**Useful Links:**

Attending ASU: [https://myfuture.angelo.edu/](https://myfuture.angelo.edu/)

Scholarships: [https://myfuture.angelo.edu/pay_for_college/scholarships.php](https://myfuture.angelo.edu/pay_for_college/scholarships.php)

Free Summer Housing: [https://www.angelo.edu/dept/residential_programs/summer_housing_application.php](https://www.angelo.edu/dept/residential_programs/summer_housing_application.php)

Internships: [https://www.pathwaystoscience.org/Discipline.aspx](https://www.pathwaystoscience.org/Discipline.aspx)


Salary Survey

Mathematics

The Angelo State University Department of Mathematics is seeking students with a strong mathematical ability and a desire to learn more mathematics. A degree in mathematics is very marketable. Graduates can pursue many rewarding careers with good salaries.

Graduate Study: Students with a bachelor’s degree in mathematics who wish to pursue a graduate degree have many options for graduate study. Almost every student who has shown promise in their undergraduate work has been accepted to a graduate program. Over the last decade, graduates from our program have been accepted into many graduate programs including:

- Rice University
- Baylor University
- The University of William and Mary
- Indiana University
- Arizona State University
- Claremont College
- Louisiana State University
- University of New Mexico
- Texas Tech University
- Texas Christian University
- University of North Texas
- The University of Texas at Dallas

These graduates have pursued graduate degrees in the following fields:

- Applied Mathematics
- Statistics
- Pure Mathematics
- Electrical Engineering
- Atmospheric Science
- Epidemiology
- Economics
- Geology
- Law
- Medicine

Careers: As is evident above, students with a degree in mathematics have a wide variety of career choices. Some careers will require a graduate degree, but a mathematics degree opens many doors. Below is a short list of some common careers requiring mathematics.

- Actuarial Sciences
- Data Scientist
- Statistician
- Research Scientist
- Computer Scientist
- Operations Research Analyst
- Cryptologist
- Teacher
- Economist
- Engineer
- Professional Consultant
- Epidemiologist

Links: Below are links to information on salaries and careers related to mathematics. The last three links contain data on how mathematics careers rank in satisfaction and salary when compared to other fields of study.

- Mathematics Careers: https://www.math.uci.edu/math-majors/math-career-resources
- Salary Survey

For further information on the Angelo State University Department of Mathematics, please visit http://www.angelo.edu/dept/mathematics/ or contact Karl.Havlak@angelo.edu.
Agriculture

Animal Science

• Graduates will have the ability to make management decisions as they relate to livestock production.
• Graduates will be able to develop a nutrition plan for each species of livestock based on their stage of production.
• Graduates will be able to manage reproductive efficiency in livestock.
• Graduates can communicate, orally and written, factual information in a knowledgeable manner.
• Graduates can effectively evaluate live animals and carcasses on their ability to grade and become part of the food industry.

Food Animal Science and Marketing

• Graduates are HACCP and Servsafe trained and certified.
• Graduates understand characteristics impacting quality of both fresh and processed meats.
• Graduates can incorporate the areas of marketing and business into food production.
• Graduates have the ability to address food safety concerns from farm to table.
• Graduates can communicate, orally and written, factual information in a knowledgeable manner.

Natural Resource Management

• Graduates can develop habitat management plans for livestock and wildlife.
• Graduates can assess forage production and range condition.
• Graduates can determine proper stocking rates.
• Graduates will be proficient in the management of supplemental feeding.
• Graduates can develop a population management plan for game and nongame species.

Agricultural Science and Leadership

• Graduates will be certified to teach Agriculture Science in Texas high schools.
• Graduates will be able to develop a laboratory safety plan.
• Graduates can manage, organize and conduct a Leadership Development Event.
• Graduates will be able to conduct a Career Development Event.
• Graduates can communicate, orally and written, factual information in a knowledgeable manner.

