



## BE 496A & BAT 496A, Seminar in Engineering (& Science) Careers and Professionalism

Wednesdays, 1:00 p.m. – 1:50 p.m.; Shantz 440

### Description of Course

The seminar focuses on honing career development skills introduced in BAT/BE 201 for employment in the biosystems engineering and analytics fields and becoming exposed to ethics and professionalism. Topics include how to find a job (finding opportunities, writing elements for the interviewing process, interviewing, networking), the value of continuing education (professional societies, schools, self-learning), and ethics. Presentations, discussions, and guest speakers provide communication opportunities. Students enrolled in BE 496A are required to register and take the Fundamentals of Engineering (FE) Exam.

### Course Prerequisites or Co-requisites

There are no prerequisites for this course.

### Instructor and Contact Information

#### Instructor Information

Dr. Kitt Farrell-Poe

Office: Shantz 413

Contact Information: Office: 520-626-9120; kittfp@email.arizona.edu

Office Hours/"Open Door Policy": I don't have set office hours, but you can usually connect with me 9 a.m. to 5 p.m. Monday through Friday by calling my office or emailing me. You may also contact Mr. Aaron Tevik (621-3691; [atevik@arizona.edu](mailto:atevik@arizona.edu)) to make arrangements for a Zoom meeting.

#### Web information

D2L: course management will be through D2L

Instructor homepage: <http://be.arizona.edu/person/kitt-farrell-poe>

### Course Format and Teaching Methods

Course format includes lecture, small-group activities or group projects, in-class discussion, and guest speakers using in-person instructional modality when permitted by the University of Arizona.

### Course Objectives

During the course, you will:

1. **Evaluate** the ethical consequences of engineering/science decisions and design options.
  - **Discuss** the impacts decisions/designs have on a community (or many communities), in the environment, on the economy, etc.
  - **Give your opinion on** potential ethical solutions to decisions/designs that exist in the present.
  - **Evaluate** what is considered ethical and what is considered unethical engineering/science decisions/designs.

2. **Investigate** the role of internships in your education.
  - **List** some of the benefits of an internship in terms of your future career as an Engineer/Scientist.
  - **Identify** skills that can be acquired through successfully completing an internship.
  - **Summarize** how your internship experience contributes to your growth in your chosen field.
3. **Conduct an analysis** of the multifaceted aspects of current global trends which will influence the problems engineers and scientists will face in the near future, and demonstrate effective communication skills, both written and oral.
  - **Determine** what areas in your written and oral communication skills have room for improvement.
  - **Deconstruct** current problems engineers and scientists face in the present to better understand the type of initiatives required to solve such problems in the near future.
  - **Outline** the type of decisive actions that will propel significant progress in the field of engineering and science while remaining conscious of the impact it may have in the future (ethics is key).

### Expected Learning Outcomes

Upon completion of this class, you will be able to:

1. Compare and contrast the ethical consequences of engineering and science decisions and design options,
2. Explain the role of internships in engineering and science education,
3. Articulate the multifaceted aspects of current global trends which will influence the problems engineers and scientists will face in the near future, and
4. Demonstrate effective communication skills, both written and oral.

### Relationship of Course to ABET Learning Outcomes (high level contribution only)

Learning Objectives	ABET Learning Outcomes
1, 2, 3, 4	(3) An ability to communicate effectively with a range of audiences
1, 3	(4) An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

### Absence and Class Participation Policy

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. Absences may affect a student's final course grade. If you anticipate being absent, are unexpectedly absent, or are unable to participate in class online activities, please contact me as soon as possible. To request a disability-related accommodation to this attendance policy, please contact the Disability Resource Center at (520) 621-3268 or [drc-info@email.arizona.edu](mailto:drc-info@email.arizona.edu). If you are experiencing unexpected barriers to your success in your

courses, the Dean of Students Office is a central support resource for all students and may be helpful. The Dean of Students Office is located in the Robert L. Nugent Building, room 100, or call 520-621-7057.

### Makeup Policy for Students Who Register Late

If you register after the first class meeting, you may make up missed assignments/quizzes. Please make an appointment with me to determine the deadlines for missed assignments/quizzes.

## Course Communications

This course uses D2L for all course communications including for the repository for assignments, communicating weekly updates, email communications, and the calendar tool. Since I will be using the email tool in D2L, if you don't use the D2L email system as your primary email system, then you need to forward your D2L email to the email system of your choice. You can also subscribe to instant email or text notifications through D2L to remind you about assignment due dates. To activate or change the notification features, click on the gear to the right of your name at the top right of your home page, and select "Notifications."

## Required Texts or Readings, Required or Special Materials

None.

