



University of Massachusetts Amherst
Department of Resource Economics

Course ID: Res-Econ 112-01 SPRING 2020
Course Title: **Computing: Foundations to Frontiers**
Meetings: TuThu 8:30-9:45am 01/21/2020 - 04/29/2020
Classroom: Integrative Learning Center S120

Instructor: **Dr. Miah Tran**

Teaching Assistants:(to be updated)

Office Location: Stockbridge Hall 217C
Office Hours: TuThu 10-11am and 2:30-3pm and by appointment
Phone: (413) 545-5723

Need help?

- For questions related to class lectures, homework, or exams, go to **Help Desk for ResEcon 112** section on **Moodle**. You also can go to see teaching assistants or the instructor during office hours (check Moodle).
- For personal questions, email: **resecon112@gmail.com**

COURSE WEB PAGE: MOODLE (<https://moodle.umass.edu/>) I will post class contents, learning materials, office hours, assignments, grades, etc. in Moodle. *It is important that you check the website frequently!*

COURSE DESCRIPTIONS AND OBJECTIVES: This course focuses on important computing concepts and techniques, including data analysis and modeling using MS Excel spreadsheets, relational data management using MS Access and data management and analysis using SAS. On top of the IT learning outcomes, this course will help you train your critical thinking, strengthen your ability to troubleshoot problems, and efficiently work in groups of diverse students. These capabilities will give you a competitive edge in job seeking or pursuing advanced studies.

Since this class is designed to create a team-based learning environment (flipped-classroom), success in this course requires collaboration and cooperation between teammates and participation in class activities and assignments. You will learn how teamwork contributes to individual and collective success. **NO FREE RIDER IS ALLOWED!** Remember we don't have "traditional" lectures where I teach you the materials. Instead, you are asked to come to class prepared while class time is devoted to discussions and class activities. Your performance will be assessed in a variety of means such as projects, in-class assignments, homework, exams and peer evaluations. It means you must work hard individually as well as in a team. As an instructor, I will support you as much as I can so that you obtain the best experience learning exciting modern computing tools, learning how to work in teams and developing your critical thinking and problem solving skills. You also have several teaching assistants to rely on when you have difficulty. Don't be afraid to ask!

TEAM-BASED LEARNING: Team-based learning is a type of flipped classrooms that are designed to increase students' in-class interactive engagement and focus on applications of the knowledge. Our class consists of over 90 students who will be immediately formed into groups of 8 or 9 students on the first day of class. Your group members might change during the first two weeks of the semester due to drop-outs and add-ins. Once you form a group, you will work together for the whole semester. Since each group consists of students of different backgrounds, you will benefit from your teammates' unique perspectives and experience. So be respectful to your teammates! To be successful in this class, there are three primary steps which should be done by each team member: (1) Preparation outside of class, (2) Active engagement in class and (3) Self-reflection.

- **Preparation outside of class:** The flipped classroom models require you to learn basic concepts outside of class to be further developed in class. You will learn the concepts and techniques of Spreadsheet and Database learning outside of class time. You can learn from any individual resources, tutorials or videos. Some of them might be found in Moodle.
- **Active engagement in class:** Use your class time effectively by interacting with your teammates, your instructor and teaching assistants.
- **Self-reflection:** After each assignment, you should step back and jot down your thoughts over the course of arriving at the solutions. What challenges did you face? How did you overcome them? How did you work with your teammates to reach a common goal? What should you have done better? These reflective assignments will not only reinforce your learning but also help you build up your intellectual strength. The self-reflection training is valuable for your long-term personal and professional development.

TA's OFFICE HOURS: My teaching assistants will hold various office hours during the semester. They are friendly and resourceful. Take this chance to improve your computing skills. But keep in mind that you only learn when you work on the assignments on your own and ask for help on unresolved issues. Refrain from going to office hours unprepared!

Number of Course Credits: 3

Prerequisite(s): None.

Text(s): *None required*

REQUIRED SOFTWARE: You are responsible for obtaining access to MS Excel 2013, MS Access 2013 and SAS 9.4. MS Excel (for Mac and Windows computers) and Access (only for Windows computers) are free for registered resource economics students at UMass. SAS is available for purchase at \$125 through the IT Help Center. However, if you don't want to invest in these packages, most of the computers in Du Bois Library, Fine Arts Center and Morrill III building have these software packages installed.

