FMEA: Teams should use both Function and Component Based FMEA.

• What is the purpose of this recommendation?
  
  o Teams which have completed failure modes and effects analysis deliver more robust products to customers.

• Where did this recommendation come from?
  
  o Three of the successful projects (Obstacle course, balance bike, and parallel bars) have documented FMEA process. The Obstacle course was the most successful project, and they did both component based and function based FMEA; hence the recommendation.

• How can this recommendation be implemented?
  
  o Include points for FMEA in the Risk Assessment and/or Concept Development requirement.

• What is the time-frame and manpower required to implement this recommendation by administration?
  
  o Templates for FMEA already exist, so time required will mostly relate to posting on MyCourses. Additional time may need to be spent with teams explaining how to use FMEA. Posting the files to MyCourses should take less than a half hour, and up to an hour may be required per team for explanation.

• What projects will this benefit the most?
  
  o Device projects will benefit more than process, however FMEA certainly will not detract from a process project.

• What are the Pros and Cons of this recommendation?
  
  o Potential failure modes will be removed from the project.

  o Added work will increase the time teams have to spend doing a process activity.
• Risks associated with this recommendation.
  o The analysis is not done properly or completely, and some easily preventable failure mode exists in the delivered product.

• Mitigation of associated risks.
  o Clear directions and training for student teams so major failure modes can be avoided.