Welcome! We are very Happy to host you

Please *mute your microphones* and *turn off your cameras*

Presentation will start in few minutes

You may ask Questions in chat

... or at the end of the session by raising your hand
Welcome!

Professor Assimina Pelegri
MAE Undergraduate Director

Professor Xi Gu
Course Coordinator
Approaching Senior Design
What to Expect

Junior Class Info Session

650:467/468 - Design and Manufacturing I & II

650:487/488 – Aerospace Engineering Project I & II
Senior Design Projects at Rutgers
Senior Design...

- **Relevant and Impactful**
  - Prepare to innovate transformative solutions that make the world a better place

- **A Path to Professional Success**
  - Senior Designs are part of your “portfolio”
  - Videos, presentations and elevator pitch
Prerequisites

- 650:312 Fluids
- 650:342 Design of mechanical Components
  (prereq: 291, 388)
- 650:350 MAE Measurements
- 60:351 Thermodynamics
Two step registration

Starting next week

- ME students (650) register in 650:467
- AE students (021) register in 650:487

Starting May 1st

- Forming of groups
- Formed groups will be given SP# to register to specific sections
- The process will continue until August
Groups

- 650:467 ME
  Can have only mechanical engineering students
- 650:487 AE
  Can have aerospace students and one or 2 mechanical (priority of the groups forming goes to aerospace)
Projects

Projects may be offered

- Professors
- Companies
  professor will indicate to you if your project is industry supported
- Groups
  you have to solicit a professor to work with you
Where can I find a project?

- [https://mae.rutgers.edu/capstone-design-project](https://mae.rutgers.edu/capstone-design-project)
### Student Expertise

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Beginner</th>
<th>Intermediate</th>
<th>Serious Hobbyist</th>
<th>Professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand Tools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machining (trad...)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CNC Machining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3D Printing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yielding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wiring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple analog ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microcontroller...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing (i.e....)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Software Expertise

<table>
<thead>
<tr>
<th>Software</th>
<th>None</th>
<th>Beginner</th>
<th>Intermediate</th>
<th>Serious Hobbyist</th>
<th>Professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matlab</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comsol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Python</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ansys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid Works</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other CAD pack...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siemens NX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LabView</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-Calc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xfoil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machine vision ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Timeline

Phase I
Registration

Apr 2020

Info Session

April - May 2020

Project Release

Jul 2020

Group Forming

Aug 2020

End Registration Phase II

Dec 2020

Project Design Presentation

Jan 2021

Project Design Pitch

May 2021

Capstone Design Expo

1st Semester

2nd Semester

Phase I
Registration

Apr 2020

Info Session

April - May 2020

Project Release

Jul 2020

Group Forming

Aug 2020

End Registration Phase II

Dec 2020

Project Design Presentation

Jan 2021

Project Design Pitch

May 2021

Capstone Design Expo
• Useful Links!

https://mae.rutgers.edu/flipbook/ughandbook/mobile/

https://mae.rutgers.edu/flipbook/ughandbook/mobile/

https://mae.rutgers.edu/flipbook/dm18/mobile/
I couldn’t help it....

steve jobs level maneuver
QUESTIONS?