Syllabus for ENG220 – Fall 2024

<mark>Your lack of studying/planning is NOT OUR emergency</mark>!

OLD Title: Engineering, Business, Sustainability, Ethics and Society

NEW Title: Engineering, Business, Sustainability, Ethics, Society, and JEDAI

NOTE:
- **Some** classes will be delivered via ZOOM. It is expected for students to use their cameras when connected. Special approval is required to NOT use a camera. Participation is part of the grade.
    - When participants do not use a camera over 60% of effectiveness is lost.
- All online sessions will be recorded. Rollcall and participation required.
- The following electronic tools will be used:
    - <mark>PackBack – create your account</mark>
    - ChatGPT, GPTZero
        - UNM AI Resources https://airesources.unm.edu/index.html
    - DROPBOX
    - ZOOM
    - MIRO
    - Microsoft Tools Available
        - TEAMS, Planner, Project, OneNote, ClassNotebook, Bookings, SharePoint

1. Course number and name
   ENG 220 – Old Title: Engineering, Business, Ethics and Society

2. Credits and contact hours

This is a three credit-hour course. Class meets for two 65-minute sessions of direct instruction for fifteen weeks during the Fall 2022 semester. Please plan for a minimum of six hours of out-of-class work (or homework, study, assignment completion, and class preparation) each week.

Support: Center for Academic Program Support (CAPS). Many students have found that time management workshops can help them meet their goals (consult (CAPS) website under "services").

3. Instructors
   Instructor - Ramiro Jordan – ECE

4. Additional information:
   Ramiro Jordan - UNM
   a. Office Location: ECE 225B or WHY Lab ECE 132
   b. Office Hours: To be coordinated via email or other means.
   c. Class Meeting Day(s): TUE and THU, 14:00 – 15:15 MDT
   d. Class Location / Room: MECH 218
   e. Email: rjordan@unm.edu
   f. Office Phone: (505) 277-2412
   g. Term / Semester: Fall 2024
   h. Final Exam date: NA

Students 100
Semester: Start Aug 19 - End Dec 14
Fall Break Oct 10-11

- We will use PackBack to get to know each other, create teamwork, ask, and answer questions, generate peaceful and respectful dialogues, other. https://www.packback.co/
- PackBack assignments are done in PackBack NOT Canvas

5. Textbook, title, author, and year
   No textbook is required for this class. Links to web sites plus documents posted on canvas.unm.edu and/or DROPBOX/SharePoint will be used. All assignments, exams, deliverables, and rubrics are found on canvas.unm.edu. Most importantly, the Semester Schedule is the master schedule for the class and always is the latest and most correct reference regarding class meetings, deliverables, and deadlines. Follow it exactly and CHECK IT OFTEN!!

   Packback – Discussion Tool
   Participation is a requirement for this course, and the Packback Questions platform will be used for online discussion about class topics. Packback

Questions is an online community where you can be curious and ask open-ended questions to build on top of what we are covering in class and relate topics to real-world applications.

How to Register on Packback:
Please follow the instructions in Canvas.

How to Get Help from the Packback Team:
If you have any questions or concerns about Packback throughout the semester, please read their FAQ at help.packback.co. If you need more help, contact their customer support team directly at help@packback.co.

For a brief introduction to Packback Questions and why we are using it in class, watch this video: vimeo.com/packback/Welcome-to-Packback-Questions

6. Specific course information
   a. Course Description: The course uses a team-teaching format to foster students' understanding of the interaction of engineering practice with business and society. Students will learn about innovation, entrepreneurship, and global engineering standards. Professional ethics will be introduced. Business and technical writing will be incorporated throughout the course. Invited speakers will include engineering professionals from the community.
   b. Course Goals: To introduce engineering students to the broad context of engineering practice both nationally and internationally, to foster skills and attitudes necessary for success in the modern engineering workplace, to introduce ethical issues that practicing engineers may face, and to improve technical communication skills. It is important to understand CONTEXT and BIASES in the globalized world we all inhabit. One planet, one environment, one chance.
   c. Possible topics covered: National Academy of Engineering Grand Challenges for the 21st Century. The United Nations 17 Sustainable Development Goals (SDGs). Entrepreneurship, innovation in engineering practice, design thinking, teamwork in the modern engineering workplace, international engineering standards, global awareness, Industry 4.0, ethics, transparency, social justice (JEDAI), engineering communication/technical writing fand story telling for all disciplines

7. Course Outcomes: (adapted from ABET engineering program outcomes)

   At the end of this course students will have introductory-level skills in the following areas:

   1) an ability to apply design thinking to engineering problems with consideration of public health, safety, diversity, and welfare, as well as global, cultural, social, and environmental factors

   2) an ability to communicate effectively with a range of audiences

   3) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must

consider the impact of engineering solutions in global, environmental, and societal contexts. Deal with unintended consequences that may create conflicts.

4) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

Student accomplishment of these outcomes will be measured through specific questions on the exams, presentations, group meetings, by analyzing parts of the writing assignments designed to measure specific outcomes, or observation of student behavior by instructor (assessed using a rubric), feedback from your poeers.

Homework: There will be five team-based writing assignments. Students will work in teams and will receive both a group and an individual grade. Each team will give an oral presentation of two of these assignments.

Engineering Ethics
The Engineering Ethics section of this class will introduce students to modern-day aspects of engineering professions. Goals for the engineering ethics portion of the class are:
- o To understand what a profession is and to understand the professional nature of engineering.
- o To understand what a code of ethics is and how it can be used.
- o To understand the theoretical underpinnings of professional ethics.
- o To learn how to apply ethical problem-solving tools to real and hypothetical ethical problems.
- o To be sensitized to the potential ethical issues involved in engineering practice.

8. Grading
In-class exams (2 x 20% each), writing assignments (5 x 10% each), oral presentations (2 x 5% each). Grades are assigned based on the following table:

GRADING SCALE	
Percentage	Grade
> 96%	A+
93-95%	A
90-92%	A-
86-89%	B+
83-85%	B
80-82%	B-
76-79%	C+
73-75%	C
< 72%	Doesn't Earn Credit in SOE

Other Grading Information
1. Team documents returned as unsatisfactory will be counted as non-existing.
2. All deadlines must be met (or revised -- with justification). If a document is received by the instructor after the established deadline, a 10% penalty/day will be imposed
3. Peer evaluation:
   a. Each team member will occasionally rate the performance of fellow team members in writing.
   b. Peer and Sponsor Evaluations are typically confidential so you may not know every single grade entry for the semester.
   c. Your attendance during class time (lecture, oral progress reports, and Teamwork Days) is mandatory. Excused absences from class require written my permission in advance.
4. This class considers performance elements other than exams and homework, and these cannot be easily quantified. Judgment of the Instructor is final.

9. ENG 220 – OLD Sample Schedule (It is dynamic, expect changes)

Week	Topic – Fall 2021
1 – Aug 24, 21021	What is ENG220 – Where are we? Industry 4.0. Global RESET button…. Peace Engineering
2 - Aug 31, 2021	National Academy of Engineering Grand Challenges for the 21st Century and the 17 United Nations Sustainable Development Goals (SDGs) - Projects
3 – Sep 7, 9 , 2021	Engineering Standards and Ethics - Projects
4 - Sep 14, 16	Metrics, Data and Statistics – Ethics - Projects
5 – Sep 21, 23, 2021	It is about the story! How do you tell a story?
6 – Sep 28, 30, 2021	Design Thinking – Systems Thinking
7 – Oct 5, 7, 20221	Water -Energy -Telecom -Food-Security – Unintended/Intended consequences
8 – Oct 12, 14, 2021	Transparency and Ethics – Unintended/Intended consequences
9 – Oct 19, 21, 2021	Tell your story!!!! Oral presentations - Projects
10 – Oct 26, 28, 2021	Tell your story!!!! Oral presentations - Projects
11- Nov 2, 4, 2021	Healthcare and Wellness
12 – Nov 9, 11, 2021	Global aspects of engineering practice
13 – Nov 16, 18, 2021	Tell your story!!!! Oral presentations – Final report

14 – Nov 23, 2021	Tell your story!!!! Oral presentations – Final report - Thanksgiving
15 – Nov 30, Dec 2, 20221	Tell your story!!!! Oral presentations – Final report
16 – Dec 7, 9, 2021	FINALS

10. Electronic Files, Reports, Quizzes and Exams, Directories and Email for Students
    The electronic file format accepted for students to submit Reports, Quizzes and Exams is PDF.
    - Naming convention: NAME-LASTNAME-quiznumber.pdf
        - Teamwork: use all the last names followed by report, quiz or exam number
    - If you have more than one file, then create a directory with all your files and compress it before you email. Naming convention: NAME-LASTNAME-reportnumber.zip
    - All emails to the instructors must have the tag eng220: in the subject field
    - All emails will be sent to your UNM account. If you want to forward to another email system, then you are responsible for making sure you receive and send emails.
    - Each project team will be given a DROPBOX directory to keep all materials required for the class. The account will be managed by each Program Manager.

