A SYSTEMS APPROACH TO GLOBAL ENGINEERING

CVEN 4157/CVEN 5157 (3 credit hours)

Spring 2023

Image credit Virpi Oinonen: http://www.businessillustrator.com/

Instructor

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Prerequisites Senior or graduate level

Course website:

Week-by-Week Content for CVEN 4/5157 | Bernard Amadei | University of Colorado Boulder

Course Description

This course aims to introduce engineering students to the global context in which engineers are asked to operate in the 21st century. The course also introduces students to system dynamics tools and other decision-making tools (network analysis,

These goals will be met through lectures, seminars, and projects. Students will be exposed to various projects in the developed and developing world. In each project, students will be shown how technical and non-technical issues have helped shape the project outcome.

Throughout this course, students will be presented with the importance of depth and breadth in their education and the need for a balance between specialization and a broader understanding of the linkages between engineering and society.

This course is offered as a senior and graduate-level technical elective.

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The web and the literature are rich in articles, videos, and websites covering the topics mentioned below. Students are expected to read three to four articles (or book chapters) before each class, work and learn with their peers, and present their findings in class.

Software:

You are asked to purchase the student version of the

- 8. Sustainability and Sustainable Development
 - Definitions
- Integrating sustainability in engineering projectsSystems Approach to

CLASSROOM BEHAVIOR

Course Communication & Professionalism

In an effort to create a professional atmosphere within the classroom, it is requested that you:

- Arrive to class on time
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Information about university policies, <u>reporting options</u>, and support resources can be found on the <u>OIEC website</u>.

Please know that faculty and graduate instructors have a responsibility to inform OIEC when they are made aware of incidents of sexual misconduct, dating, domestic violence, stalking, discrimination, harassment and/or related retaliation to ensure that individuals impacted receive information about their rights, support resources, and reporting options. To learn more about reporting and support options for a variety of concerns, visit Don't Ignore It.

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance. See the <u>campus policy regarding religious observances</u> for full details.

Activity-