

# Joining the Research Effort – Information

Thanks for your interest in the “Design Your Process of Becoming a World Class Engineering Student” project.

If you are interested in joining our research on the project:

Our intent is to compile data from various institutions to demonstrate the effectiveness of the project, and by project, we mean the whole approach of focusing at least 1 credit/unit hour on student development including the comprehensive project at the end.

The research material can be found on this website or at the following link:

<https://www.dropbox.com/sh/4bbdclq3p8g0mc0/R5GrqcOJpK>

To be able to publish data gained from surveys an Internal Review Board (IRB) approval at your institution is necessary. You can find our approved IRB proposal for your reference including the consent forms (we can only use results from surveys and statements from students who consented to the research study for publication). General data, such as overall GPA of a cohort, can be used without student consent, but an IRB proposal is still needed (at least based on our institutional regulations).

Our 4-year research plan is as follow:

For students who are taking the project (Cohort taking the project):

- Survey - Cohort taking the project - End of Term: given to the students at the end of the term they do the project
- Determine: Total number of students taking the project per term, percentage taking Calculus I in their first academic year, percentage of students staying enrolled as engineering (pre-)major in subsequent term, freshman year GPA
- Survey - Cohort taking the project - One and two years after taking the project, retain a list of the students who took the project (and consented to the research) and follow up with them after one and two years
- Survey - Cohort taking the project - after four years or upon graduation, this is the last survey
- Gather GPA data after one, two and four years (or upon graduation)

For students who are not taking the project (Cohort not taking the project):

- Survey - Control Group: given students who don't take the project, either students in sections that did not assign the project or previous student classes, such as current sophomore or juniors

- Determine: Total number of students not taking the project, percentage taking Calculus I in their first academic year, percentage of students staying enrolled as engineering (pre-)major in subsequent term, freshman year GPA, sophomore, junior and senior year GPAs

Please note that you need to edit the surveys and substitute the name of your institution and your course name. We used Qualtrics for our surveys (see .qsf files) since it allows easy and quick analysis of the data. All surveys are also posted as MS Word documents.

Our intent is to find funding sources to support collaborators. We might ask you for a letter of support for this effort at some point.

Even if you cannot participate fully at this point, please feel free to use the surveys in your class for our own assessment. We would be interested in any result even if you don't have an IRB approval to get a larger picture of the impact of the project.