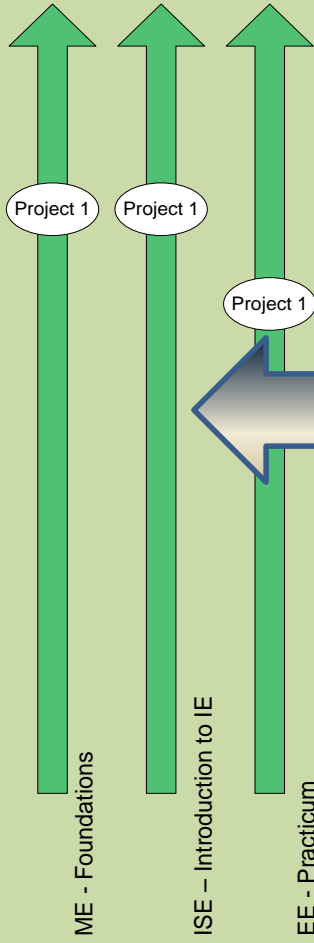


Assistive Devices Future Roadmap

4 Projects (suggested)

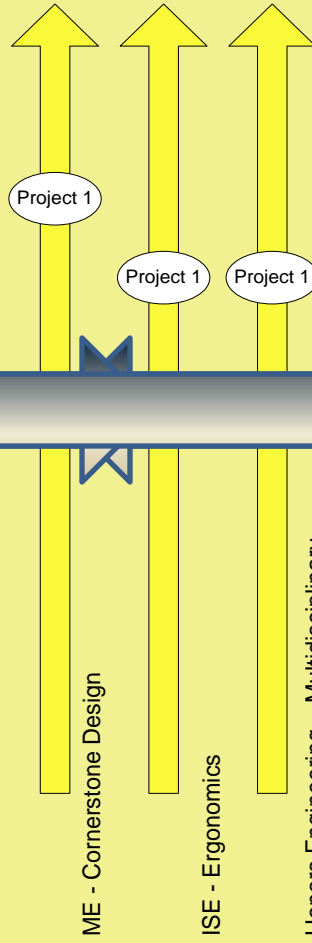
Simple



1st Year

4 Projects (suggested)

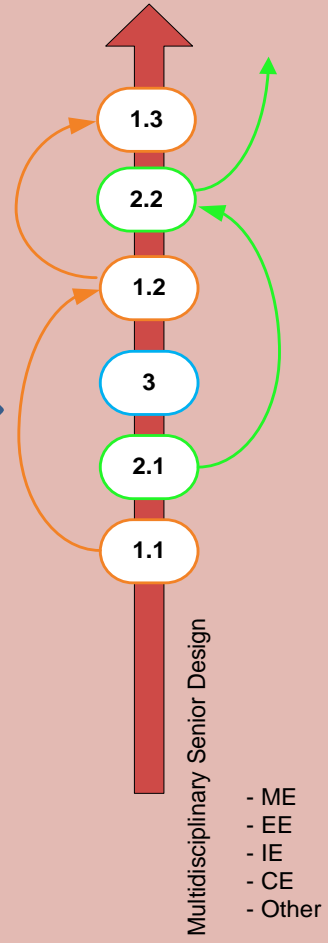
Moderate



3rd Year

8 Projects (suggested)

Difficult

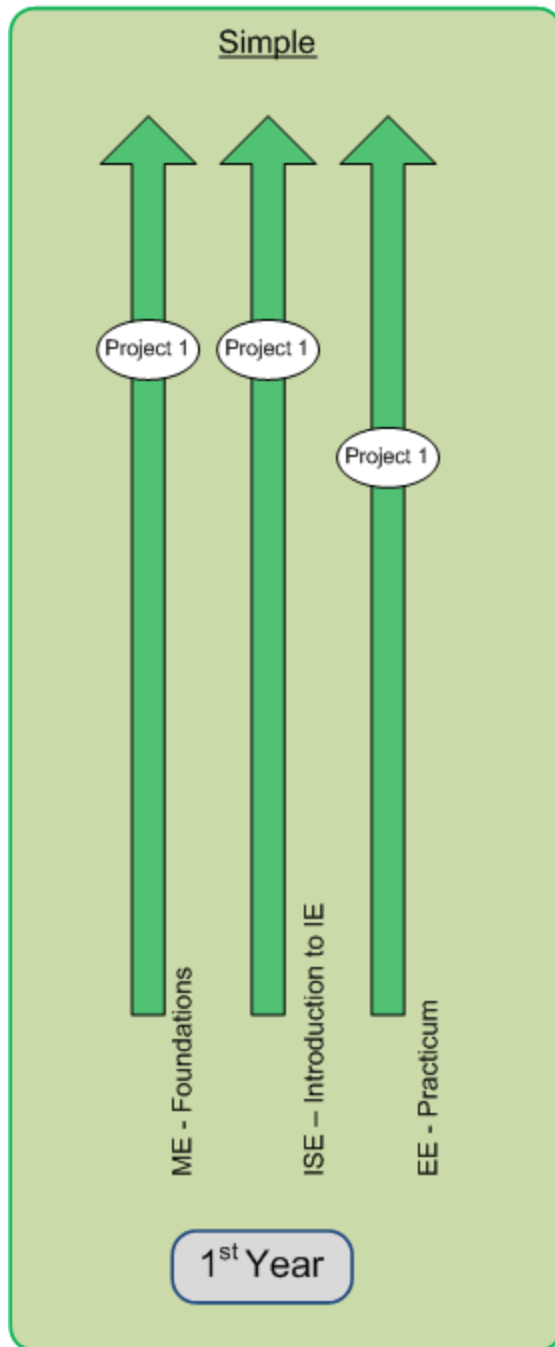


5th Year

TIME

TIME

4 Projects (suggested)



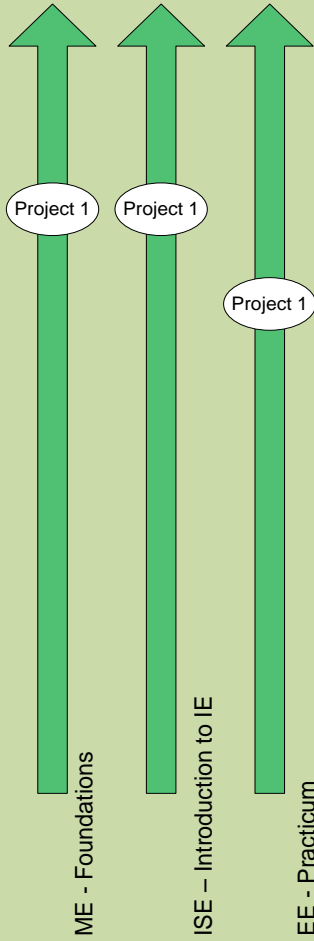
Simple Project Track

- Involve 1st year engineering students
- Draws on foundational math and science courses
 - Physics I, II, III
 - Calculus I, II, III
- **Goal:** Provide students with a rudimentary real world problem with defined scope
 - Allows for hands-on application of theory
 - Create/Further an interest in engineering
- **Outcome:** Provide numerous solutions to given problem. Solutions will be archived for future use.
- **Example:** Develop a device to reach a grasp an object within a certain distance and time period