GRADE POLICIES:

Components =====	Contents =====	Weights =====
3 Midterms (3 @ 15% each)	Excel, Access, SAS	45%
Final Exam (optional)	Comprehensive	
HW assignments (best 7 out of 8)	3 for Excel, 3 for Access and 2 for SAS	25%
Inclass team-based exercises		10%
Group projects	1 for Excel and 1 for SAS	20%
<i>Total</i>		<i>100%</i>

Letter Grade Distribution: *Total scores are less than or equal to*

59.99	62.99	66.99	69.99	72.99	76.99	79.99	82.99	86.99	89.99	92.99	>= 93
F	D-	D	D+	C-	C	C+	B-	B	B+	A-	A

Grading Details:

- **Exams:** There are three midterm exams and one final exam. Midterm exams are not comprehensive: each corresponds to a different component of the course (Excel, Access or SAS). And yes, your final exam is optional! It means you can skip the final exam if you don't want to. The final exam, if taken, accounts for 15% of the total grade. If your grade for the final exam is lower than any of the midterms, it will be dropped. If you didn't do well in or missed one of the three midterms, this is your only chance to make up. Remember that there is no other make-up exam given unless the student has the university-approved reasons for not taking the tests as scheduled and provides all the written documents under such circumstances (see details in the Exam policies).
- **Homework Assignments:** There are eight tutorial assignments throughout the semester. The lowest score will be dropped. The instructions are very detailed and most of the time you can finish your homework on your own. Students are expected to work their homework independently. **Offering** and **accepting** solutions from others is an act of **plagiarism**, which is a serious offense and all involved parties will be penalized according to the Academic Honesty Policy. Discussion amongst students is encouraged, but when in doubt, direct your questions to the professor or TAs. Also, do not wait till the last minute to do your homework since it might take longer than you expect. Doing it at least two or three days before deadlines will give you more time to absorb the knowledge, attempt different methods to reach the answers or seek help when needed.
 - You have one week from the date of grade release to question about your grades. Every request after one week won't be considered.
 - If we can't open your assignment file due to your negligence, you will be asked to re-submit your work within a day with a penalty of 20% point deduction. If no responses are received after one day, a zero will be given to your work.
 - Late submissions are allowed for 20% points deducted within 3 days of deadlines, 50% points deducted after 3 days and less than 1 week. After one week of deadlines, no late submissions are allowed and zeros are given.
- **Inclass Team-based Exercises:** During the semester, you will be given multiple team-based exercises in class as opportunities to reinforce what you have learned from your homework tutorial assignments. Each complete submission is worth 1 point. While these are team-based exercises, you will only get points if you are present during those class times. As I said earlier, free riders are not allowed in this class.
- **Group Projects:** Two group projects will be assigned. Details will be posted on Moodle when the time comes.

EXAM POLICIES:

- Exams are closed book but you may have one 3"x5" double-sided notecard for the SAS exam (Exam 3 only).
- Make-up examinations will be scheduled for those students presenting a valid excuse for missing the examination (as outlined in "Academic Regulations" <https://www.umass.edu/registrar/sites/default/files/academicregs.pdf>). You will also need either a medical note or signed note or email from Dr. Tran to be able to take a make-up exam (you will need to present the note/email to the TA at the make-up exam). Doctor notes have to clearly specify which date and how many days you are allowed to take off.
- All make-up exams will be scheduled within a week of the exam date unless your doctor says otherwise. If you can't make it to the appointed date and time of the makeup exams, zeros will be given to your exam.
- Requests for a make-up exam have to be made before the exam. No makeup is allowed if the request is made after the exam.

ATTENDANCE POLICY:

Attendance is not a component of your final course grade. However, please be aware that we take attendance whenever there is an inclass team-based activity to make sure your participation in teamwork never goes unnoticed. While a couple of unavoidable absences are understandable, I advise you to frequently attend classes for better understanding of course contents and greater learning experience.

CLASSROOM DECORUM:

Students are expected to assist in maintaining a classroom environment that is conducive to learning. In order to assure that all students have the opportunity to gain from time spent in class, I propose certain basic standards of classroom respect be adhered to. Respect does not eliminate appropriate humor, enjoyment, or other indications of a comfortable and pleasant classroom community. However, there is an expectation that all participants in this course will:

- Display respect for all members of the classroom community: your instructor, TAs, your teammates, and fellow students.
- Attend and participate in group discussions, and other classroom activities.
- Avoid unnecessary disruptions during class such as private conversations, reading newspapers, speaking on cell phones, using a laptop for something other than current classroom work, arriving late or leaving early, eating, drinking, and sleeping during class.
- ***Please wait for the class to be formally dismissed before you start to pack up your things or get up to leave. If you must leave early, inform the instructor at the beginning of the class.***
- Avoid negative language that is considered racist, sexist, or homophobic or in other ways may exclude members of our campus and classroom community.

ACCOMMODATION STATEMENT:

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

ACADEMIC HONESTY STATEMENT:

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent (http://www.umass.edu/dean_students/codeofconduct/acadhonesty/).

Tentative Course Outline: Remember this is just a preliminary schedule. I may change it along the course to make your learning more efficient and valuable. Please check your Moodle frequently for updates!