Career Opportunities

• Product development
• County extension agencies
• State and federal inspections
• Natural resource management
• Rangeland management
• Agricultural lending
• Sales
• Research and laboratory settings
• Commodity trading
• Feedlot management
• Quality assurance
• Food safety
• Ranch or private land management
• Agricultural education
Biology

When you graduate with a Bachelor of Science degree in biology from Angelo State, you can expect to possess a variety of skills necessary to succeed. You will also be prepared to explore job opportunities in multiple areas.

 Marketable Skills

- Graduates are prepared for graduate and professional post-baccalaureate education programs and careers in the biological sciences and related fields.
- Graduates can demonstrate comprehensive and specialized knowledge in the biological sciences.
- Graduates can understand and apply scientific reasoning and logical thinking to problem-solving.
- Graduates will have developed proficiency in science process skills, inquiry and investigative methodologies (research, technical, analytical, problem-solving and evaluative skills) in the biological sciences.
- Graduates can communicate and critically evaluate information in oral and written forms.

 Career Opportunities

 Biology

- Education
- Research
- Government agencies
- Nature centers and parks
- Environmental organizations
- Health professions

 Biology / Pre-Health Professions

- Doctor, physician
- Dentist
- Podiatrist
- Clinical lab scientist
- Chiropractor
- Optometrist

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Chemistry and Biochemistry

When you graduate with a Bachelor of Science degree in chemistry from Angelo State, you can expect to possess a variety of skills necessary to succeed. You will also be prepared to explore job opportunities in multiple areas.

 Marketable Skills

- Critical Thinking – We emphasize the “chemistry in the world” aspect of our discipline. The degrees in chemistry and biochemistry provide tools for understanding the world and the intellectual foundations for becoming effective citizens.
- Problem Solving – Every course emphasizes solving problems in the different disciplines of chemistry. Our capstone course aims to contextualize and integrate problem-solving skills with real-world activities.
- Teamwork – Teamwork is essential to laboratory work in chemistry. Our degree has over three hundred hours of laboratories. Further, most of our students take advantage of research opportunities in which they work on research teams.
- Communication – Students receiving chemistry degrees must engage in written and spoken communications in classrooms and laboratories. Research students often present their results at regional and national meetings. Our capstone course requires a presentation in which the students must develop their own narrative and presentation materials.

 Career Opportunities

- Chemical engineering
- Analytical chemistry
- Biochemistry
- Biotechnology
- Environmental chemistry
- Food and flavor chemistry
- Forensic chemistry
- Materials science
- Medicinal chemistry
- Organic chemistry
- Oil and petroleum
- Science writing
- Pharmacy school
- Graduate school
- Medical school
- Law school

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Computer Science

When you graduate with a Bachelor of Science in computer science from Angelo State, you can expect to possess a variety of skills necessary to succeed. You will also be prepared to explore job opportunities in multiple areas.

Marketable Skills

- Graduates can effectively develop and apply the skills inherent in systems engineering where requirements, design, configuration, integration, project management, quality assurance and process applications are necessary.
- Graduates can effectively use information technology to gather, store and communicate data in appropriate formats.
- Graduates will be able to evaluate and use skills relating to the differing technological tools used to manipulate, report or operate with data acquisition.
- Graduates will understand roles within teams, work units, departments, organizations, inter-organizational systems and the larger environment.
- Graduates will have developed the skills and abilities to research career pathways in computer science and other technical fields, in particular the technical skills and knowledge required to pursue targeted careers for all pathways in their chosen fields.
- Graduates will be able to effectively apply trouble-shooting skills in identifying and mitigating hardware, software and networking security-related problems and incidents.

Career Opportunities

- Research and development
- Computer programming
- Computer game development
- Mobile application development
- Internet programming and development
- Web development
- Systems analysis
- Consulting
- Computer and network security
- Information technology management
- Software development
- Database administration
- Hardware engineering
- Systems management
- Data communication network design
- Network administration

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Engineering

When you graduate with a Bachelor of Science in Civil Engineering degree or a Bachelor of Science in Mechanical Engineering from Angelo State, you can expect to possess a variety of skills necessary to succeed. You will also be prepared to explore job opportunities in multiple areas.

