SYLLABUS

Course Number and Name:	ME692 – Advanced Product Design & Development	
Term:	Spring 2022	
Lecture:	Monday/Wednesday, EPC B05, 2:30-4:15	
Lab:	TBD, EPC B05, TBD	
Credits:	4. Engineering topic.	
Number of Contact Hours:	LAB – 1, LECTURE – 3	
Instructor or Coordinator:	Stephen Chomyszak	
Office Hours:	By Appointment	
Textbook(s) and/or Other Required Material: None		

Course Description: This course will teach the Product Development and Design process using student-chosen projects. The class will be segmented into teams of 3 or 4 people. Each team will navigate the Product Development and Design process while working on their chosen project. There will be engineering/design reviews at various stages of the project which will require each team to prepare and deliver concise and succinct presentations. Teams will incorporate feedback from each review back into their projects. Teams will also incorporate the learnings from ME691 to design an entire product based on their chosen area of interest. The emphasis will be on collaborative design (Onshape will be used for CAD purposes), component design and packaging, Design for Manufacturing and Assembly (DFMA), and engineering documentation suitable for manufacturing evaluation.

Semester Schedule:

Week	Topics
1	Formation of Teams, Presentation of Product Ideas, Down Selecting the Final Project
2	Project Plan, Concept Generation, Concept Reviews
3	Concept Design – CAD Layout (Human Interface, Maintenance, Assembly, Packaging, Etc.)
4	Concept Design Review and Revisions
5	Begin Detailed Design and Material Selection
6	Continue Detailed Design, Begin Manufacturing Process Evaluation
7	Semester Break – No classes
8	Mid-Term Project Review and Peer Reviews
9	Continue Detailed Design
10	Manufacturing Review - DFMA
11	Begin Design Revisions
12	Begin Final Modeling and Engineering Drawings
13	Continue Engineering Drawings
14	Engineering Drawing Review
15	Final Revisions to Models and Drawings

NOTE: Instructor reserves the right to make alterations to the above schedule as needed.

Assignments and Grading Criteria

This course will be comprised of individual and team-based work. Evaluation of team-based work will be comprised of a final team grade given by the instructor for the overall quality of the work produced by the entire team AND will be prorated based upon a peer evaluation of each member's contribution to the team by all other members on the team. The peer evaluation will be agreed to and signed by all members on the team and will be used in the determination of an individual's team-based evaluation.

The breakdown for the grade weighting is:

Attendance	10%
Assignments and Reviews	25%
Team Midterm Presentation	15%
Team Project Final Presentation	50%

Due to the importance of the team project, failure to participate in the project will result in a failing grade for the course.

Attendance Policy:

All students are expected to attend all lecture, labs, and events scheduled by their respective team. I will be taking attendance at lectures and labs and I encourage team leaders to take attendance at their team meetings as well to provide meaningful data during the team's peer assessment.

Tracking of attendance will take the following format on a spreadsheet:

1.0 = Student is present and accounted for during scheduled class/lab time

0.5 = Student is not present but was proactive in communicating their absence to me via email

0.0 = Student not present and no prior notification given

A series of three 0's in a row will constitute a contact to the Department Chair to investigate the circumstances behind extended absences and to determine any administrative actions that should be taken as a result of the findings.

You can ask to see your attendance record for the class at any time.

Academic Conduct:

All students will be expected to follow Boston University's code for academic conduct found here: <u>https://www.bu.edu/academics/policies/academic-conduct-code/</u>