

The University of Texas Rio Grande Valley

College of Engineering & Computer Science

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UTRGVTM



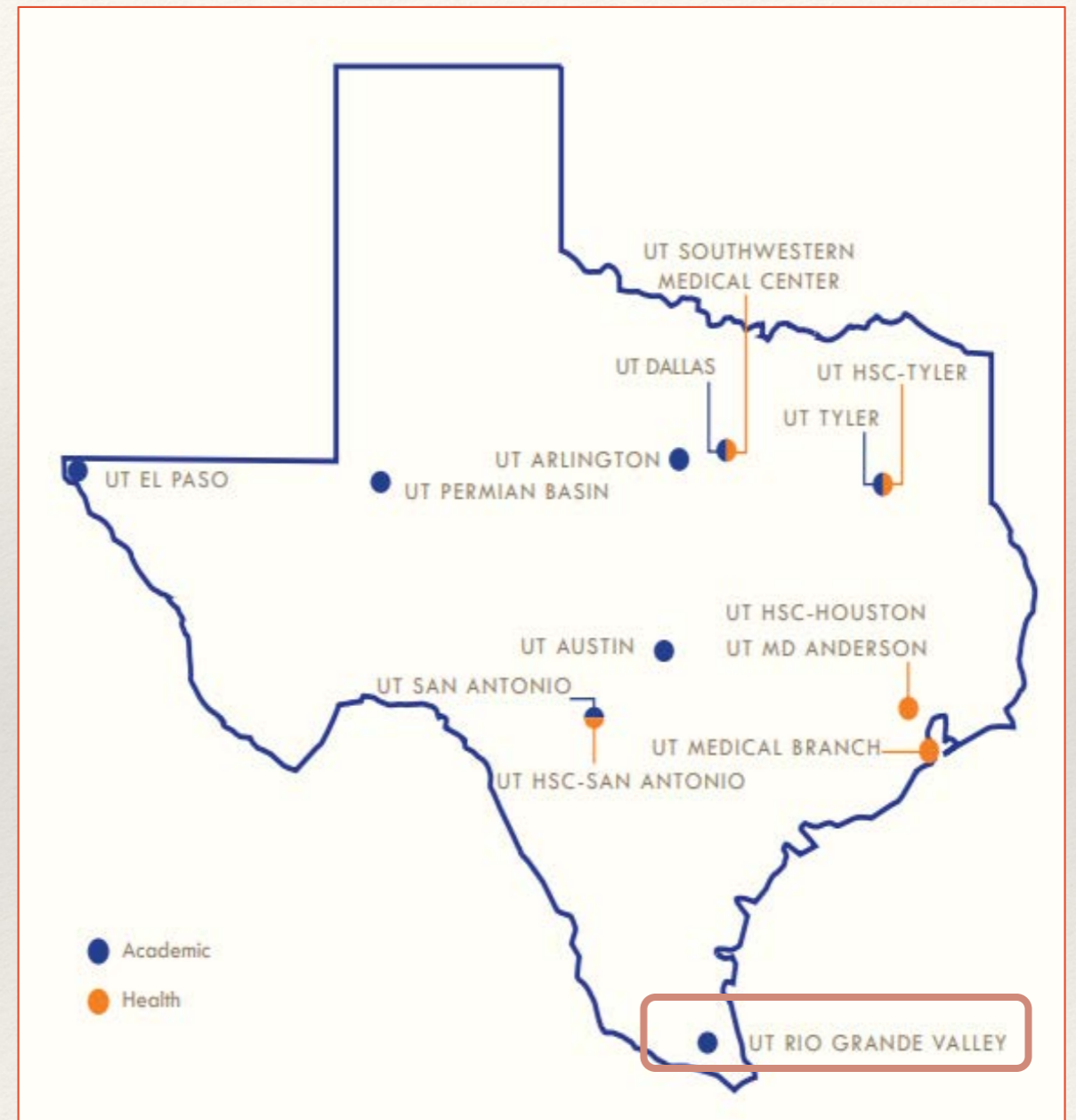
UTRGV: Part of the UT System

ACADEMIC INSTITUTIONS

- ❖ UT Arlington
- ❖ UT Austin
- ❖ UT Dallas
- ❖ UT El Paso
- ❖ UT Permian Basin
- ❖ **UT Rio Grande Valley**
- ❖ UT San Antonio
- ❖ UT Tyler

