Instructor:
Dr. Shani Ross
- E-mail: sross20@gmu.edu
- Office: 431 Research Hall
- Office hours: Mondays, Wednesdays 12:00 - 1:00 pm or by appointment
- Office telephone: 703-993-5934

Lectures: Thursday: 1:30 – 2:20 pm, Planetary Hall, Room 129

Important Notes and Dates:
- Final Exam: None
- Holidays: Sept 4th (Labor Day), Nov 22nd – 26th (Thanksgiving)

Required Textbooks: None

Course Description:
- This course covers the variety of responsibilities of bioengineers to society. Topics include ethics, regulation, research, industry, entrepreneurship, and cost issues. Professional approaches to job searching and effective technical communication will also be discussed. Speakers include faculty, invited guests from industry and government, and students. (University catalog)

Prerequisites: Senior Standing

Requirement or Elective:
- This course is a required course for all bioengineering students.

Course Objectives:
- To provide information on the various career paths in biomedical/bioengineering and related fields
- To assist students in the career development process and bring awareness to the importance of continuing professional education
- To emphasize the critical importance of ethics and professionalism in the engineering field and to communicate some of the ethical issues in the field
- To bring awareness to engineering developments in bioengineering and other related fields
- To enable students to practice research and technical writing skills
- To facilitate students to practice public speaking
- To bring awareness to the impact of technology on the economy, environment, and society
- To provide an avenue for practice in professional networking and job search processes
**Student Learning Outcomes:** Upon completion of this course, students will:
- Be able to identify various career paths in the bioengineering and related fields
- Demonstrate oral and written communication skills
- Be better prepared to start the job search and transition into a career as an engineer
- Comprehend the importance of ethics and professionalism in the engineering field and be aware of some of the ethical issues surrounding their chosen field of study
- Be able to explain the impact of various engineering developments on the economy, environment, and society

**Assignments, Policies, and Grading:**

**Assignments:** Several assignments will be given along the semester:
- Strengths Assignment
- Resume Assignment
- Job Fair Assignment
- Engineering Issues Presentation
- Technical Research Paper

**Grading Structure:**
- The final grade will be based on:

<table>
<thead>
<tr>
<th>BENG 491</th>
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<tbody>
<tr>
<td>Attendance/Class Participation</td>
<td>10%</td>
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<tr>
<td>Strengths Assignment</td>
<td>10%</td>
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<tr>
<td>Resume Assignment</td>
<td>15%</td>
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<tr>
<td>Job Fair Assignment</td>
<td>15%</td>
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<tr>
<td>Engineering Issues Presentation</td>
<td>20%</td>
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<tr>
<td>Technical Research Paper</td>
<td>25%</td>
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<tr>
<td>Teamwork evaluation</td>
<td>5%</td>
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- Letter grades will be based on a 10 point scale ([90, 100] = A, [80, 90) = B, ...). The grading scale for this course is:

<table>
<thead>
<tr>
<th>Grade Percentage</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>97-100%</td>
<td>A +</td>
</tr>
<tr>
<td>93-97%</td>
<td>A</td>
</tr>
<tr>
<td>90-93%</td>
<td>A -</td>
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<tr>
<td>87-90%</td>
<td>B +</td>
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<tr>
<td>83-87%</td>
<td>B</td>
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<td>80-83%</td>
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<td>C +</td>
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<td>C - *</td>
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<td>60-70%</td>
<td>D *</td>
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<tr>
<td>0-60%</td>
<td>Failing *</td>
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</table>
* Grades of "C-" and "D" in this course are considered unsatisfactory. According to departmental policy, no C- or D in ECE, BENG, BIOL, CS or ENGR courses can be submitted for the degree in Bioengineering. You will need to repeat the course if you obtain a grade of C- or lower.

**Attendance and Class Participation:**
- Students are expected to attend and participate in class. Attendance will be taken for every class starting with the 2nd class (09/07). Attendance is worth **two points per day**. Students will also be allowed **one unexcused absence**.
- If you are unable to attend class due to medical reasons or GMU-sanctioned travel/activity please let me know beforehand. If it is a medical emergency, please let me know asap.

**Late Submission Policy:**
- All assignments will be submitted via blackboard by the submission deadline. Any assignments turned in after the submission deadline will be graded as late.
- The penalty for late assignments is a **10% reduction for each day (or part thereof) following the due date**. (This late policy will apply to all assignments for which no application for extension has been made).

