

Statics Survey  
Background questions

4. Please indicate your sex (sex)

- a. (1) Male
- b. (0) Female

6. Are you are part of the School of Biomedical Engineering? (BioEng)

- a. Yes
- b. No
- c. Don't know

7. What was your math SAT score? (200-800) \_\_\_\_ (SAT)

8. Have you taken Statics before this semester? (PrevStatics)

- a. Yes
- b. No

Self efficacy (SE)

Part I. Instructions: The following is a list of major steps along the way to completing an engineering degree. Please indicate how much confidence you have in your ability to complete each of these steps in relation to the engineering major that you are most likely to pursue. Use the 1 to 5 scale below to indicate your degree of confidence

- (1) No Confidence At All
- (2) Little Confidence
- (3) Moderate Confidence
- (4) Strong Confidence
- (5) Complete Confidence

How much confidence do you have in your ability to:

- 1. (SE1.1) Complete the rest of your "basic science" (i.e., math, physics, chemistry) requirements for your engineering major with grades of B or better .
- 2. (SE2.1) Excel in your engineering major over this current semester
- 3. (SE3.1) Excel in your engineering major over the next two semesters
- 4. (SE4.1) Complete the upper level required courses in your engineering major with an overall grade point average of B or better

Outcome expectations (OE)

Part II. Instructions: Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements.

- (1) Strongly Disagree
- (2) Disagree
- (3) Unsure
- (4) Agree
- (5) Strongly Agree

These items relate to getting a BS in engineering.

Graduating with a BS degree in engineering will likely allow me to:

1. (OE1.1) ...receive a good job offer
2. (OE2.1) ...earn an attractive salary
3. (OE3.1) ...get respect from other people
4. (OE4.1) ...do work that I would find satisfying
5. (OE5.1) ...do exciting work

These items relate to your current Statics class:

6. (OE6.1) If I work harder in Statics, I will earn better grades.
7. (OE7.1) If I work harder in Statics, I will do better in future engineering classes.
8. (OE8.1) If I participate in Statics, I will earn a better grade.
9. (OE9.1) If I participate in Statics, I will understand the material better.
10. (OE10.1) If I study for Statics with classmates, I will earn a better grade.
11. (OE11.1) If I study for Statics with classmates, I will understand the material better.
12. (OE12.1) If I attend Statics, I do better on assignments.
13. (OE13.1) If I complete my homework assignments in Statics, I will do better on the tests.

Interests(INT)

Part III. Instructions: Now, please indicate your degree of interest in doing each of the following activities. Use the 1-5 scale to show how much interest you have in each activity.

- (1)Very Low
- (2)Low Interest
- (3)Medium Interest
- (4)High Interest
- (5)Very High

How much interest do you have in:

1. (INT1.1) Solving practical math problems
2. (INT2.1) Reading articles or books about engineering issues
- e. (INT3.1) Working on a project involving engineering principles
4. (INT4.1) Solving complicated technical problems
5. (INT5.1) Working on a project involving scientific concepts
6. (INT6.1) Examining how machines work
8. (INT7.1) Working in groups to solve engineering problems
9. (INT8.1) Watching television shows about engineering (e.g. Mythbusters, Modern Marvels).

Part IV. Instructions: Using the scale below, indicate your level of agreement with each of the following statements.

- (1)Strongly Disagree
- (2)Disagree
- (3)Unsure
- (4)Agree
- (5)Strongly Agree

Goals (goal)

1. (goal1.1) I intend to major in an engineering field (G1- 13)
2. (goal2.1) I plan to remain enrolled in an engineering major over the next semester
3. (goal3.1) I think that earning a bachelors degree in engineering is a realistic goal for me
4. (goal4.1) I am fully committed to getting my college degree in engineering
5. (goal5.1) I plan to look for summer internships in engineering.
6. (goal6.1) I plan to look for undergraduate research opportunities with engineering professors.
7. (goal7.1) I am considering switching to another major.

### Mastery Orientation (MO)

1. (MO1.1) It's important to me that I learn a lot of new concepts this year.
2. (MO2.1) One of my goals in class is to learn as much as I can.
3. (MO3.1) One of my goals is to master a lot of new skills this year.
4. (MO4.1) It's important to me that I thoroughly understand my class work.
5. (MO5.1) It's important to me that I improve my skills this year.

### Performance Approach (PAp)

1. (OE1.1) It's important to me that other students in my class think I am good at my class work.
2. (OE2.1) One of my goals is to show others that I'm good at my class work.
3. (OE3.1) One of my goals is to show others that class work is easy for me.
4. (OE4.1) One of my goals is to look smart in comparison to the other students in my class.
5. (OE5.1) It's important to me that I look smart compared to others in my class.

### Performance Avoidance (PAv)

1. (PAv1.1) It's important to me that I don't look stupid in class.
2. (PAv2.1) One of my goals is to keep others from thinking I'm not smart in class.
3. (PAv3.1) It's important to me that my teacher doesn't think that I know less than others in class.
4. (PAv4.1) One of my goals in class is to avoid looking like I have trouble doing the work.

### Identity (ID)

1. (ID1.1) In general, being an engineer is an important part of my self-image.
2. (ID2.1) Being an engineer is unimportant to my sense of what kind of person I am.\* (rQ91b)
3. (ID3.1) I have a strong sense of belonging to the community of engineers.
4. (ID4.1) Being an engineer is an important reflection of who I am.
5. (ID5.1) Being an engineer is not a major factor in my social relationships.\* (rQ91f)
6. (ID6.1) I have come to think of myself as an 'engineer.'
7. (ID7.1) My social network includes a lot of engineers and/or science students.
8. (ID8.1) The daily work of an engineer is appealing to me

### Attitudes General (Att)

1. (Att1.1) In general I do not expect engineering to be an enjoyable career.(r)
2. (Att2.1) Engineering is the most rewarding future career I can imagine.
3. (Att3.1) My interest in engineering outweighs any disadvantages I can think of.
4. (Att4.1) There is no other major that will lead to a career I enjoy more than engineering.

### Enjoyment of Math & Science (EnMS)

1. (EnMs1.1) I really enjoy the subjects of science and mathematics.
2. (EnMs2.1) Studying mathematics and science is not something I like to do.(r)
3. (EnMs3.1) I like to take courses in mathematics and science.
4. (EnMs4.1) I find studying the topics in my mathematics and science courses interesting.

### Engineering as exact science (Exact)

1. (Exact1.1) Sometimes there are no right answers to engineering problems.
2. (Exact2.1) There is always a right answer to engineering problems.(r)
3. (Exact3.1) Engineering problems are not exact.
4. (Exact4.1) There is always a right answer to any problem an engineer faces.(r)

### Behavior (BEH)

1. (BEH1.1) I hate missing engineering class.
2. (BEH2.1) I keep working on engineering problems until I am satisfied with the solution.
3. (BEH3.1) I raise my hand often in class to answer questions.
4. (BEH4.1) I raise my hand often to ask question in class.
5. (BEH5.1) I go to my instructor's office hours to clarify my understanding of engineering principles.

6. (BEH6.1) I participate in engineering student organizations.
7. (BEH7.1) Even outside of class, I talk with my friends about how things work.
8. (BEH8.1) I rarely talk about engineering outside of my engineering classes (r)