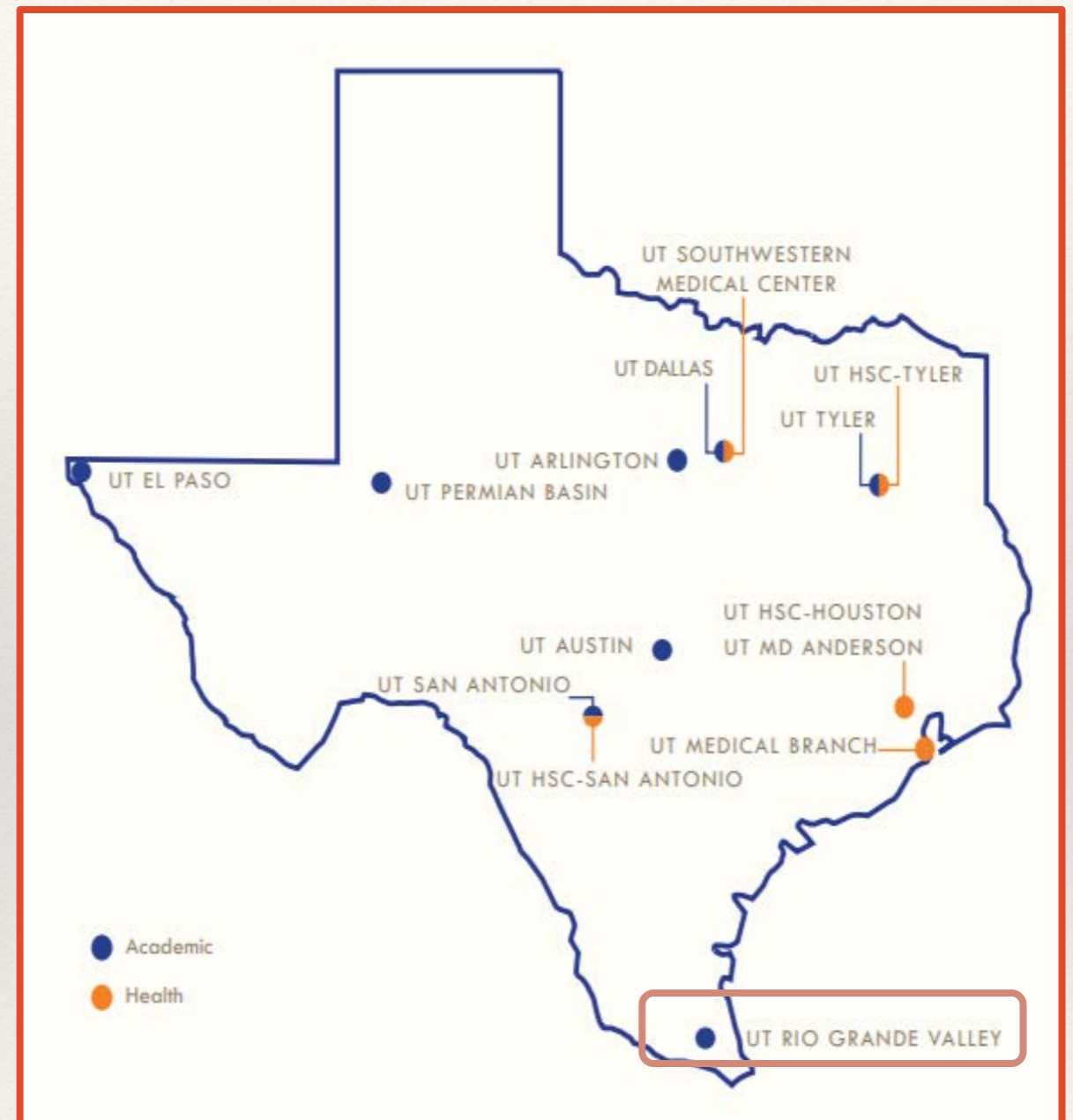
HEALTH INSTITUTIONS

- ❖ UT Southwestern
- ❖ UTMB Galveston
- ❖ UT Health Houston
- ❖ UT Health San Antonio
- ❖ UT MD Anderson
- ❖ UT Health Tyler



UTRGV: Part of the UT System

- ❖ The University of Texas System: **Fourteen Institutions, Unlimited Possibilities**
- ❖ As a member of the UT System, UTRGV gets the same resources as other UT system components.




UTRGV: Among the Elite

- ❖ Recently, [*Diverse: Issues in Higher Education*](#), E-zine, ranked UTRGV *third* in most degrees awarded to Hispanics
- ❖ The University of Texas Rio Grande Valley has been ranked on the annual list of the *Top 25 Best Colleges* in Texas by BestColleges.com, a leading provider of higher education information and resources.
- ❖ UTRGV for the second consecutive year has been named on the Forbes Magazine 2017 “America's Top Colleges” list, ranking No. 235 among research universities, No. 151 among schools in the South and No. 221 among public colleges.




UTRGV: Mission

To transform the Rio Grande Valley, the Americas, and the world through an innovative and accessible educational environment that promotes student success, research, creative works, health and well-being, community engagement, and sustainable development.



UTRGV: Vision

To be one of the nation's leaders in higher education, its premier Hispanic-serving institution, and a highly engaged bilingual university, with exceptional educational, research, and creative opportunities that serve as catalysts for transformation in the Rio Grande Valley and beyond.



UTRGV-COECS: Mission


Successful Together