**Email policy:**
- I can also be reached via email (sross20@gmu.edu). In your email: *put “BENG 491” in the subject line*. This will allow me to better filter your emails and respond faster to your request.
- In general, I will respond to emails between 9 am and 11:59 pm, daily. Please allow up to 24 hrs for a response. If I do not respond within 48 hours, please resend your email. If you email after 8 pm on Friday, please do not expect a response until Sunday. Also keep in mind that it will be most reliable to send e-mails from your MasonLive account as some e-mail servers may be filtered into the spam folder.
- I can answer quick, brief questions about the course material via email, but questions that may require a lengthy or complex response will be better addressed in-person (either during/after class, or office hours). Also, remember that the answer to your question may already be in the syllabus, class outline, or announced in class or on Blackboard, so check those first.

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**Note:** the instructor reserves the right to make any changes in the course she determines academically advisable. Changes will be announced in class and updated in the syllabus and class outline (where appropriate). It is your responsibility to keep up with any changed policies.

**Additional policies and resources for students:**
- Students must adhere to the guidelines of the George Mason University Honor Code [See http://oai.gmu.edu/the-mason-honor-code-2/].
- Students must follow the university policy for Responsible Use of Computing [See http://universitypolicy.gmu.edu/all-policies/].
- Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly.
All communication from the university, college, school, and program will be sent to students solely through their Mason email account.

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students’ personal experience and academic performance [See http://caps.gmu.edu/].
- If you require any special accommodations due to religious practices, learning or other disabilities, medical needs, physical requirements, athletic requirements or other, please inform me in writing within the first three weeks of the semester. Students with disabilities who seek accommodations in a course must also be registered with the George Mason University Office of Disability Services (ODS). [See http://ods.gmu.edu/].
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor. The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See http://writingcenter.gmu.edu/].

Professional Dispositions:
- Students are expected to exhibit professional behaviors and dispositions at all times. Students engaged in disruptive behavior will be given a warning and then will be asked to leave if the behavior continues, as this negatively affects other students.

Core Values Commitment:
- The College of Education & Human Development is committed to collaboration, ethical leadership, innovation, research–based practice, and social justice. Students are expected to adhere to these principles. [See http://cehd.gmu.edu/values/].

WAVES: Wellness, Alcohol and Violence Education and Services:
WAVES promotes wellness within the Mason community through health education, alcohol/drug assessment and education, and violence awareness, prevention and sexual assault response. We help students make healthy, safe choices and encourage lifelong, thoughtful healthy decision-making through individualized support, creative programming, and evidence-based education and outreach.

WAVES office 703-993-3686
SUB I, Suite 3200
24-Hour Sexual and Intimate Partner Violence Crisis Line 703-380-1434
waves.gmu.edu

- 703-360-7273 (Fairfax County Office for Women and Domestic and Sexual Violence Services 25 hotline)
- 703-237-0881 (Arlington County Domestic Violence Services Hotline)
- 703-368-4141 (Prince William County Sexual Assault Victims Advocacy Services (SAVAS) hotline)
- 1-800-838-8238 (Virginia Family Violence and Sexual Assault Hotline)
- 1-800-656-HOPE (Rape, Abuse and Incest National Network)
https://ohl.rainn.org/online/
**CAPS: Counseling and Psychological Services:**
Counseling and Psychological Services (CAPS) provides a wide range of free confidential services to students, faculty, and staff. Services are provided by a staff of professional clinical psychologists, social workers, counselors, learning specialists, and psychiatric providers. CAPS individual and group counseling, workshops, and outreach programs are designed to enhance students’ personal experience and academic performance.
Visit us at caps.gmu.edu for additional resources.
  - For consultation or emergency assistance during office hours call 703-993-2380.
  - For assistance during non-office hours, call University Police at 703-993-2810.
  - 703-527-4077 (CrisisLink)
  - 1-800-273-8255 (National Suicide Prevention Lifeline)
  - 1-877-838-2838 (Veterans' Crisis Hotline)

**Student Health Services (SHS):** Provides confidential health care to enrolled students in emergency and non-emergency circumstances on the Fairfax, Arlington and Prince William campuses. If there is a medical emergency and Student Health Services (SHS) is closed, please contact the free after-hours nurse ((703) 993-2831), a hospital emergency room, an urgent care facility, or call 911.

  SUB 1, Suite 2300
  703-993-2831

**University Police:**
Emergency: 911  Non-Emergency: (703) 993-2810
Reporting a Crime (Crime Solvers Anonymous Tip Hot-Line): (703) 993-4111
Mason Police Website: http://police.gmu.edu/
Carl Rowan, Chief of Police  Phone: (703) 993-3840  E-mail: crowan2@gmu.edu