

EXCITE! Shadow Group Choices

Architectural Engineering

Architectural engineers are responsible for designing the details of the building systems—structural, HVAC, plumbing, fire protection, and electrical—using the principles of engineering science, mathematics, and physics.

Biochemistry

Biochemistry focuses on the study of life at molecular level. As you go about your daily life biochemistry is sure to be involved. It has a role in: understanding the causes of diseases, use of engineered therapeutic proteins in medicine, food production & understanding how cells function.

Biological & Agricultural Engineering

Biological and agricultural engineers develop the techniques and systems to work with living systems, including plants and animals. They work to produce and process them into useful products like food, fiber, energy, and pharmaceuticals.

Biology

Studying biology teaches us to ask questions, make observations, evaluate evidence, and solve problems. Biologists learn how living things work, interact with one another and evolve.

Chemical Engineering

Chemical engineers use chemistry, physics, and math along with engineering tools to solve problems relating to the production and use of chemicals. This includes things like refining gasoline and other fuels from petroleum, purifying of drinking water, treating waste, recovering raw materials, and producing and processing food.

Chemistry

Chemistry offers excellent preparation for professional schools including medicine, dentistry, and veterinary science. Careers can be found in any of the traditional areas of chemistry as well as in forensic science, materials science, environmental science, food, paper, water, agricultural, petroleum, polymer, polymer, and paint/coatings chemistry, geochemistry, and scientific writing and/or art.

Civil Engineering

Civil engineers design and supervise the creation of structures. They work on everything from tunnels and dams, to highways and airports, to water and sewer systems. They use computer technologies to design structures that meet the needs of a growing population while considering future needs of the community.

Computer Engineering

Rather than just using computers, computer engineers apply scientific theory and engineering design to use and develop new computer hardware or software. They write programs to solve problems and create more efficient ways of doing things.

Computing and Information Sciences

Ever wonder how smart buildings control their internal environment, or how cars and planes can avoid collisions, or how pacemakers keep your heart in rhythm, or how movies are animated or video games create such realistic environments, or how the internet connects all of society? It's not magic; it's software. With a degree in computer science or information systems you can contribute to society through the creation and development of such systems.

Electrical Engineering

Electrical engineers work with electricity in its many forms - from the electrons to the large scale magnetic fields. In addition to designing new products, they construct, operate, and maintain a wide variety of electrical systems and equipment like industrial robotics.

Geography

Geographers examine the way the physical environment and human activities interact and affect each other. Map reading and computing skills are important, as is knowledge of the physical environment and how it relates to social and cultural issues.

Geology

Their undergraduate training typically includes significant coursework in chemistry, physics, mathematics and possibly biology, in addition to classes offered through the geology department; volcanology, hydrology, and rock and mineral formation are among the many areas of study. Local, state, and national governments hire geologists to help plan and evaluate excavations, construction sites, environmental remediation projects, and natural disaster preparedness, as well as to investigate natural resources.

Industrial Engineering

Industrial engineers look at how people, machines, energy, resources, and information are used to accomplish goals and devise ways to improve those methods. Industrial engineers have sometimes been called "productivity people" and "efficiency experts".

Kinesiology

Kinesiology provides professional preparation for careers in fitness-related industries, athletic training, teaching and coaching, and health related fields such as physical therapy.

Math

Math is a broad field of study. Students find many choices available and have the option of tailoring their personal interests to a specific area of specialization.

Mechanical Engineering

Mechanical engineers research, design, manufacture, and test all kinds of mechanical things: medical instruments, tools, engines, machines, and other devices. They study materials, heat and energy transfer, manufacturing technologies, among other things to design machines and tools that will meet all the requirements for a particular job.

Physics

Physicists build upon the discoveries made through basic research and work to develop new devices, products, and processes. They design research equipment such as; laser surgery, microwave devices, and measurement instruments that analyze the chemical content of foods.