Engineering Review Activity

Course:

- University of British Columbia, MECH 325 (Mechanical Design I)
- Third-year core course for Mechanical Engineers
- Approx. 150 students in 30 teams

Activity Objectives:

- Review characteristics and uses of common mechanical components

Activity Duration:

- 5 different scenarios
- Each included 5 minutes for team discussion and 5 minutes class discussion / debrief

Activity:

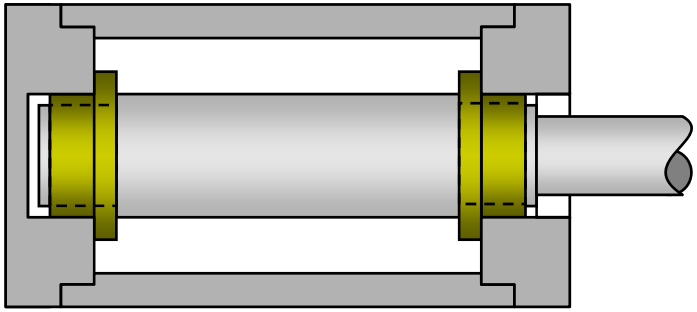
- Select preferred implementations for common mechanical components (e.g. bearing selection, as shown on next page)
- Conducted during introductory class – activity also served as icebreaker and team-building exercise

Reporting and Debriefing:

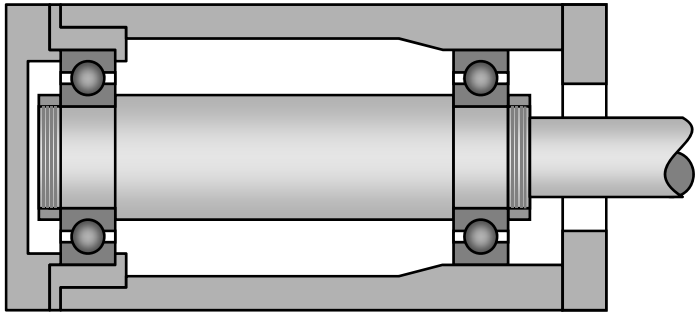
- Teams reported their answer (A, B, C, or D) by holding up coloured card with corresponding letter
- Instructor facilitated discussion and led class to “best” answer

Bearing Selection

- Scenario:
  - Support a shaft, as shown
  - Moderate speed
  - High radial load, low axial load
  - Dirty environment
- Your recommendation:
  A. Design 1 as-is
  B. Design 1 w/ modifications
  C. Design 2 as-is
  D. Design 2 w/ modifications



Design 1



Design 2