

Graduate course 2 – Biomaterials (ME765):

Specific Plan

→ One 75 minute class period devoted to ethics module – continue to incorporate into brief examples throughout semester

- Give students a general engineering B/W example about an engineer in the biomaterials field (Case Study 1). Discuss briefly in class.
- Present a grey example (Case Study 2); let them think about it briefly, discuss as a class for five minutes, then present Ethics Lecture. The Case Study 2 has aspects that require technical knowledge of the field to fully understand and address.
- After lecture, present the grey example again. Ask students to form small groups in the classroom. Distribute the Reasoning Table to help direct and organize teams toward ethical reasoning principles. Give groups five minutes to work together on filling in the sheet.
- Assign Case Study 2 as a team (3 students) homework problem where the homework teams discuss this case study further. On the day the homework is turned in, have a brief group discussion about what more came out about the analysis within the teams.
- Reintroduce Case Study 2 later in semester and repeat analysis steps and inclusion of variables at the appropriate time that technical information relevant to understanding of the problem is presented.
- Use the Ethical Reasoning Table to set the stage for analysis of issues of embryonic stem cell research in the biomaterials field. Use this analysis as homework before debate on issues. Students must concentrate on one approach at a time during the debate and acknowledge which approach they are using before entering the discussion.