UNIVERSITY of VIRGINIA

UVA IN VALENCIA PROGRAM

STS 2600 ENGINEERING ETHICS

I. COURSE DESCRIPTION

This course seeks to equip undergraduates with knowledge, understanding, and practice to prepare them for ethical leadership now, as students, and for their future as engineering leaders.

In STS 2600, students will develop the capacity to

- ✓ Identify and describe ethical principles and codes that are relevant to engineering and their future career.
- ✓ Differentiate and address key elements of engineering ethics case studies.
- ✓ Articulate their professional values and relate them to engineering practice.
- ✓ Gain familiarity with a range of theoretical frames for understanding their personal ethics, and specifically the Giving Voice to Values (GVV) method of scripting and rehearsing in addressing ethical dilemmas.

II. GRADING SCALE AND BREAKDOWN

Grades will be awarded according to the **UVA grading scale**:

A 10-9 **A-** 8,9-8	**B+** 7,9-7 **B** 6,9-6 **B-** 5,9-5,5	**C** 5,4-5	**F** 4,9-0

Midterm exam	25%
Final exam	25%
Daily work	25%
Participation	25%

Midterm exam (25%)

This exam will cover the material you worked on from the beginning of the course until the week before the exam. Only topics covered during course will be asked. The exam will be composed of both multiple-choice questions and open-ended questions.

Final exam (25%)

This exam will cover the second part of the course. Only topics covered during course will be asked. The exam will be composed of both multiple-choice questions and open-ended questions.

Daily work (25%)

Students will be asked to accomplish some daily tasks along the course: prepare readings or some prework prior to class, do homework, solve problems in class individually or in team, prepare and expose presentations, etc. Final "Daily Work" grade will be the mathematic average of the proposed tasks.

Participation (25%)

Students are expected to comply with the assigned work plan on a daily basis. Coming prepared to class and **participating in debates** is essential to the learning process.

The following rubric is important regarding participation grades:
A The student always prepares the class and complies with the work plan assigned daily; he/she participates voluntarily and frequently, works well as a team, and contributes positively to the classroom environment.
B The student participates voluntarily and frequently by answering questions from the teacher.
C The student participates sporadically when the teacher asks and he/she/they occasionally ask questions.
D The student does not make effort to participate or minimum work is done.
F The student is absent and shows disrespect to other peers and to the professor.

III. BIBLIOGRAPHY AND MATERIALS

Materials and slides will be posted on Moodle.

The following bibliography may also be useful, but purchase is not mandatory:

Engineering Ethics: Contemporary and Enduring Debates Deborah G. Johnson.

IV. COURSE PLANNING AND CALENDAR

SESSIONS-DATES	CONTENTS
1. 09/08	Course introduction - Students' presentation
2. 09/10	Morality and WEIRD morality
3. 09/15	Introduction to engineering ethics
4. 09/17	Codes of ethics for engineers
5. 09/22	Theoretical and practical ethics
6. 09/24	Ethics in the engineer's working relationships
7. 09/29	Whistleblowing I - *Citizenfour*
8. 10/01	Whistleblowing II - *Citizenfour* and debate
9. 10/06	Safety and responsibility I - *Three Mile Island* and debate
10. 10/08	Social responsibility - *Flint´s deadly water* and debate
11. 10/20	Case analysis – students'presentations
12. 10/22	Case analysis – students'presentations
13. 10/27	Case analysis – students'presentations
14. 10/29	**MIDTERM EXAM**
15. 11/03	Giving voice to values (GVV) - Section 1: What is GVV? Why and how it works
16. 11/05	GVV - Section 2: Recognizing and learning from your success and failures
17. 11/10	GVV - Section 3: Developing scripts and action plans
18. 11/12	GVV - Section 4: Module wrap-up
19. 11/17	Genetic engineering I - *GATTACA*
20. 11/19	Genetic engineering II - *GATTACA* and debate
21. 11/24	Weapons I - *Eye in the sky*
22. 11/26	Weapons II - *Eye in the sky* and debate
23. 12/01	Data ethics, privacy, surveillance I - *In the Age of AI*
24. 12/03	Data ethics, privacy, surveillance II - *In the Age of AI* and debate
25. 12/10	Lying and deception in engineering - *BACKFIRED: When VW Lied to America* and debate
26. 12/11	Energy production - *Will renewables stop the climate crisis?/Global renewables: Pioneering the energy transition* and debate
27. 12/14,15,16	**FINAL EXAM (Official Schedule)**