## Assignments and Examinations

### Description of Assignments & Activities

#### *Student Attendance*

Attendance is required and recorded through a sign-in sheet available during each class. Because attendance is required, you will have one absence waived for an emergency situation. You don't need to provide an excuse to me, but letting me or your teammates know ahead of time is the responsible action to take. If you arrive more than 10 minutes late or leave early (without pre-authorizing it with me), you will receive 1/2 of the points for attendance that day.

#### *Class Participation*

The grade for Class Participation will be based on your participation in class discussions for the student presentations, asking questions or participating in discussions with guest speakers, and preparation for each class. There is a rubric for Class Participation on the course website.

#### *Ethical Issue Assignments*

Each student will serve on a team to present a view point of a class-chosen topic featuring a global issue that pertains to Biosystems engineers or scientists. The team will present the ethical issue and provide arguments either "for" or "against" the topic. As the final project, each team will be responsible for providing a 10- to 15-minute presentation, answering questions from the class, and convincingly "argue" your team's view point on the issue. Each team will prepare a report summarizing the class discussion and conclusions on the topic for which they are responsible. All written assignments will follow standard style (APA, Chicago, ASABE, etc.). The style guide for ASABE is available as a PDF file on the course Content section under Resources and at the ASABE website

[<https://www.asabe.org/Portals/0/aPubs/GuideForAuthors.pdf?ver=2018-05-09-160038-000>].

Rubrics are available for all phases of the Ethical Issue Assignments and are available on the course website.

#### *Internship Presentation*

Each student will develop both a video and a poster on an internship experience (or career if you have not completed an internship). Engineering and BAT internships or experiences are preferred.

The file for the poster and link to your video will be posted to an Assignments folder in D2L (videos may be posted to Youtube as well). The video presentation will be peer-evaluated by both BE 496a and BE 201 students. Video presentations will be 5-8 minutes in length. Rubrics are available for both the video and poster on the course website.

#### *Fundamentals of Engineering Exam (for engineering majors only)*

The Biosystems Engineering department requires all undergraduates of our engineering program to have taken the Fundamentals of Engineering (FE) exam before graduation. The FE exam is a computer-based exam administered nearly year-round at approved test centers and is a comprehensive exam over your undergraduate engineering subjects including: mathematics, statistics, chemistry, sensors, ethics, safety, engineering economics, statics, dynamics, strength of materials, materials science, fluids, electricity, and heat and mass transfer. During this course, you will be expected to take the FE exam. It will be considered a homework assignment. You cannot complete and pass the course without taking the exam. The department has study manuals and exam-approved calculators for check out. For more information on the FE exam, please go to: <http://ncees.org/engineering/fe/>. BAT students are exempt from this requirement.

#### Scheduled Topics/Activities

Below is a general list of topics that will be covered in this course. The schedule of topics with due dates is available in the D2L course resources folder.

1. Introduction, course syllabus, course format, plagiarism, grammar
2. Career skills & professionalism
  - a. Career Development: From a survey question posed to the class, five to six topics will be chosen from interviewing skills, developing written elements for interviewing, applying for graduate school, creating presentations & posters, networking, and searching for a job
  - b. LinkedIn: Creating your own profile, identifying Biosystems Engineering alumni
  - c. Dress for success & dining etiquette
  - d. Fundamentals of Engineering (FE) exam
3. Ethical personal and business behavior
  - a. Codes of ethics
  - b. Ethical dilemmas: Case studies
4. Internship experience via poster & videos
5. Company presentations: From a survey question posed to the class, invited speakers from industry, government, etc. will be invited to share their experiences about their career, their academic preparation, and what they look for in new employees.

#### Final Examination or Project

Using the skills you obtained and practiced during the semester, the Final Project will recap your original introductory “elevator” speech.

## Grading Scale and Policies

### Grade Evaluation

The final grade will be based on the following points (there is no weighting to assignments, attendance, or class participation):

Attendance	30 points
Assignments	
Syllabus, Plagiarism, Paraphrasing, Picture, & Video	26 points
LinkedIn Profile & Identifying BE Alumni	10 points
Cover Letter, Resume, Follow-up Letter	24 points
Ethics & Engineering Pro/Con Assignment	36 points
Ethics & Engineering Pro/Con Thesis Statement	2 points
Ethics & Engineering Pro/Con Executive Summary	12 points
Ethics & Engineering Pro/Con Presentation	6 points
Ethics & Engineering Pro/Con Discussion Posts	16 points
Internship/Career Poster & Video Presentation	35 points
Guest Speaker Reflections	40 points (8 points each)
Grand Engineering & Science Challenge Reflections	10 points
Dining Etiquette Quiz	12 points
FE Exam (for BE 496A students only)	20 points
Final Project	15 points
Class Participation	8 points
<b>Total</b>	<b>266 points</b>

### Grading Schedule

To earn the grade of your choice, you will need to obtain the following percentages.