Marketable Skills

- Graduates will have the ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science and mathematics.
- Graduates will have the ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety and welfare, as well as global, cultural, social, environmental and economic factors.
- Graduates will have the ability to communicate effectively with a range of audiences.
- Graduates will have the ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental and societal contexts.
- Graduates will have the ability to function effectively on a team to provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks and meet objectives.
- Graduates will have the ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Graduates will have the ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Career Opportunities

- Transportation systems and engineering
- Energy (renewable, oil and natural gas)
- Geotechnical engineering
- Environmental engineering
- Surveying, construction and land development
- Structural engineering
- Water resources
- Construction
- Mechanical Design
- Energy
- Automotive
- Aeronautical
- Biomedical and Biotechnology
- Heating, Ventilation and Air Conditioning (HVAC) R&D/Maintenance/Supply Chain/Production Manager Technical Sales Engineer CAD and Simulation Patent Law Expert or Manufacturing Consultant

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Geosciences:

Career Opportunities

- There is a real need for geoscientists in the workforce today, as we are facing a shortage of 118,000 geoscientists by 2026, particularly here in oil-rich Texas. Great paying and fun jobs are just a few short years away.

- ASU Alumni from the geoscience program work in a wide variety of fields such as oil and gas, environmental geology, water resources management, and the application of GIS to city, state, and national problems, and teaching.

- Many Alumni have attended graduate school before entering the workforce, however good jobs in the geosciences can still be found with just a Bachelor’s degree.

Program Highlights

- We strive to provide an all-around education with an emphasis on the application of geoscience in the field.

- Our courses provide practical knowledge in the classics such as structural geology, mineralogy petrology, and sedimentology and stratigraphy, as well as the less traditional areas of hydrogeology, environmental geology, geochemistry, geophysics and volcanology.

- We also encourage our majors to gain real world experience by working one-on-one with a faculty advisory in our active undergraduate research program.

- All Geoscience majors complete an intensive 5-week field camp in their last summer before graduation. This course provides valuable hands-on experience valued by employers.

- Students have the option of conducting undergraduate research and working one-on-one with a faculty mentor. Research topics in Geosciences at ASU include geologic mapping in Big Bend and Chihuahua, Mexico; mineralogy of meteorites; seismology; and hydrogeology.

- Our student organizations are dedicated to the advancement of Geology through outreach, service, and professional engagement. GEO activities include science nights at local schools, a local archaeology fair, and monthly meetings with professional geologists.

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**Physics:**

**Majors Available**

Physics with a concentration in Physics
Physics with a concentration in Applied Physics

**Career Opportunities**

Our graduates often advance to careers in engineering, medicine, astronomy, and geosciences, as well as aerospace, computer technology and petroleum industries, to name just a few. We offer flexible degree plans that allow students to enter careers after graduating or continue on to graduate school.

**Program Highlights**

Recognized by the American Institute of Physics as a highly productive program.

We offer five advanced lab courses targeted at providing students with useful hands-on skills needed to enter the workforce or advance to graduate school.

Our department houses the Global Immersion Center Planetarium, one of the largest digital display centers in Texas. It boasts a 50-foot dome and a high definition star projector.

We offer an Astronomy minor which includes studies in astrophysics and opportunities to do observations at McDonald Observatory.

Students have the option of conducting undergraduate research and working one-on-one with a faculty mentor. Research topics in Physics at ASU include observational astronomy, quantum field theory, nuclear imaging, superconductivity, and computation biophysics

Our student organizations are dedicated to the advancement of physics through outreach, service, and professional engagement. SPS activities include science nights at local schools, a “can roll” food drive, and an annual physics Road Show.

Our students have summer research opportunities (REU), and students in the past have done research at Duke, Indiana University, Princeton as well as NASA Goddard, and the CERN accelerator laboratory.

Students in applied physics are prepared to enter the workforce or graduate programs in any branch of engineering

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