IMPORTANT INFORMATION

1) Use of Spanish at the Center

The use of Spanish at the Center is strongly encouraged. Remember that you have come to Spain to learn Spanish and immerse yourself in its culture, and there is no better way to do so than by using Spanish on as many occasions as possible.

2) Class Attendance and Tardiness

2.1) Attendance and punctuality are essential for the successful completion of the course. Consequently, unexcused absences and lateness will negatively affect the final grade.

2.2) Only one unexcused absence is permitted. Please bear this in mind when planning trips or outings.

2.3) Arriving more than 5 minutes late to class will count as half an absence (1/2). It is the student's responsibility to notify the instructor of an absence before the class begins.

2.4) Arriving more than 30 minutes late to class will be considered an absence.

2.5) Four (4) unexcused absences will result in the student not receiving credit for the course.

2.6) Only documented absences will be considered excused: a religious holiday, a family emergency, or a medical appointment. Medical absences must be supported by a doctor's note and submitted at reception on the day the student returns to class after the incident has ended.

3) Academic Integrity

3.1) The exchange of information is not only permitted but is also a way of enriching the knowledge acquired during the course. However, all work submitted for each course must be individual and original in every respect. Any sources and direct quotations used must be properly cited.

3.2) Remember that the use of artificial intelligence to complete assignments or examinations is strictly prohibited unless an instructor expressly states otherwise. Such use constitutes a lack of authenticity, and may amount to direct plagiarism, in addition to undermining the development of critical thinking and writing skills, which are among the primary goals of this program. Failure to comply with this rule will result in a grade of "F" for the course.

3.3) Any work that has received credit for one course will NOT be accepted for credit in another course. There will be NO exceptions to this rule. Reusing such work will result in immediate failure of the second course. If assignments for two different courses are related in any way and the student has questions about whether the second project is permissible, the matter must be discussed with all instructors involved. This will prevent any possible unintentional violation of this rule.

3.4) As with punctuality, assignments must be submitted on time. Any late submission will result in a reduction of the grade for that assignment.

3.5) Failure to comply with the provisions set out above will result in the loss of the corresponding course credits for the course in which these rules have been violated.

3.6) If you have a documented special need that requires academic accommodations (SDAC), it must be certified by your home institution. Please contact the Head of Studies in Valencia, María Andrés (maria.andres@uvavalencia.org).

4) Activities, Workshops, and Lectures

Throughout the course, various activities, workshops, and lectures are organized. Participation may be voluntary or mandatory if the instructor considers the activity relevant to the course.

5) Classroom Conduct

5.1) It is very important that all students arrive to class on time, prepared, and with the materials needed for the day. During class, students must treat one another and the instructor with respect, demonstrate a positive attitude, and help

create a participatory and collaborative environment that supports effective learning. Any violation of these expectations will have direct consequences.

5.2) Electronic devices (laptop, mobile phone, smartwatch) may be used in class only for course-related purposes. If a student uses such technology for personal reasons during class, the student may be penalized with an unexcused absence.

5.3) The use of computer or electronic technology during examinations is prohibited unless the instructor determines otherwise in accordance with the examination format.

6) Course Content

On occasion, and always within the context of the course, certain "sensitive" topics may be addressed both inside and outside the classroom. Therefore, if a student feels offended by such content in a particular class, the student may leave the class, and doing so will not have any negative effect whatsoever on the final grade. Faculty members will always be open to communication and dialogue in order to promote better intercultural understanding.

7) Final Clarification

The instructor may modify or add activities and/or change the dates indicated according to the learning needs of the group. Effective learning requires not only careful planning, but also a certain degree of flexibility.