11. Attendance Policy
    Regular and punctual attendance is required. UNM Pathfinder policies apply, which in part means instructor drops based on non-attendance are possible. This policy applies regardless of the grading option you have chosen.

12. Special Circumstances
    The instructor should be notified as early as possible regarding any special conditions or circumstances which may affect a student's performance during the course timeframe (e.g., medical emergencies, family circumstances, etc).

13. Academic Integrity: Dishonesty in Academic Matters
    Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The university reserves the right to take disciplinary action, including dismissal, against any student who is found responsible for academic dishonesty or who otherwise fails to meet the standards. Any student who has been judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

    Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments (including programming assignments); claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or outside the

university; and nondisclosure or misrepresentation in filling out applications or other university records.

The University of New Mexico believes that academic honesty is a foundation principle for personal and academic development. All University policies regarding academic honesty apply to this course. Academic dishonesty includes, but is not limited to, cheating or copying, plagiarism (claiming credit for the words or works of another from any type of source such as print, Internet or electronic database, or failing to cite the source), fabricating information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. The University's full statement on academic honesty and the consequences for failure to comply is available in the college catalog and in the Pathfinder.

14. A few words on tablets, laptops, and cell phones
OK- we all (mostly) have "smart" cell phones. However, a classroom is a learning environment. A ringing cell phone or beeping pager going off during a lecture is disruptive to other students as well as the instructor. If you must bring a beeper or cell phone to class, set it to vibrate (not ring) and leave the classroom discretely to answer your phone or to return the page. If you cannot set your phone or pager to vibrate- turn it off during class! If your cell phone or pager rings during lecture, you will be asked to leave. Turn your cell phone or pager off during exams and quizzes!! If you answer your phone or leave the room for any reason during an exam or quiz, you will not be allowed to finish!

As a matter of courtesy, please turn off cell phones, pagers, and other communication and entertainment devices prior to the beginning of class. Notify me in advance if you are monitoring an emergency, for which cell phone ringers should be switched to vibrate.

15. Reasonable Accommodation
The university makes reasonable accommodation to the religious observances/national origin practices of a student and to the known physical or mental limitations of a qualified student or program user with a disability, unless such accommodations have the end result of fundamentally altering a program or service or placing an undue hardship on the operation of the university. Qualified students or program users with disabilities should contact the Office of Equal Opportunity or the Student Support Services for information regarding accommodations. The University of New Mexico is committed to the recognition and the proactive pursuit of compliance with the Americans with Disabilities Act of 1990 (ADA).

Accessibility Services (Mesa Vista Hall 2021, 277-3506) provides academic support to students who have disabilities. If you think you need alternative accessible formats for undertaking and completing coursework, you should contact this service right away to assure your needs are met in a timely manner. If you need local assistance in contacting Accessibility Services, see the Bachelor and Graduate Programs office.

16. Library and Tutorial Services

UNM-Main campus provides many library services and some tutorial services for distance students. For library services, go to http://www.unm.edu/libraries/ to link to a specific library or to contact a librarian. For tutorial services, go to http://caps.unm.edu/online to explore UNM's online services.

17. UNM Copyright Policy and Law - University Counsel's Office
    Subject to Change Without Notice

The unauthorized distribution of copyrighted material, including through peer-to-peer file sharing, may subject a student to criminal and civil penalties. The laws that govern copyright are not specific to any one technology. Students can violate the rights of a copyright holder using many different types of technology. Both uploading and downloading of files can pose a violation of the copyright law. Students should be cautious when obtaining any copyrighted material. As a rule of thumb, before a student receives anything for free, they should research whether that source provides material licensed by the copyright owner. A group called EDUCAUSE has a list of legal file sharing alternatives at http://www.educause.edu/legalcontent.

Individuals who violate copyright law by illegally uploading and downloading copyrighted files may be subject to civil penalties of between $750 and $150,000 per song. These penalties are established by federal law. In the past, pre-litigation settlements offered by copyright owners have been in the $3,000 to $4,000 and up range while juries in some jurisdictions have issued verdicts of hundreds of thousands and up. In addition, a court may, in its discretion, grant the copyright owner reasonable attorney fees. Although criminal prosecution of students for file sharing is extremely rare, federal law lays out criminal penalties for intentional copyright infringement which can include fines and jail time. In addition to potentially violating the law, unauthorized distribution or receipt of copyrighted material is a violation of University Business Policies and Procedures Manual 2500. That policy states that: "Users shall respect all copyrights including software copyrights…Use of University computing services in violation of applicable laws or University policy may result in sanctions, including withdrawal of use privilege; disciplinary action, up to and including, expulsion from the University or discharge from a position; and legal prosecution under applicable federal and/or state law.