A:	100	-	90%
B:	89	-	80%
C:	79	-	70%
D:	69	-	60%
E: (Failure)	<60%		

### Additional Grading Information

**Submissions to the Assignments folder.** You need to save anything that you turn into the course Assignments folder in a format that is universal (.doc, .wpd, .pdf, .rtf, .xls, .jpg, .wmv, .avi, etc.). It is your responsibility to make sure that the file can be read. If you have a question about format or you think something went wrong while you were submitting it, check the file before the deadline and ask me for help if you need it. No credit can be given for submissions that can't be opened unless a technical difficulty exists that is beyond your control.

**Plagiarism.** Plagiarism will not be tolerated. I use the TurnItIn function in D2L. I allow you to see the resulting report. Pay attention to the report. Know how to properly cite sources (text, pictures, ideas, etc.).

**Late Submissions.** Generally, my policy is no late submissions. BUT I will allow up to 50% of the points for submissions which are less than 24 hours late.

### Incomplete (I) or Withdrawal (W):

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies, which are available at <http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete> and <http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal> respectively.

## Dispute of Grade Policy

You may dispute a grade on a paper, project, assignment, etc. before the next assignment is returned to you.

**University policy** regarding grades and grading systems is available at

<http://catalog.arizona.edu/policy/grades-and-grading-system>

## Honors Credit

If you wish to contract this course for Honors Credit, you should email me to set up an appointment to discuss the terms of the contact. Information on Honors Contracts can be found at

<https://www.honors.arizona.edu/honors-contracts>.

## 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.).

Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

Students are expected to be familiar with the UA Policy on Disruptive Behavior in an Instructional Setting found at <http://policy.arizona.edu/printpdf/92> and the Dean of Students Office at

<https://deanofstudents.arizona.edu/student-rights-responsibilities/disruptive-behavior>.

## 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

At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, <https://drc.arizona.edu/>) to establish reasonable accommodations.

## 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>

### Campus Health

<http://www.health.arizona.edu/>

Campus Health provides quality medical and mental health care services through virtual and in-person care.

Phone: 520-621-9202

### Counseling and Psych Services (CAPS)

<https://health.arizona.edu/counseling-psych-services>

CAPS provides mental health care, including short-term counseling services.

Phone: 520-621-3334

### The Dean of Students Office's Student Assistance Program

<http://deanofstudents.arizona.edu/student-assistance/students/student-assistance>

Student Assistance helps students manage crises, life traumas, and other barriers that impede success. The staff addresses the needs of students who experience issues related to social adjustment, academic challenges, psychological health, physical health, victimization, and relationship issues, through a variety of interventions, referrals, and follow up services.

Email: DOS-deanofstudents@email.arizona.edu

Phone: 520-621-7057

### Survivor Advocacy Program

<https://survivoradvocacy.arizona.edu/>

The Survivor Advocacy Program provides confidential support and advocacy services to student survivors of sexual and gender-based violence. The Program can also advise students about relevant non-UA resources available within the local community for support.

Email: survivoradvocacy@email.arizona.edu

Phone: 520-621-5767

### Campus Pantry

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. In addition, the University of Arizona Campus Pantry is open

for students to receive supplemental groceries at no cost. Please see their website at: [campuspantry.arizona.edu](http://campuspantry.arizona.edu) for open times.

Furthermore, please notify me if you are comfortable in doing so. This will enable me to provide any resources that I may possess.

### Preferred Gender Pronoun

This course affirms people of all gender expressions and gender identities. If you prefer to be called a different name than what is on the class roster, please let me know. Feel free to correct instructors on your preferred gender pronoun. If you have any questions or concerns, please do not hesitate to contact me directly in class or via email (instructor email). If you wish to change your preferred name or pronoun in the UAccess system, please use the following guidelines:

**Preferred name:** University of Arizona students may choose to identify themselves within the University community using a preferred first name that differs from their official/legal name. A student's preferred name will appear instead of the person's official/legal first name in select University-related systems and documents, provided that the name is not being used for the purpose of misrepresentation. Students are able to update their preferred names in UAccess.

**Pronouns:** Students may designate pronouns they use to identify themselves. Instructors and staff are encouraged to use pronouns for people that they use for themselves as a sign of respect and inclusion. Students are able to update and edit their pronouns in UAccess.

More information on updating your preferred name and pronouns is available on the Office of the Registrar site at <https://www.registrar.arizona.edu/>.

### Confidentiality of Student Records

Grades will be posted on the D2L website for the class. If you have any questions regarding your student record confidentiality rights, please refer to: <http://www.registrar.arizona.edu/personal-information/family-educational-rights-and-privacy-act-1974-ferpa?topic=ferpa>

### COVID Mitigation Procedures

This class will abide by all UA COVID Mitigation Procedures. Please refer to <https://covid19.arizona.edu> for the most current guidelines.

### Subject-to-Change Notice

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.