The College provides a path to a better life through a comprehensive education for student success delivered by accomplished and passionate scholars supported by professional and caring staff. We will transform the Rio Grande Valley through innovative academic programs integrated with research that has global impact.



UTRGV-COECS: Vision

To make a meaningful difference for our students and people in all walks of life, establish a nurturing environment for the blossoming of creative activity, and seeing that our activities are a catalyst for economic prosperity and engagement with the global community as a Gateway to the Americas. The CECS will become “among the preeminent colleges” with integrated educational and research programs, and areas of distinction done with Compassion, Community, and Technology.



College Team



It takes a team

Where our faculty have their degrees from

UF UNIVERSITY of
FLORIDA


ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



UNIVERSIDAD
DE MONTERREY

THE UNIVERSITY OF
TEXAS
AT AUSTIN



الجامعة الأردنية
The University of Jordan

Tufts
UNIVERSITY

UNIVERSITY OF
HOUSTON



UNIVERSITY OF
Nebraska



UNIVERSITY OF
TEXAS
ARLINGTON

THE UNIVERSITY OF
TOLEDO



THE UNIVERSITY
OF ARIZONA



RICE


University at Buffalo
The State University of New York



TEXAS A&M
UNIVERSITY

BOSTON
UNIVERSITY

THE UNIVERSITY OF
ALABAMA

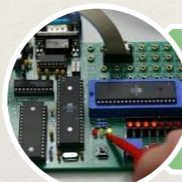
College Overview: General Areas



Civil Engineering



Computer Science/Engineering



Electrical Engineering



Engineering Technology



Manufacturing Engineering



Mechanical Engineering



College Overview: Specific Programs

Undergraduate Programs

- ❖ Computer Information Systems Technology
- ❖ Computer Science
- ❖ Civil Engineering
- ❖ Computer Engineering
- ❖ Engineering Technology
- ❖ Electrical Engineering
- ❖ Manufacturing Engineering
- ❖ Mechanical Engineering