COVID-19 Health and Awareness: UNM is a mask friendly, but not a mask required, community. To be registered or employed at UNM, Students, faculty, and staff must all meet UNM's Administrative Mandate on Required COVID-19 vaccination. If you are experiencing COVID-19 symptoms, please do not come to class. If you have a positive COVID-19 test, please stay home for five days and isolate yourself from others, per the Centers for Disease Control (CDC) guidelines. If you do need to stay home, please communicate with me at [ ]; I can work with you to provide alternatives for course participation and completion. UNM faculty and staff know that these are challenging times. Please let us know that you need support so that we can connect you to the right resources and please be aware that UNM will publish information on websites and email about any changes to our public health status and community response.

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Support: Student Health and Counseling (SHAC) at (505) 277-3136. If you are having active respiratory symptoms (e.g., fever, cough, sore throat, etc.) AND need testing for COVID-19; OR If you recently tested positive and may need oral treatment, call SHAC.

LoboRESPECT Advocacy Center (505) 277-2911 can offer help with contacting faculty and managing challenges that impact your UNM experience.

Accommodations: UNM is committed to providing courses that are inclusive and accessible for all participants. As your instructor, it is my objective to facilitate an accessible classroom setting, in which students have full access and opportunity. If you are experiencing physical or academic barriers, or concerns related to mental health, physical health and/or COVID-19, please consult with me after class, via email/phone or during office/check-in hours (I am not legally permitted to inquire about the need for accommodations). We can meet your needs in collaboration with the Accessibility Resource Center (https://arc.unm.edu/) at arcsrvs@unm.edu or by phone (505) 277-3506.

Support: Contact me at [ ] or in office/check-in hours and contact Accessibility Resource Center (https://arc.unm.edu/) at arcsrvs@unm.edu (505) 277-3506.

Title IX: Our classroom and our university should always be spaces of mutual respect, kindness, and support, without fear of discrimination, harassment, or violence. Should you ever need assistance or have concerns about incidents that violate this principle, please access the resources available to you on campus. Please note that, because UNM faculty, TAs, and GAs are considered "responsible employees" by the Department of Education, any disclosure of gender discrimination (including sexual harassment, sexual misconduct, and sexual violence) made to a faculty member, TA, or GA must be reported by that faculty member, TA, or GA to the university's Title IX coordinator. For more information on the campus policy regarding sexual misconduct, please see: https://policy.unm.edu/university-policies/2000/2740.html.

Support: LoboRESPECT Advocacy Center and the support services listed on its website, the Women's Resource Center and the LGBTQ Resource Center all offer confidential services and reporting.

Land Acknowledgement: Founded in 1889, the University of New Mexico sits on the traditional homelands of the Pueblo of Sandia. The original peoples of New Mexico Pueblo, Navajo, and Apache since time immemorial, have deep connections to the land and have made significant contributions to the broader community statewide. We honor the land itself and those who remain stewards of this land throughout the generations and also acknowledge our committed relationship to Indigenous peoples. We gratefully recognize our history.

Citizenship and/or Immigration Status: All students are welcome in this class regardless of citizenship, residency, or immigration status. Your professor will respect your privacy if you choose to disclose your status. As for all students in the class, family emergency-related absences are normally excused with reasonable notice to the professor, as noted in the attendance guidelines above. UNM as an institution has made a core commitment to the success of all our students, including members of our

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undocumented community. The Administration's welcome is found on our website: http://undocumented.unm.edu/.

Respectful and Responsible Learning: We all have shared responsibility for ensuring that learning occurs safely and equitably. UNM has important policies to preserve and protect the academic community, especially policies on student grievances (Faculty Handbook D175 and D176), academic dishonesty (FH D100), and respectful campus (FH CO9). These are in the Student Pathfinder (https://pathfinder.unm.edu) and the Faculty Handbook (https://handbook.unm.edu). Please ask for help in understanding and avoiding plagiarism or academic dishonesty, which can both have very serious consequences.

Support: Center for Academic Program Support (CAPS). Many students have found that time management workshops can help them meet their goals (consult (CAPS) website under "services").

Connecting to Campus and Finding Support: UNM has many resources and centers to help you thrive, including opportunities to get involved, mental health resources, academic support including tutoring, resource centers for people like you, free food at Lobo Food Pantry, and jobs on campus. Your advisor, staff at the resource centers and Dean of Students, and I can help you find the right opportunities for you.