Syllabus
Engineering Professionalism and Ethics
EGS 4034 – Section 0129

Class Periods: Friday, Period 3 (9:35 am – 10:25 am)
Class Location: NEB, Room 100
Academic Term: Spring 2017

1. Instructor: Bill McElroy, P.E., Assistant Director, Engineering Leadership Institute, University of Florida Herbert Wertheim College of Engineering
   a. E-mail address: mcelrowj@eng.ufl.edu
   b. Office Telephone: 352-294-7383
   c. Office location: Weil Hall Room 313B
   d. Office hours: By appointment; flexible except for Tuesday and Friday mornings
   e. Web site: UF course Canvas web site
   f. No teaching assistant

2. Course Description: This course is designed to introduce undergraduate engineering students to the concepts, theory and practice of engineering ethics. It will allow students to explore the relationship between ethics and engineering and apply classical moral theory and decision making to engineering issues encountered in academic and professional careers.
   Our society places a great deal of responsibility on its professionals and requires that they conduct themselves in a manner fitting to the place of prominence accorded to them by the community. Studying and understanding professional ethics is as much a part of your development as an engineer as is the study of higher order mathematics and technology applications. You must be able to broaden your mind and be open to society’s ever changing character. It is important that you learn to share ideas and concepts regardless of the fact that you may not always agree; therefore, we will be working in teams on majority of the assignments in this course.

3. Credit Hours: 1

4. Course Pre-Requisites/Co-Requisites: Junior/Senior standing or instructor approval

5. Course Objectives: The objectives of this course are to provide students of engineering with:
   - An understanding of their duties and responsibilities as professionals through gaining knowledge of the philosophies of ethics, professional practice, and world culture.
   - Basic knowledge to make informed ethical decisions when confronted with problems in the working environment.
   - Improved awareness of potential ethical issues within an engineering context.
   - Team skills through working in teams on assignments and in-class assignments.
• Subjective analytical skills through investigation and evaluation of ethical problems in engineering settings using accepted tests for moral problem solving.
• An understanding of how societal morals varies with culture and how this influences ethical thought and action.
• Improved communications skills with regard to ethical and professional issues in engineering.
• Know some of the classic cases as well as contemporary issues in engineering ethics.

6. **Material and Supply Fees:** not applicable

7. **Professional Component (ABET):** This course will prepare students with fundamental knowledge to successfully handle ethical/moral situations that might be encountered in their engineering careers.

8. **Relation to Program Outcomes (ABET):**
   - Students will have the improved ability to function on multidisciplinary teams.
   - Students will have an understanding of professional and ethical responsibility.
   - Students will have an improved ability to communicate effectively.
   - Students will have the broad education necessary to better understand the impact of engineering solutions in a global/societal context.
   - Students will have recognition of the need for and an ability to engage in lifelong learning.
   - Students will have knowledge of contemporary issues.

9. **Required Textbooks and Software:**


   However, you will need to use UF network to be able to access the book. Here are the instructions on what to do for off campus access: [https://connect.ufl.edu/it/wiki/Pages/glvpn.aspx](https://connect.ufl.edu/it/wiki/Pages/glvpn.aspx)

   Students are expected to have computer and internet access. Standard software, i.e. MS Office suite, and a pdf reader are required.

10. **Recommended Materials:**

    Not required:
Students should expect to have additional reading assignments and materials that will be noticed via email as being posted on the Canvas course website. Reading materials will be articles that are available electronically through the University library system or through postings on the Canvas course website.

11. Course Schedule: The course will be delivered weekly on Fridays, in one 50-minute lecture and discussion session. Brief case examples will be included, as frequently as practicable, as part of the weekly class discussions. Students will have access to an updated weekly class schedule that outlines expected weekly coverage topics, as well as reading requirements and expected due dates for assignments and quizzes for the semester.

An outline of expected topics to be covered each week is summarized below. The actual weekly outline, dates for assignments and quizzes, and content coverage of quizzes for the semester are subject to change at the course instructor’s discretion, and will be reflected in the updated course schedule that students will have access to via the Canvas course website:

<table>
<thead>
<tr>
<th>Week</th>
<th>Expected Topics</th>
<th>Assignments and Quizzes</th>
</tr>
</thead>
</table>
| W1   | • Course introduction and overview  
      | • Morals and ethics  
      | • Comparison of ethics and engineering ethics  
      | • Ethics at personal and student level | Quiz 1 (WK 1 – 3 plus Ch. 1 – 2, Seebauer)  
      | | HW 1 due |
| W2   | • The concept of professions  
      | • The importance of ethics in science and engineering  
      | • The role of codes of ethics  
      | • Professional responsibilities of engineers | |
| W3   | • The concept of morality  
      | • The importance of core values  
      | • Moral/ethical dilemmas and hierarchy of moral values  
      | • Factors affecting moral responsibility, and degrees of responsibility | Quiz 2 (WK 4 – 5 plus Ch. 3 - 6, Seebauer)  
      | | HW 2 due |
| W4   | • Overview of ethical theories and applications | |
| W5   | • Basics of ethical analyses and decision-making | Quiz 3 (WK 6 – 8 plus Ch. 7 - 10, Seebauer)  
      | | |
| W6   | • Ethical analyses and decision-making (continued) | |
| W7   | • The importance if intention  
      | • Truth (personal and social)  
      | • The concept of whistleblowing | |
| W8   | • Ethical leadership in engineering and society  
      | • Conflicts of interests | |
| W9   | • Engineers in organizations  
      | • Ethics in the workplace  
      | • Fairness (personal and social) | |
12. Attendance Policy, Class Expectations, and Make-Up Policy: Attendance is mandatory at all sessions and will be monitored through sign-up sheets or similar methods. Signing in for a non-attending student may be considered for honor code violation.

Students are allowed one unexcused absence during the semester class. More than one unexcused absence can result in a loss of a letter grade per each absence over one at the discretion of the instructor, subject to the UF attendance policies. Excused absences must be consistent with university policies in the undergraduate catalog [https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx) and require appropriate documentation.

Students are expected to arrive to class on time and to remain in class through completion. Excessive student use of electronic devices during class sessions, for non-class purposes, may be considered by the instructor as an unexcused absence for that day.

Unless stated otherwise, assignments (up to 6) are to be submitted via Canvas by the stated deadline. Late submissions may be accepted by the instructor for partial credit, subject to the policies of the undergraduate catalog. No make-up quizzes will be available, subject to UF attendance policies [https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx).

Working in teams
You should take away from this learning experience some of what you will need to succeed as practicing engineers. For most of us, we have been pushed and prodded into striving for individual success with very little emphasis on group success. In the real world, you will be judged more on team success than on individual success. In
order to work well in teams, you should know your strength and weaknesses. You can learn how to work better at groups by taking personality profile test such as the one found at: http://www.humanmetrics.com/cgi-win/JTypes1.htm

13. Evaluation of Grades:

<table>
<thead>
<tr>
<th>Components</th>
<th>Points</th>
<th>Weighting Percentage of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance (14 classes)</td>
<td>20 (max)</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes (up to 6)</td>
<td>~ 5 to 15 each</td>
<td>40%</td>
</tr>
<tr>
<td>Assignments (up to 6)</td>
<td>100 each</td>
<td>40%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

**Attendance:** The maximum attendance points (20) will be earned by students with no or one unexcused absence. Attendance points will be reduced with the number of unexcused absences as follows.

<table>
<thead>
<tr>
<th>Total # of Unexcused Absences</th>
<th>Attendance Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>≥ 4 ¹</td>
<td>0</td>
</tr>
</tbody>
</table>

¹ Refer to the previously-stated attendance policy regarding unexcused absences and loss of another letter grade per each additional absence at the discretion of the instructor, subject to the UF attendance policies.

**Quizzes**

Quizzes will be completed electronically through the Canvas website for the course. The quizzes will be available for prescribed periods of time (normally a couple days) with dates and times of availability established by the instructor based on the course schedule and updates as required through announcements and emails using the Canvas course website. Quizzes for all students in the class will be administered through services provided by ProctorU.

Available by agreements with the University of Florida, ProctorU is a live online proctoring service that allows students to take the quizzes from the comfort of their home. ProctorU is available 24/7; however, students will need to schedule their proctoring session at least 72 hours in advance of the exam availability to avoid payment of a demand scheduling fee (that will be borne by the students in the event they occur). Creating a ProctorU account is very simple; all students will need to do is visit go.proctoru.com. Additional information about the ProctorU process is provided in a document posted on the Canvas course site (under the Files folder).
ProctorU also provides free technical support to ensure that students have the best testing situation possible. That support is available at www.proctoru.com/testitout. On this page, students will also be able to test their equipment, learn about what to expect during the proctoring session, and ask any questions they may have about the proctoring process with a ProctorU representative.

