

Project Statement

Design your Process for Becoming a “World-Class” Engineering Student

Engineers “design products or processes to meet desired needs.” In engineering education, most of the focus is on designing products. Through this project you will design a process. You will “Design Your Process for Becoming a ‘World-Class’ Engineering Student.” The text *Studying Engineering* will be a valuable resource in this design project.

Task:

For each of the following items, develop a plan that will indicate:

- a. Where a “world-class” engineering student would want to be on each item
- b. Where you are currently on each item
- c. What you need to do to move from where you are to where you would need to be to become a “world-class” engineering student

Items:

1. Set goal(s) for what you want to achieve through your engineering education (major, time to graduation, GPA, etc.) and beyond
2. Develop a strong commitment to the goal of graduating in engineering by:
 - a) Clarifying what success in engineering study will do to enhance the quality of your life (rewards, benefits, opportunities, payoffs, etc)
 - b) Understanding the essence of engineering (be able to articulate an answer to the question “What is engineering?”)
 - c) Being aware of past engineering achievements, current opportunities (academic disciplines, job functions, industry sectors) and future directions.
 - d) Preparing a “road map,” a term-by-term plan to guide you to graduation
 - e) Other strategies identified by you.
3. Be prepared to deal with inevitable adversity
4. Do a good job of managing various aspects of your personal life including interactions with family and friends, personal finances, outside work, and commuting.
5. Change your attitudes to those appropriate to success in math/science/engineering coursework. Among those that are candidates for change are:
 - a) Low self-confidence or overconfidence
 - b) Reluctance to seek help
 - c) Resistance to change, grow, develop, improve
 - d) Tendency to procrastinate
 - e) Avoidance behavior (avoid difficult or unpleasant tasks)
 - f) Reluctance to study with other students
 - g) Negative view toward authority figures
 - h) Other negative attitudes identified by you

6. Understand teaching styles and learning styles and how to make the teaching/learning process work for you.
7. Understand and practice the concept of “metacognition” to improve your learning process by observing your learning process, feeding back to yourself what you observed, and making changes based on that feedback.
8. Change your behaviors to those appropriate to success in math/science/ engineering coursework to include at least:
 - a) Devoting adequate time to studying
 - b) Adopting the principle that you master the material presented in one class before the next class comes
 - c) Make effective use of your peers through sharing information and group study; build productive relationships for college and beyond
 - d) Make effective use of your professors both inside and outside of the classroom
 - e) Prepare for lectures by reading ahead, attempting a few problems, formulating a few questions
 - f) Other behaviors identified by you
9. Manage your time and tasks effectively
10. Understand the principles of teamwork and leadership and develop skills to be both an effective team member and also an effective team leader
11. Participate in co-curricular activities to good benefit
12. Understand and respect differences in learning styles and personality types and in ethnicity and gender
13. Engage in good health and wellness practices including management of stress
14. Develop a high sense of personal and professional integrity and ethical behavior
15. Become effective at getting what you want and need from the educational system by utilizing campus resources (such as advising, tutoring, job placement services, health center, etc)
16. Add up to three additional objectives that you perceive are important for your success in engineering study

Deliverable:

Describe your plan in a 10-12 page report