of classes of Summer II.

**August 13<sup>th</sup>**, Thursday: Summer II last class day and finals.

**STUDENTS WITH DISABILITIES:** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

**Office of Student Disability Resources and Services**

**Texas A&M University-Commerce**

**Gee Library**

**Room 132**

**Phone (903) 886-5150 or (903) 886-5835**

**Fax (903) 468-8148**

[StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)

**COUNSELING CENTER:** A student that faces a crisis or a serious and unforeseeable event that affects his/her class performance must contact the Counseling Center, Student Services Building, Room 204, Phone (903) 886-5145. If important class material or course assignments are missed because of such crisis or event, the student must contact the instructor as soon as possible.

**GENERAL POLICIES FOR CLASSES:** All students enrolled at the University will follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. See Student's Guide Handbook, Rules and Procedures, Code of Student Conduct (<http://www.tamuc.edu/CampusLife/documents/studentGuidebook.pdf>).

**ACADEMIC INTEGRITY:** Students must follow the *Code of Student Conduct* in the *Student Guidebook* (<http://web.tamuc.edu/admissions/studentGuidebook.aspx>). Any form of plagiarism or academic dishonesty will not be tolerated. Academic honesty is defined on *Chapter 13 Students (Academic)* of the *TAMUC Rules and Procedures* (<http://web.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/>):

“Academic dishonesty” includes, but is not limited to, plagiarism (the appropriation or stealing of the ideas or words of another and passing them off as one’s own), cheating, collusion (the unauthorized collaboration with others), and abuse (destruction, defacing, or removal) of resource material.

**TECHNOLOGY REQUIREMENTS:** The following information has been provided to assist you in preparing to use technology successfully in this course.

- Internet access/connection – high speed recommended (not dial-up)
- Word Processor (i.e. MS Word or Word Perfect)

Additionally, the following hardware and software are necessary to use eCollege:

Our campus is optimized to work in a Microsoft Windows environment. This means our courses work best if you are using a Windows operating system (XP or newer) and a recent version of Microsoft Internet Explorer (6.0, 7.0, or 8.0).

Your courses will also work with Macintosh OS X along with a recent version of Safari 2.0 or better. Along with Internet Explorer and Safari, eCollege also supports the Firefox browser (3.0) on both Windows and Mac operating systems.

It is strongly recommended that you perform a “Browser Test” prior to the start of your course. To launch a browser test, login in to eCollege, click on the ‘myCourses’ tab, and then select the “Browser Test” link under Support Services.

**AEC 340: Agricultural Finance (Web-based)**  
**Course Schedule, Summer II, 2015**  
**7/13/2015 through 8/13/2015**

| Lecture #     | Weekday | Date   | Topic/All assignments are due on specific dates listed below by 11:59 p.m.  |
|---------------|---------|--------|---|
| <b>July</b>   |         |        |   |
| 1             | Mon     | 13-Jul | Syllabus, eCollege tutorial,<br>Chapter 1. Introduction to Agribusiness Finance<br>Chapter 2. Agribusiness Loans: Legal Issues, Terms, and Interest Rates |
| 2             | Tue     | 14-Jul | Chapter 2. Continued, Homework Assignment 1   |
| 3             | Wed     | 15-Jul | Chapter 3. Time Value of Money, Loan Calculations & Analysis_Part 1   |
| 4             | Thur    | 16-Jul | Chapter 3. Part 1 Continued, Homework Assignment 2  |
| 5             | Fri     | 17-Jul | <b>EXAM 1. Chapters 1, 2, and Chapter 3_Part 1</b>  |
| 6             | Mon     | 20-Jul | Chapter 3. Time Value of Money, Loan Calculations & Analysis_Part 2   |
| 7             | Tue     | 21-Jul | Chapter 3. Part 2 Continued, Homework Assignment 3  |
| 8             | Wed     | 22-Jul | Chapter 3. Time Value of Money, Loan Calculations & Analysis_Part 3   |
| 9             | Thur    | 23-Jul | Chapter 3. Part 3 Continued, Homework Assignment 4  |
| 10            | Fri     | 24-Jul | <b>EXAM 2. Chapter 3_Part 2 and Chapter 3_Part 3</b>  |
| 11            | Mon     | 27-Jul | Chapter 4. Capital Budgeting and Leasing_Part 1   |
| 12            | Tue     | 28-Jul | Chapter 4. Part 1 Continued, Homework Assignment 5  |
| 13            | Wed     | 29-Jul | Chapter 4. Capital Budgeting and Leasing_Part 2   |
| 14            | Thur    | 30-Jul | Chapter 4. Part 2 Continued, Homework Assignment 6  |
| 15            | Fri     | 31-Jul | <b>EXAM 3. Chapter 4_Part 1 and Chapter 4_Part 2</b>  |
| <b>August</b> |         |        |   |
| 16            | Mon     | 3-Aug  | Chapter 5. Financial Statements   |
| 17            | Tue     | 4-Aug  | Chapter 5. Continued, Homework Assignment 7   |
| 18            | Wed     | 5-Aug  | Chapter 6. Financial Statement Analysis   |
| 19            | Thur    | 6-Aug  | Chapter 6. Continued, Homework Assignment 8   |
| 20            | Fri     | 7-Aug  | <b>EXAM 4. Chapters 5 and 6</b>   |
| 21            | Mon     | 10-Aug | Chapter 7. Risk in Agribusiness   |
| 22            | Tue     | 11-Aug | Chapter 7. Continued, Homework Assignment 9   |
| 23            | Wed     | 12-Aug | Study day   |
| 24            | Thur    | 13-Aug | <b>FINAL EXAM (OPTIONAL), Chapters 1 through 7</b>  |

NOTE: The instructor reserves the right to make changes to the syllabus and the course schedule as needed. If changes are made, you will be notified of them ahead of time.