In order to use ProctorU, students will need to have a high-speed internet connection, a webcam (internal or external), a Windows or Apple operating system, and a government-issued photo id. ProctorU recommends that students visit proctoru.com/testitout prior to their proctoring sessions to test their equipment. For additional technical services needed before their exam, students can click on the button that says “connect to a live person.”

Test Taker Walk Through Video
URL: https://vimeo.com/107066503

Assignments
Assignments will generally be posted at least one week prior to their respective assignment due dates. The assignments are to be submitted using the assignment tool on the class website by the due date. Late submittals may be accepted by the course instructor via Canvas email, for a reduced grade (minimum one letter grade reduction).

Note: Review the Assignment Grading Criteria document available on the course website that outlines general requirements for assignments and how the instructor will evaluate assignments. Also, note that all team members will receive the same assignment scores unless a team member has been identified as a non-contributing member; in those cases, the non-contributing student will receive a grade of 0 for the assignment(s).

Turn it in: The assignments submitted will be run through turn it in, an online tool that compares the content of submitted homework to online resources. Note that, it is ok to use copyrighted material in your HW submissions, but it should be within the allowable limits of copyright rules and common courtesy to the original copyright holders work. As a benchmark, if the likelihood percent of the HW exceeds 35%, the students will be asked to revise and resubmit their assignment. Note that late submission criteria will be effective, in case of returned HWs!

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14. Grading Policy: The grade scale for the student total weighted class score, rounded to the nearest units digit, is:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>94 or above</td>
</tr>
<tr>
<td>A-</td>
<td>90 – 93</td>
</tr>
<tr>
<td>B+</td>
<td>87 – 89</td>
</tr>
<tr>
<td>B</td>
<td>84 – 86</td>
</tr>
<tr>
<td>B-</td>
<td>80 – 83</td>
</tr>
<tr>
<td>C+</td>
<td>77 – 79</td>
</tr>
<tr>
<td>C</td>
<td>74 - 76</td>
</tr>
<tr>
<td>C-</td>
<td>70 - 73</td>
</tr>
<tr>
<td>D+</td>
<td>67 - 69</td>
</tr>
<tr>
<td>D</td>
<td>64 - 66</td>
</tr>
<tr>
<td>D-</td>
<td>60 - 63</td>
</tr>
<tr>
<td>E</td>
<td>59 or below</td>
</tr>
</tbody>
</table>

More information on UF grading policy may be found at [https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx).

**NOTE:** Class grades indicated through the Canvas class website are unofficial and may not accurately reflect the grading criteria and policy contained in this syllabus. Students are encouraged to keep up with their class grade individually based on the class grading approach.

15. Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [https://www.dso.ufl.edu/drc](https://www.dso.ufl.edu/drc)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

16. Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at [https://evaluations.ufl.edu/evals](https://evaluations.ufl.edu/evals). Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at [https://evaluations.ufl.edu/results/](https://evaluations.ufl.edu/results/).

17. University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code.” On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code ([https://www.dso.ufl.edu/sscr/process/student-conduct-honor-code/](https://www.dso.ufl.edu/sscr/process/student-conduct-honor-code/)) specifies a number of behaviors that are in violation of this code and the possible sanctions.
Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

18. Software Use
   All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

19. Student Privacy
   There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html

20. Campus Resources:

   Health and Wellness

   **U Matter, We Care:**
   Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

   **Counseling and Wellness Center:** [http://www.counseling.ufl.edu/cwc](http://www.counseling.ufl.edu/cwc), and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

   **Sexual Assault Recovery Services (SARS)**
   Student Health Care Center, 392-1161.

   **University Police Department** at 392-1111 (or 9-1-1 for emergencies), or [http://www.police.ufl.edu/](http://www.police.ufl.edu/).
**Academic Resources**

**E-learning technical support:** 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. [https://lss.at.ufl.edu/help.shtml](https://lss.at.ufl.edu/help.shtml).

**Career Resource Center,** Reitz Union, 392-1601. Career assistance and counseling. [https://www.crc.ufl.edu/](https://www.crc.ufl.edu/).

**Library Support,** [http://cms.uflib.ufl.edu/ask](http://cms.uflib.ufl.edu/ask). Various ways to receive assistance with respect to using the libraries or finding resources.

**Teaching Center,** Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. [https://teachingcenter.ufl.edu/](https://teachingcenter.ufl.edu/).

**Writing Studio, 302 Tigert Hall,** 846-1138. Help brainstorming, formatting, and writing papers. [https://writing.ufl.edu/writing-studio/](https://writing.ufl.edu/writing-studio/).

**Student Complaints Campus:**