Graduate Programs

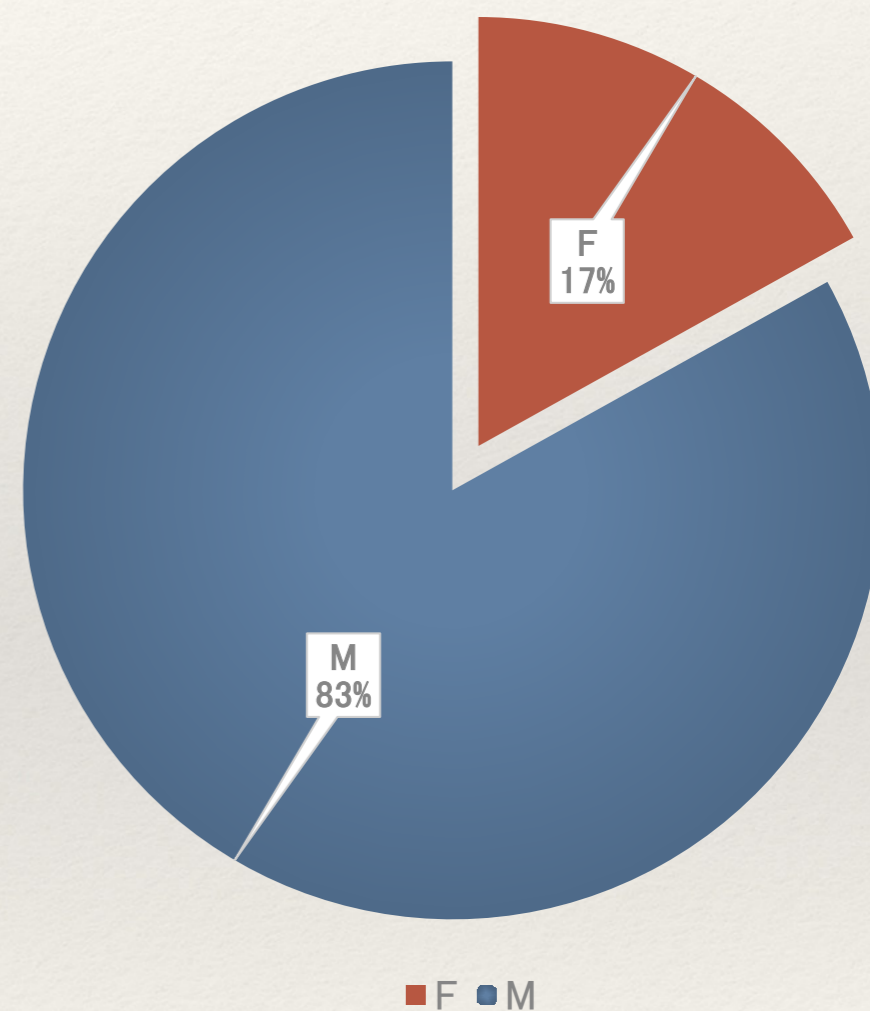
- ❖ Computer Science
 - ❖ Electrical Engineering
 - ❖ Engineering Management
 - ❖ Information Technology
 - ❖ Manufacturing Engineering
 - ❖ Mechanical Engineering
 - ❖ Civil Engineering
- 

College Enrollment

Grand Total for College of Engineering & Computer Science

Classification	Fall 2017	Spring 2018	Gender	Fall 2017	Spring 2018
Total UG	2,906	2,663	F	488	446
			M	2,418	2,217
Total Graduate	204	203	F	43	39
			M	161	164
Total Enrollment	3,110	2,866	F	531	485
			M	2,579	2,381

