

General Education Reflection

Ryan Gallus

A large part of my education at Iowa State University has come from general education classes. These classes, which I took largely as a freshman and sophomore, have helped me develop as an engineer and will continue to be beneficial in my career. My general education classes taught me about math, science, english, writing, and business. All of these can be applicable to my future career as an engineer

While still a senior in high school, I was able to take two english general education classes. These classes taught me how to correctly use grammar and write with proper organization and style. After coming to Iowa State, I also took a course on technical writing, which taught me how to communicate ideas concisely and efficiently. In my future engineering career, this will help me prepare documentation for my projects, interact with clients, define project requirements, and report progress to managers.

Early in my college career, I took classes in physics and chemistry. In my first physics course, I learned about basic interactions of forces and motion. In my second physics course, we studied electricity and electromagnetism. In chemistry, I learned about the periodic table of elements, how elements combine and interact, and the different properties of those interactions. In my future engineering career, I will use this information when working with computer hardware, which uses the electrical properties of different chemicals. Studying chemistry has also helped me to understand global issues, such as how high carbon emissions contribute to global climate change.

Throughout my experience at Iowa State, I took several math classes, including calculus one through three, and differential equations. Later on in my college career, I also took a statistics course. These classes taught me how to work with numbers and equations, as well as model real world problems in mathematical terms. In my engineering career, math will be critical. Computer engineers use math to analyze algorithms and study speed of hardware components. Math is also used heavily when analyzing electrical circuits. I will also use what I learned in statistics class to analyze large data sets and find patterns. Studying statistics has helped me to understand serious issues, such as the bulk collection of personal data by companies and governments.

As general education electives, I took several business courses, including introductions to economics, accounting, and management. These classes taught me the fundamentals of how the market works, and how businesses operate. No matter where I end up as an engineer, I will almost certainly be working for a business. Understanding the business needs will be critical to being successful as an engineer at the company. Studying economics has also helped me to understand global economic issues, such as how trade deals function and how sanctions affect different countries.

All of these general education classes have helped me to prepare as an engineer. I have learned how to write technical documents, what chemicals make up a printed circuit board, how electricity flows through the circuits, how to solve the math equations needed to model that circuit, and how the whole project may affect the business. All of these skills will be very relevant in my future career.