FACULTY INFORMATION

Dr. P. Nava  
Office: ENGR A-319 or via MS Teams  
Phone extension: 747-5994  
Email: pnava@utep.edu  
Note: calling my phone extension will result in a redirect to MS Teams.

Office Hours: 4:00 - 5:00 Monday
3:00 - 5:00 Wednesday
Other times by appointment

NOTE: these times are subject to change.

COURSE DESCRIPTION:
Underlying philosophy of the theory of fuzzy sets and its applications in engineering. Fuzzy set theory, fuzzy logic, fuzzy reasoning and rules, and fuzzy systems. Decision-making in the realm of vague, qualitative, and imprecise data. Current models, simulation tools, hardware implementations and their applications will also be covered.

REQUIRED TEXTBOOKS: none required. References will be provided, as needed.

COURSE PREREQUISITE:
EE 4366: EE 3353 (Discrete Time Signals & Systems) and EE 3384 (Intro to Probability)  
EE 5361: None

LEARNING OUTCOMES:
Students successfully completing this course will be able to:

1. Utilize a working knowledge of fuzziness, mathematically and linguistically.
2. Utilize a working knowledge of fuzzy design methodology for systems and unconventional models.
3. Explain the difference between fuzziness and other characteristics typically confused with fuzziness, e.g., probability, nondeterministic behavior, multi-valued logic, etc..
4. Understand when fuzziness is applicable and beneficial in creation of a hybrid model.

GRADING POLICY AND STRUCTURE:

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<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Exams</td>
<td>60%</td>
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<tr>
<td>Homework</td>
<td>20%</td>
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<tr>
<td>Presentation</td>
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<td>Instructor</td>
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Note: a comprehensive final exam will be

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<th>GRADING SCALE:</th>
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<tr>
<td>90 – 100% → A</td>
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<tr>
<td>80 – 89% → B</td>
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<tr>
<td>75 – 79% → C</td>
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<tr>
<td>60 – 74% → D</td>
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<td>&lt; 60% → F</td>
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provided for those students who need an opportunity to improve their grade. In order to be eligible for this option, the student must have grades for each of the three exams provided previously. Should a student opt to take the final exam, the lowest score amongst the three previous exams will be dropped.

**Homework and Readings:**

A significant portion of your content mastery depends on completion of homework assignments. Homework assignments will include problem sets and/or reading assignments. All assignments must be completed by the posted deadline. Late homework will only be accepted in the case of illness or emergency. Good homework presentation ~ including neat and legible work ~ are **expected and required**. To receive full credit, all submitted work must begin with **Student’s Name and Assignment number (with assignment title)**, all at the top of the first page.

- Reading Assignments – as assigned, have a deadline in order to prepare for discussion in a particular class. Also, reading assignments can be used to create exam questions.

- Homework assignments will be due on designated date. Typically, no late work will be accepted. Exceptions include excused absences.

**Office Hours and Communication:**

NOTE: The “instructor assessment” portion of your grade will be determined by your active class participation will be assessed by interaction during class, seeking out office hours, and other methods of engagement.

- **Office Hours** -- will provide a venue for questions and discussion. You may attend individually or as a small group, if desired. Additionally, the MS Teams environment can be used for remote office hours, or by appointment. (Please send a chat prior to your call in Teams to ensure that you have my attention.)

- **Email communication** -- Send all your class related e-mails to pnava@utep.edu. Due to high volume of emails received, please be patient and be certain that your email will receive a response within 24-48 hours of receipt. **Make sure** the message’s subject description has prefix “EE4366:“ followed by the rest of the message’s subject (Example: “EE4366: Question about homework”).

- **Accessible content will be posted on Blackboard** (PowerPoint slides, course handouts, assignments, reference materials). Be proactive and diligently keep track of your own progress by making sure you access all these resources and meet the posted deadlines.
Course Schedule and Important Dates:
There are two documents available on BlackBoard: (1) the course schedule delineates topic sequence; and (2) the important dates document lists holidays and projected exam dates. Both documents are subject to change, at the discretion of the instructor to adapt to the needs of the class.

Classroom Etiquette:
- The class is not dismissed until I dismiss it.
- If you need to leave early, please inform the professor prior to the start of class.
- If you need to use the facilities, please leave, and return as discreetly as possible.
- You are responsible for completing assignments, even though it may or may not be collected, or only some of the assignment graded.
- You may collaborate on the homework (note that collaboration and studying together is not the same as collusion, copying, or any other form of academic dishonesty).
- You may not collaborate on exams. This is a form of academic dishonesty and will be reported to the Office of Student Conduct and Conflict Resolution.

Course & University Policies
**Attendance:** Attendance is not officially reviewed.

**Covid-19 and Illness:** If you feel sick or have been exposed to a communicable illness, please do not attend class. You have the option of notifying the instructor and attending via Teams by making prior arrangement. Otherwise, you can obtain notes from BlackBoard or a classmate.

**Electronic Devices:** You must have access to an internet connected device to access course resources.

**Center for Accommodations and Support Services (CASS):** Students requiring unique accommodations must contact the CASS office and provide their instructor with the proper documentation at the beginning of the semester. Please make sure to talk to the instructor at the beginning of the semester to discuss necessary arrangements. The CASS office may be contacted at 747-5148, cass@utep.edu or in Room 106 Union East Building.

**Scholastic Integrity/Academic Honesty:** While collaboration is encouraged, collusion is not. In accordance with University regulations, scholastic dishonesty on a given assignment will be subject to disciplinary action and will be referred to the Office of Student Conduct and Conflict Resolution (OSCCR). Dishonesty/cheating/plagarizing may result in a zero on the assignment, an "F" in the course, or even suspension from the university. If you need assistance with your assignments, please consult authorized sources of help. For more information on Scholastic Dishonesty and/or Plagiarism, consult the Handbook of Operating Procedures: Student Affairs, which is available on the web, as well as in the Office of Student Life.

**Copyright Statement for Course Materials:** All materials used in this course (including but not limited to assignments, exams, quizzes, handouts, etc.) are protected by copyright law. The course materials are only for the use of students currently enrolled in this course and only for the purpose of this course. You may not further disseminate (i.e., share, send,
or post) any class materials/resources outside of this course. Doing so may result in disciplinary action.

**Make-Up Work Policy:** Make-up work will be given only in the case of a documented emergency, so please contact me immediately. Note that make-up work may be in a different format than the original work. If you miss an assignment due to an unexcused absence, you will receive a zero. It is therefore important to reach out to me—in advance if at all possible—and explain why you missed a given course requirement. Once a deadline has been established for make-up work, no further extensions or exceptions will be granted.

**Technical Support:**

If you need technical support with Blackboard (or email, etc.), please contact UTEP’s Help Desk at (915)747-4357 (HELP), helpdesk@utep.edu. For help with equipment, internet access and tech support please visit https://www.utep.edu/technologysupport/

**Other requirements:**

Graduate students taking this course, who will utilize it as part of their degree plan, are responsible for completing all work required of undergraduates. In addition, expectations include:

- written review of an article from a current journal;
- successful completion of a final exam, prepared for graduate students; and
- 80% average (minimum) on homework, quizzes, and exams.