



# **ME4182 & ME4723** (*other disciplines welcome!*)

Common Studio Session for Week #6

Date 09/27/2021

Expo Discussion:

<https://forms.gle/LTaHvtZMAX5m7sVL7>

# Recap/Reminders

- ALL Links, SLIDES and VIDEOS are posted here: <http://mecapstone.gatech.edu/students>
- Expert support staff help available:
  - Kinsey Herrin, Sr. Research Scientist with interests in prosthetics, biomed device projects.
  - Mondays 3-4 pm in GTMI #401 or <https://bluejeans.com/489459898/2989>
  - Students are also welcome to email [Kinsey.herrin@me.gatech.edu](mailto:Kinsey.herrin@me.gatech.edu) directly to schedule an appointment
- Plan for next week:
  - Class Social with refreshments
  - Product Dissection by Milwaukee Tools
  - Discussion on Prototyping and Engineering Analysis

# Common Studio Topics

- ~~1. Course Overview, Projects, Teams and Bids, Communication~~
- ~~2. User needs / Engineering Design Specifications~~
- ~~3. Market research and Prior Art~~
- ~~4. Ideation, Concept Generation, Design Process~~
- ~~5. Industrial Design & Human Factors~~
- ~~6. Social, environmental, sustainability considerations~~
- 7. Effective Communications / Plan for Expo**
- 8. Intellectual Property Protection, Filing Patent Claims**
9. Prototyping
10. Analysis
11. Risk, Liability, Codes & Standards
12. Forming a company

Associated deliverables and reports may be due in your section lab meetings

# Flipped Class for Week #7

- Everyone review the slides and videos on “Prototyping” listed under week #7 on class schedule
- 4 teams will join a panel discussion on how they plan to use prototyping for their projects. Each team will have...
  - 1 minutes to present their project overview
  - 4 minutes to present how and why they will prototype and what they wish to learn from it?
    - Share your thoughts on:
      - How many prototypes would you build in parallel?
      - How many prototyping iterations do you anticipate for your project?
      - What aspects will you prototype physically vs virtually?
      - Do you see a need to breakdown your solution into discrete sub-systems that you will prototype separately?
      - Would you need to scale down or scale up your prototype during any stage of the design process?
      - Are there opportunities to relax design requirements to simplify the prototype yet yield you with useful insights?
  - 5 minutes for Q/A and discussion by class

# Teams for Flipped Class for Week #7

- GTL and Harrison
  - 012-S.A.T. Helmet
- Interdisciplinary Group F21
  - F05-Low-Cost Neonatal Incubator for Ghana
- Aegis
  - 009-Robotic ophthalmic camera in a kiosk for self - administered eye exam
- Super Campeones
  - 003-Dia-Bot (Diagnostic Robot) Gripper