

Engineering: Myth and Reality

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Common Perceptions

- All engineering students want to be engineers
- Electrical engineers take just electrical stuff
- Engineers have poor communication skills
- Engineers avoid non-engineering subjects
- Engineering students graduate at higher rates
- “I’m going into engineering because I’m good in math and science”
- Engineers are nerdy

Courses

- 4 yrs Math – preferably through calculus
- 4 yrs English
- 3 yrs Lab Science – 4 preferred
- 3 yrs Social Studies
- 2 yrs Foreign Language
- 2 yrs Electives, including, but not limited to speech, computing, engineering design and the arts

Testing

- **Highly selective colleges may have medians in the 1350 to 1450 range – ACT 32-34**
- **Applicants to less selective programs may be competitive with scores of 1100 or better, or an ACT of 28, assuming they have strength in the math portion of the exam**
- **Most private schools consider “super” scores.**
- **It is not unheard of for students with math scores in the high 500s to succeed in engineering**

GPA

- **Competitive applicants to any engineering college should be in the 3.5 unweighted range, for the highly selective programs - 3.8**
- **High performance in math and science and an improving GPA can offset a marginal GPA**
- **Most private colleges will consider the 7th semester performance.**

Personal Attributes

- **Commitment to Engineering**
- **Passion for things beyond engineering**
- **Creativity**
- **Enterprise/risk taking**
- **Evidence of being a team player**
- **Communication skills**
- **Care and respect for others**

In school activities

- **Music, theater, debate, athletics, student gov.**
- **Competitions in robotics, solar and wind, etc.**
- **Science Fairs, Decathlons, Odyssey, etc.**
- **Community service, mentoring, etc.**
- **Engineering design classes, projects – if available**

Out-of-School Activities

- College courses
- Summer engineering and design programs
- Summer programs in the arts
- Internships – university and corporate
- Part-time jobs that develop responsibility
- International travel – become fluent in another language
- Learn about a machine shop – build stuff

A college is looking for an entering class of 600 engineering students. If their “yield” is 30%, they will admit 2000 applicants to enroll 600. The admission committee would admit 80% or 1600 “slam dunks”. The remaining 400 slots would then be filled by considering the next most qualified in the pool (about 600).

A “slam dunk” is an applicant who is clearly in the upper range of our profile and who brings additional personal attributes which add value to the college.

To fill the remaining 400 slots we look for talent, diversity, geography, unusual life experiences and even some very, very bright, but “angular” applicants who didn’t make the cut for the slam dunk decisions.