

The Quality of a  
Texas A&M  
University System  
Education

The Distinction  
of a Texas A&M  
University System  
Education

The Best Value in  
Higher Education  
in the Region,  
Right Here in  
Texarkana!



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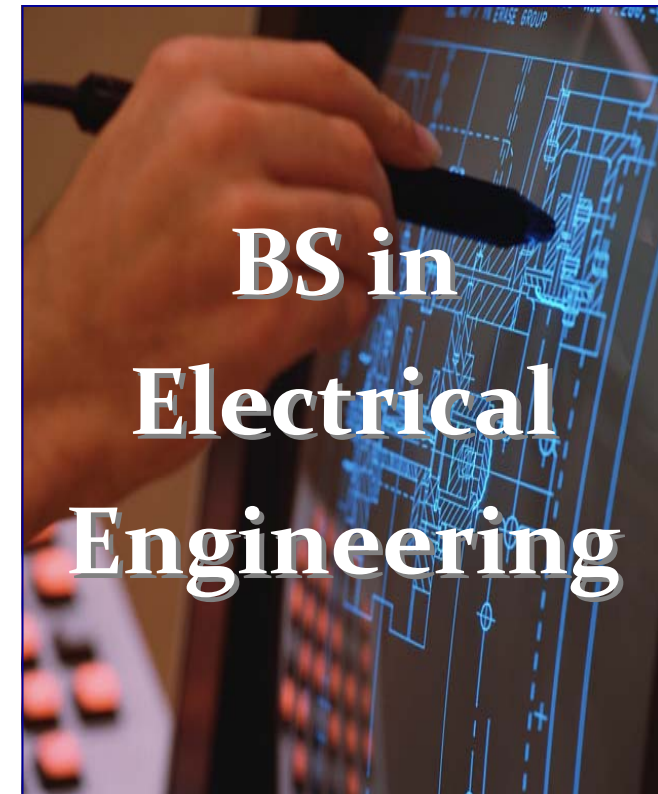
#### FEATURES OF THE ELECTRICAL ENGINEERING PROGRAM AT A&M-TEXARKANA

The A&M-Texarkana Electrical Engineering program offers a course of study leading to the Bachelor of Science in Electrical Engineering (BSEE) degree. Students are allowed to select many classes based on their personal interests. Small class sizes make it easier for students to interact with their instructors.

The main features are:

- ◆ The curriculum is based on the criteria defined by the Accreditation Board for Engineering and Technology (ABET)
- ◆ Students are acquainted with various areas of Electrical Engineering such as applied electronics, digital devices and systems, and signal processing/communication systems
- ◆ Students acquire analytical, applied and computer skills necessary to analyze, design and test electrical systems and components
- ◆ Graduates of the program will be capable of professional employment in a global market, or graduate studies program.

# Texas A&M University- Texarkana



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Electrical Engineering has changed the way people around the world lead their daily lives. This discipline covers a diverse range of areas e.g., medical devices, personal computers, high-speed communications, multimedia entertainment, and aerospace systems. It has played a dominant role in the growth of information technology through the invention of integrated circuit (IC) chips.

The major areas in which Electrical Engineers can specialize are:

*Communication systems:* wireless communications (cell-phones, TV broadcasting, AM/FM radio broadcasting), satellite and space communications (space systems used to transfer images captured from Mars), wired communications (optical fibers, land-line telephone lines, Internet).

*Computer systems:* personal computers are used in our everyday life, computer systems are used for controlling household appliances, cars, aircrafts, and satellites among others.

*Control systems:* used to operate devices based on the information collected by sensors distributed in an area of observation.

*Electromagnetics:* focuses on antennas (data broadcasting through wireless systems), optic fibers to transfer high-speed internet, microwave are others.

*Electronics:* studies the application of materials and circuits to process electrical signals.

*Photonics:* a new field that aims to replace conventional processing of electrons with photons.

*Power systems:* investigates means to convert energy to and from electricity, and transmit energy over long distances.

*Signal processing:* investigates techniques to process analog and digital data to better suit user's needs. Probably the most common signal processing device is the equalizer in a car radio used to emphasize bass and treble of one's favorite music.

## HOW MUCH CAN AN ELECTRICAL ENGINEER EARN?

Defense organizations as well as many high tech industries employ electrical engineering graduates who command substantial salaries and job security.

The average yearly salary range for engineers with a Bachelor's degree in one of the following is:<sup>1</sup>

Aerospace & Aeronautical	\$52,500—\$59,500
Bioengineering & Biomedical	\$50,000—\$61,000
Civil	\$48,000—\$55,000
<b>Electrical</b>	<b>\$54,000—\$61,000</b>
Mechanical	\$53,000—\$60,000

The average yearly salary for engineers with a Master's degree in one of the following is:

Civil	\$50,200—\$59,000
<b>Electrical</b>	<b>\$63,000—\$78,000</b>
Mechanical	\$60,000—\$68,100

## WHAT ARE THE FUTURE JOB PROSPECTS?

Electrical Engineering is a field with diverse challenges and many opportunities. Advances in the technological sector have increased the opportunities for Electrical Engineers as new electronic devices, materials and products are developed and brought to market. Increasing globalization has created new markets and new opportunities around the world, and thus an Electrical Engineer is now globally marketable.

<sup>1</sup> Job Choices for Science, Engineering, & Technology Students: 2009. www.jobweb.com

Therefore, career prospects for new graduates in Electrical Engineering are excellent. A report published by the National Science Foundation in December 2005 indicates that the national average annual salary for Electrical/Computer Engineering graduates is one of the highest at the BS degree level. A degree in Electrical Engineering is therefore an excellent stepping stone to an intellectually and financially rewarding career in design, development, or research. Electrical Engineering also opens doors to other areas of industry such as management, sales and marketing as well as to other professions, e.g., medicine, law, and business.

## Our Faculty

### Parag Lala, Ph.D.

Cary & Lois Patterson Chair in  
Electrical Engineering  
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### Massimiliano Laddomada, Ph.D.

Assistant Professor of Electrical Engineering  
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## Supporting Faculty

Igor Aizenberg, Ph.D.

Raul Cruz-Cano, Ph.D.

Victor Govindaswamy, Ph.D.

Feodor Vainstein, Ph.D.

# Your Future Starts at A&M-Texarkana!