Class meetings	Date	Contents	Deadlines
Class 1	1/21	<ul style="list-style-type: none"> Syllabus, Team Forming, Team Building Activities (Google Doc and Photo Taking!) Spreadsheet Readiness Self-Assessment assigned (not graded) Group Behaviors Survey assigned 	<ul style="list-style-type: none"> Class 3 Class 6
Class 2	1/23	<ul style="list-style-type: none"> Discuss the strategies for outside of class work. Get started with Excel! Excel Spreadsheet Tutorial Assignment 1 assigned 	<ul style="list-style-type: none"> Class 4
Class 3	1/28	<ul style="list-style-type: none"> Practice If-functions and VLOOKUP functions Correct the Spreadsheet Individual self-assessment exercise Excel Spreadsheet Tutorial Assignment 2 assigned 	<ul style="list-style-type: none"> Class 5
Class 4	1/30	<ul style="list-style-type: none"> Team Activity: Practice to reinforce what you have learnt from Excel tutorial 1 Excel Spreadsheet Tutorial Assignment 3 assigned 	<ul style="list-style-type: none"> Class 7
Class 5	2/4	<ul style="list-style-type: none"> Team Activity: Practice to reinforce what you have learnt from Excel tutorial 2 	
Class 6	2/6	<ul style="list-style-type: none"> Information about Excel Spreadsheet Exam (Exam 1) Modeling with Excel! Group Project 1_part 1 assigned (each member proposes an idea) 	<ul style="list-style-type: none"> Class 8
Class 7	2/11	<ul style="list-style-type: none"> Team Activity: Practice to reinforce what you have learnt from Excel tutorial 3 	
Class 8	2/13	<ul style="list-style-type: none"> Choose the best idea (among your members) for your group spreadsheet modeling project and share the "chosen" idea with the class Group Project 1_part 2 assigned (group submission) 	<ul style="list-style-type: none"> Class 10
Class 9	2/20	<ul style="list-style-type: none"> Class time for Group Project 1 	
Class 10	2/25	<ul style="list-style-type: none"> Review 1 	
Class 11	2/27	<ul style="list-style-type: none"> Excel Spreadsheet Exam Access Tutorial Assignment 1 (Creating Tables) assigned 	<ul style="list-style-type: none"> Class 13
Class 12	3/3	<ul style="list-style-type: none"> Get started with database management using MS Access! Access Tutorial Assignment 2 (Creating Queries) assigned 	<ul style="list-style-type: none"> Class 14
Class 13	3/5	<ul style="list-style-type: none"> Team Activity: Practice to reinforce what you have learnt from Access tutorial 1 Peer Evaluation 1 Access Tutorial Assignment 3 (Creating Forms) assigned 	<ul style="list-style-type: none"> Class 15
Class 14	3/10	<ul style="list-style-type: none"> Team Activity: Practice to reinforce what you have learnt from Access tutorial 2 Information about MS Access Database Management Exam (Exam 2) 	
Class 15	3/12	<ul style="list-style-type: none"> Team Activity: Practice to reinforce what you have learnt from Access tutorial 3 Review 2 	
Class 16	3/24	<ul style="list-style-type: none"> Get started with SAS! Team Activity: Intro SAS windowing environment SAS assignment 1 assigned 	<ul style="list-style-type: none"> Class 20
Class 17	3/26	<ul style="list-style-type: none"> MS Access Exam 	
Class 18	3/31	<ul style="list-style-type: none"> Team Activity: Read raw data into SAS 1 (internal and external) 	
Class 19	4/2	<ul style="list-style-type: none"> Team Activity: Read raw data into SAS 2 (List and Column Input Styles) 	
Class 20	4/7	<ul style="list-style-type: none"> Team Activity: Read raw data into SAS 3 (Modified List and Formatted Column Input Styles) SAS assignment 2 assigned 	<ul style="list-style-type: none"> Class 23
Class 21	4/9	<ul style="list-style-type: none"> Go through SAS assignment 2 Team Activity: Modify data in SAS 1 	
Class 22	4/14	<ul style="list-style-type: none"> Team Activity: Modify data in SAS 2 Group Project 2 assigned 	<ul style="list-style-type: none"> Class 25
Class 23	4/16	<ul style="list-style-type: none"> Team Activity: Modify data in SAS 3 Explain Group Project 2 	
Class 24	4/21	<ul style="list-style-type: none"> Class time for Group Project 2 Peer Evaluation 2 	
Class 25	4/23	<ul style="list-style-type: none"> Review 3 	
Class 26	4/28	<ul style="list-style-type: none"> SAS Exam 	
Final Week	TBA	<ul style="list-style-type: none"> Final Exam (check Spire for the exam date) 	