Assistive Devices Future Roadmap

4 Projects (suggested)

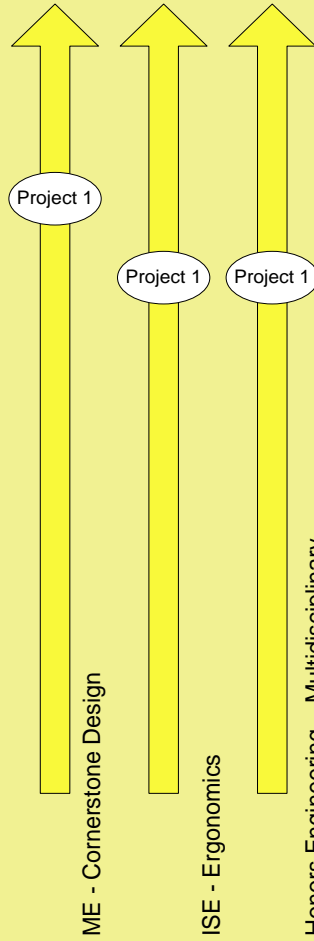
Simple



1st Year

4 Projects (suggested)

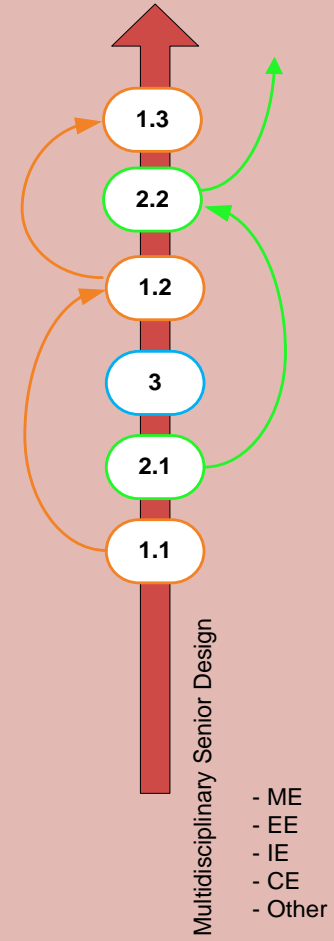
Moderate



3rd Year

8 Projects (suggested)

Difficult

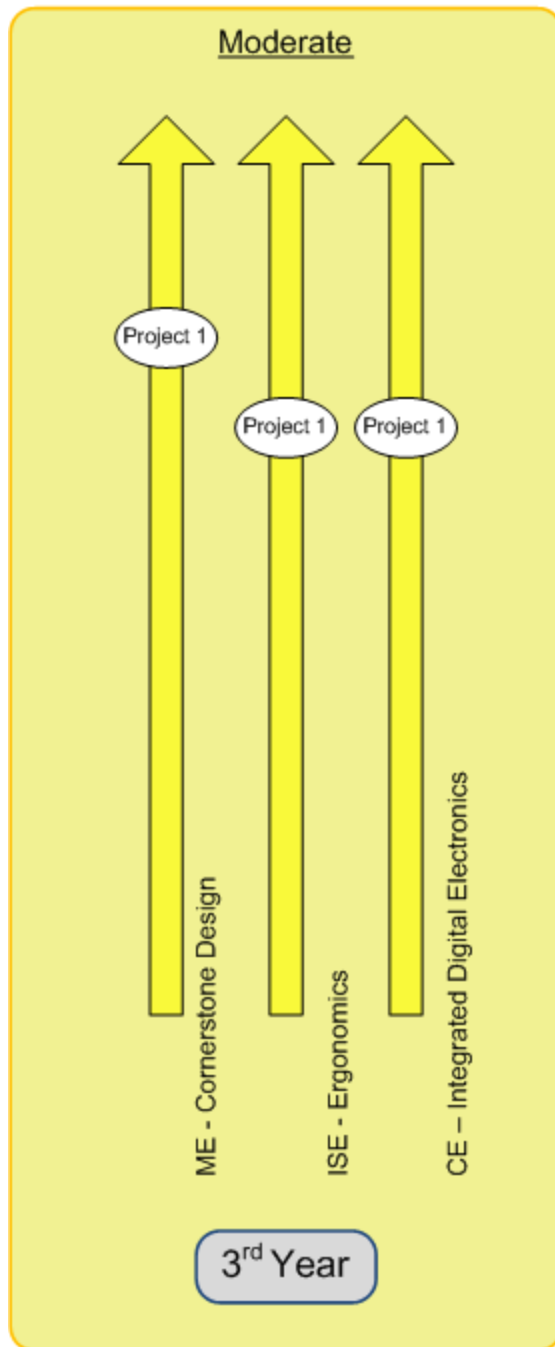


5th Year

TIME

TIME

4 Projects (suggested)



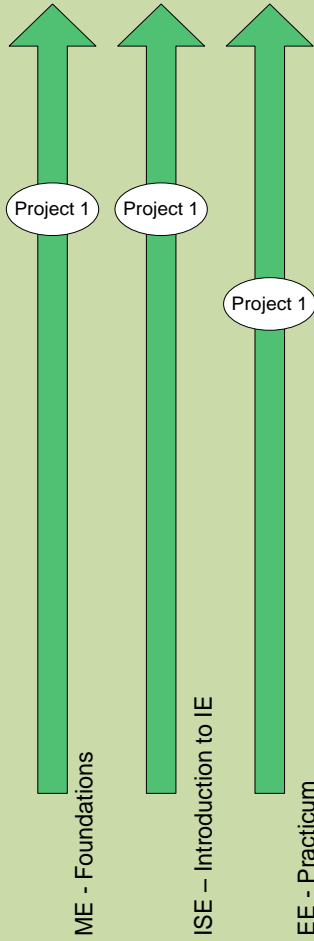
Moderately Difficult Project Track

- Involve 3rd year engineering students and projects
- Draws on **Simple Project Track** *plus* early foundational engineering courses
- **Goal:** Students to solve an open-ended design problem with given constraints
 - Students will develop some items of PD (i.e. technical drawings, organized needs) but most will be given
 - Small budget will be supplied
- **Outcome:** Develop a database of solutions for use by MSD teams for common problems
- **Example:** Develop a touch screen to read a patient's heart rate (CE)

