SIE 377 Fall 2018 Software for Engineers
MWF 9:00 AM - 9:50 AM, ILC Rm 119

Description of Course

Rapid prototyping of decision support systems using VBA and Python with Excel and external packages to solve for optimization, build models and simulations, and create scheduling and forecasting tools. Decision support system types include financial, supply chain, product portfolio and facility location and operations.

Course Prerequisites or Co-requisites

ECE 175 or CSC 127A or CSC 110

Instructor and Contact Information

Sherilyn Keaton, ENGR 256 A, (520) 621-9554, keatons@email.arizona.edu

Office Hours: MWF 1:15 – 3:00 PM and by appointment including phone and video conferences

Teaching Assistants: TBA

Course Format and Teaching Methods

The course will include lectures, in-class activities and discussion, projects, web-delivered content, and intermittent assessment.

Course information and material including lectures, announcements, quizzes, grades, and FAQs will be posted on the course's D2L site. Students are expected to visit the D2L site frequently to stay up-to-date during the semester.

Course Objectives and Expected Learning Outcomes

By the end of this course, students should be able to do the following:

- Determine, design, and implement the appropriate modeling approach for a problem solution.
- Construct and use spreadsheets, tools, object models and programs to help solve engineering problems.
- Apply the techniques and skills learned to develop customized solution software for decision support.

Required Texts or Readings

This textbook is required and reading assignments will begin immediately in this course.

VBA for Modelers: Developing Decision Support Systems with Microsoft® Office Excel®, S. Christian Albright, 5th edition, Cengage Learning, 2016.

Grading Scale and Distribution

Semester grades use Regular Grades:

A	90% - 100%
B	80% - 89%
C	70% - 79%
D	60% - 69%
E	0% - 59%

Semester grades will be based on the following components:

- Homework and Class Participation 20%
- First Midterm 20%
- Second Midterm 20%
- Project 20%
- Final Exam 20%

Project Due Date and Final Examination Date and Time

Project Deadline: TBD
Final Examination: Tuesday   12/11/2018 10:30 am - 12:30 pm

Absence and Class Participation Policy

Unless it is an emergency, you are required to send a request via email well in advance of any class or deadline that you might miss.

The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: https://deanofstudents.arizona.edu/absences

Participating in the course and attending lectures and other course events are vital to the learning process. As such, attendance is required at all lectures and discussion section meetings. Students who miss class due to illness or emergency are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences.

In-class activities and assignments are a collaborative effort. If you miss a class meeting you are required to do any in-class assignments that were done by the class the day that you missed. If the assignment was to be handed in then you are responsible for handing in the work as a solo activity and denote that on the work and in the submission folder. You are allowed to hand in up to 2 solo activities, after that you will receive no credit for the work.

Classroom Behavior Policy

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Threatening Behavior Policy

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students.

Accessibility and Accommodations

Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit http://drc.arizona.edu.

If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Code of Academic Integrity

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity.

The University Libraries have some excellent tips for avoiding plagiarism, available at http://new.library.arizona.edu/research/citing/plagiarism.

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor's express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

UA Nondiscrimination and Anti-harassment Policy

The University is committed to creating and maintaining an environment free of discrimination; see http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

Additional Resources for Students

UA Academic policies and procedures are available at http://catalog.arizona.edu/policies

Student Assistance and Advocacy information is available at http://deanofstudents.arizona.edu/student-assistance/students/student-assistance

Confidentiality of Student Records

http://www.registrar.arizona.edu/personal-information/family-educational-rights-and-privacy-act-1974-ferpa?topic=ferpa

Subject to Change Statement

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.