Assistive Devices Future Roadmap

4 Projects (suggested)

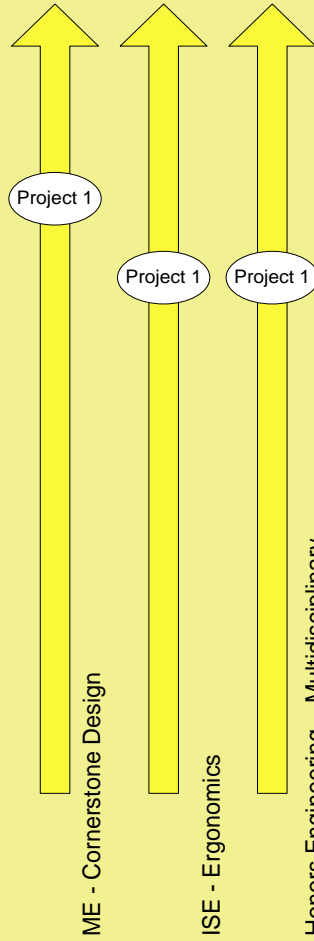
Simple



1st Year

4 Projects (suggested)

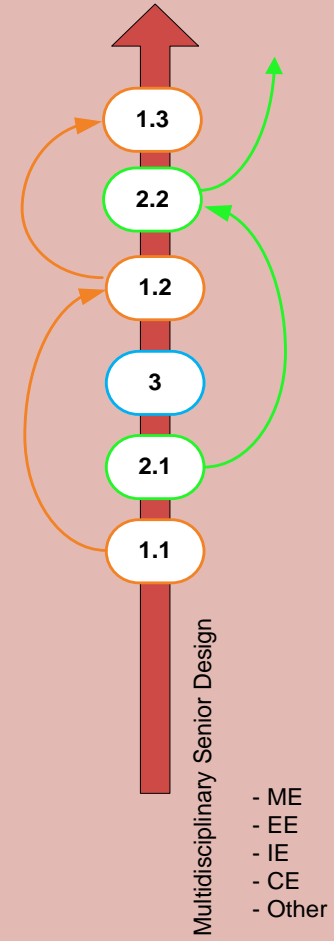
Moderate



3rd Year

8 Projects (suggested)

Difficult

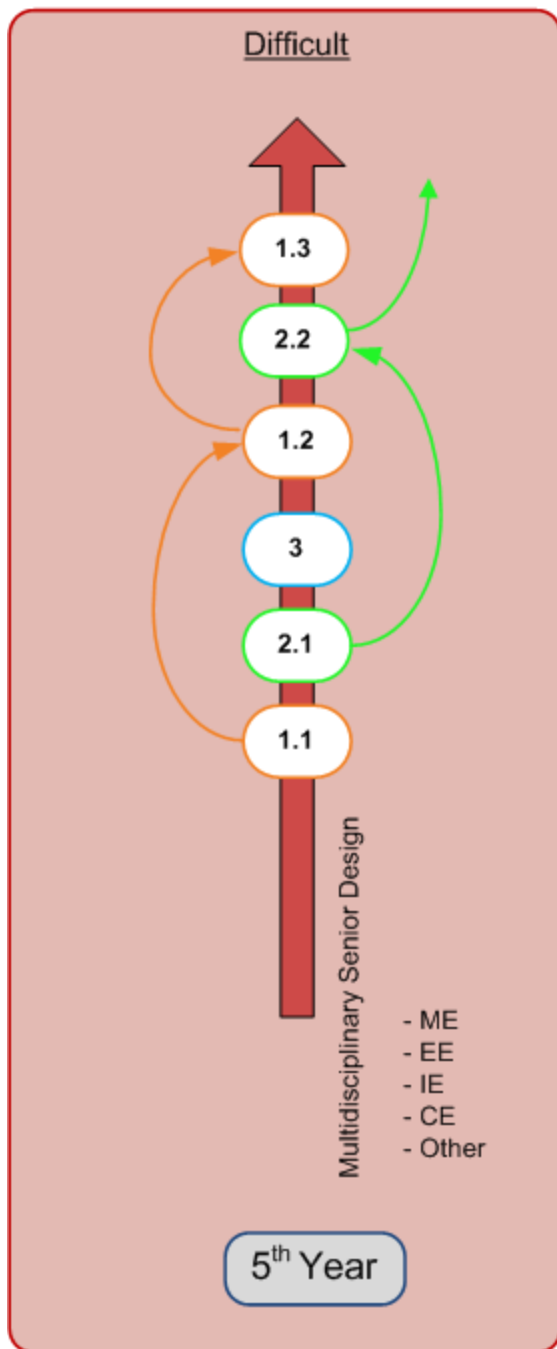


5th Year

TIME

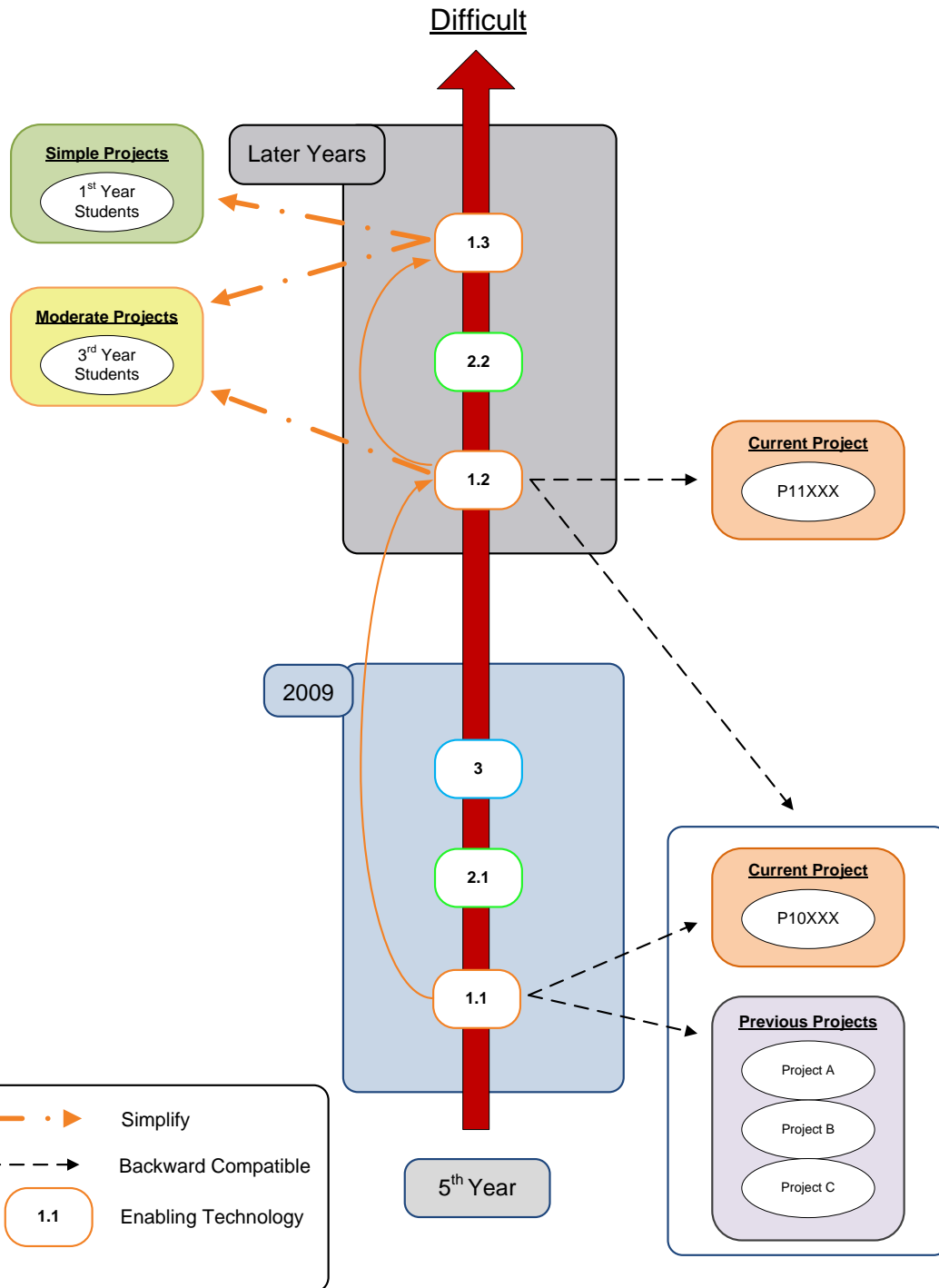
TIME

8 Projects (suggested)



Difficult Project Track

- Multidisciplinary Senior Design
- Draws from **Simple Project Track** and **Moderately Difficult Project Track**
- **Goal:** Students can use archive of problem solutions from other tracks for support during MSD
 - Allows for effective time management
 - Used for building blocks to solutions
 - Evolution of projects
- **Outcome:** MSD projects can use historical projects as references/support for current project allowing for further project completion
- **Example:** A simple problem that would usually require development time can be solved using database of solutions



Difficult Project Track Expanded

- Enabling Technology – developable technologies that are created by MSD teams and can be used in the future
 - Critical and universal technologies
- Developed parallel to specific MSD project
- Must be backward compatible
 - Archival projects
 - Recent project iterations
- Once technology is established
 - Ideas can be used in future projects as a “plug and play”
 - Ideas can be trickled down to lower level projects
- Also can work in reverse where small scale problems can be solved using lower level projects to create database for MSD teams