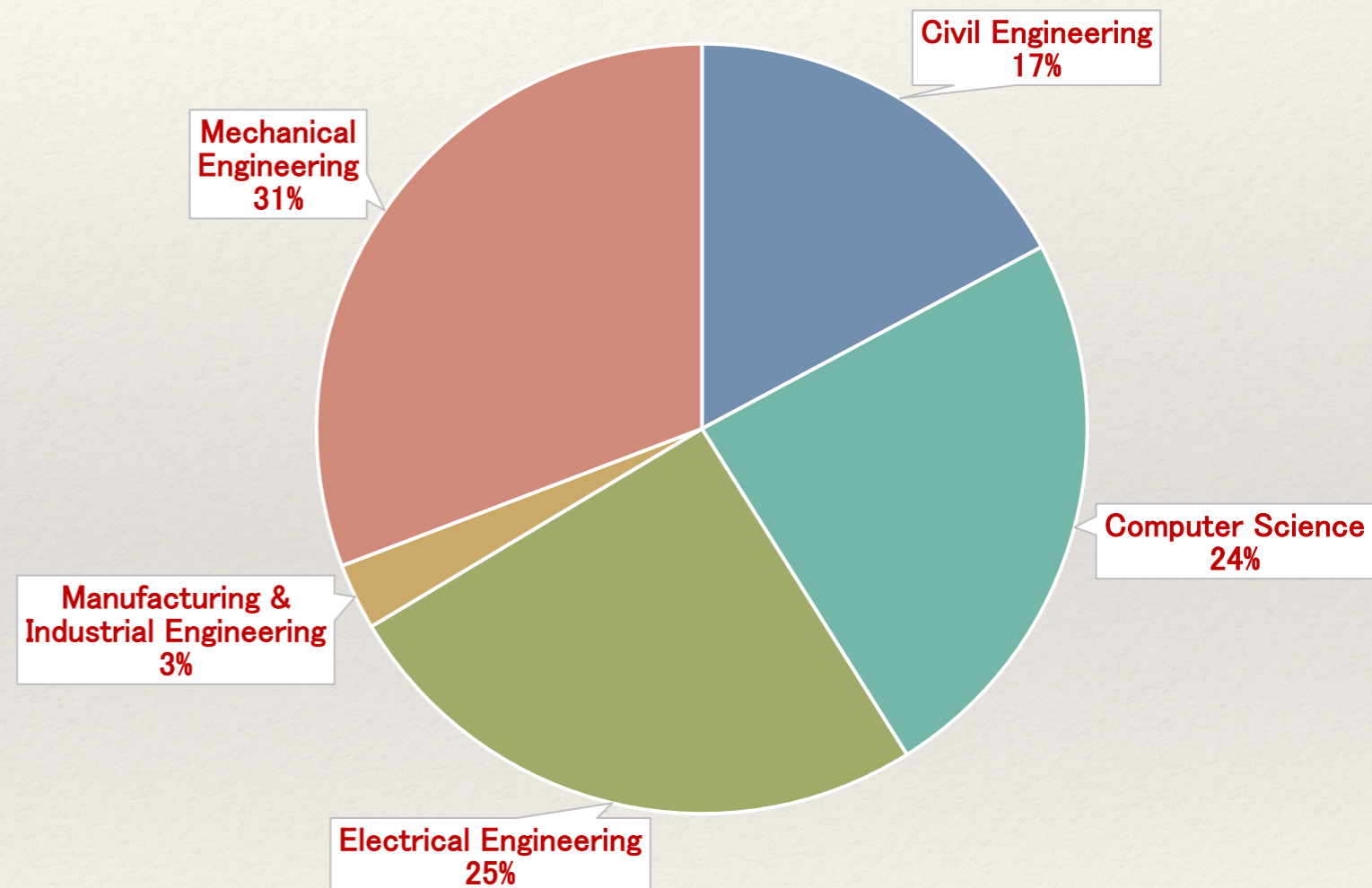
Total Enrollment for College
Fall-2017 3,110



College Enrollment

UG Enrollment by Department
Fall-2017: 2,900

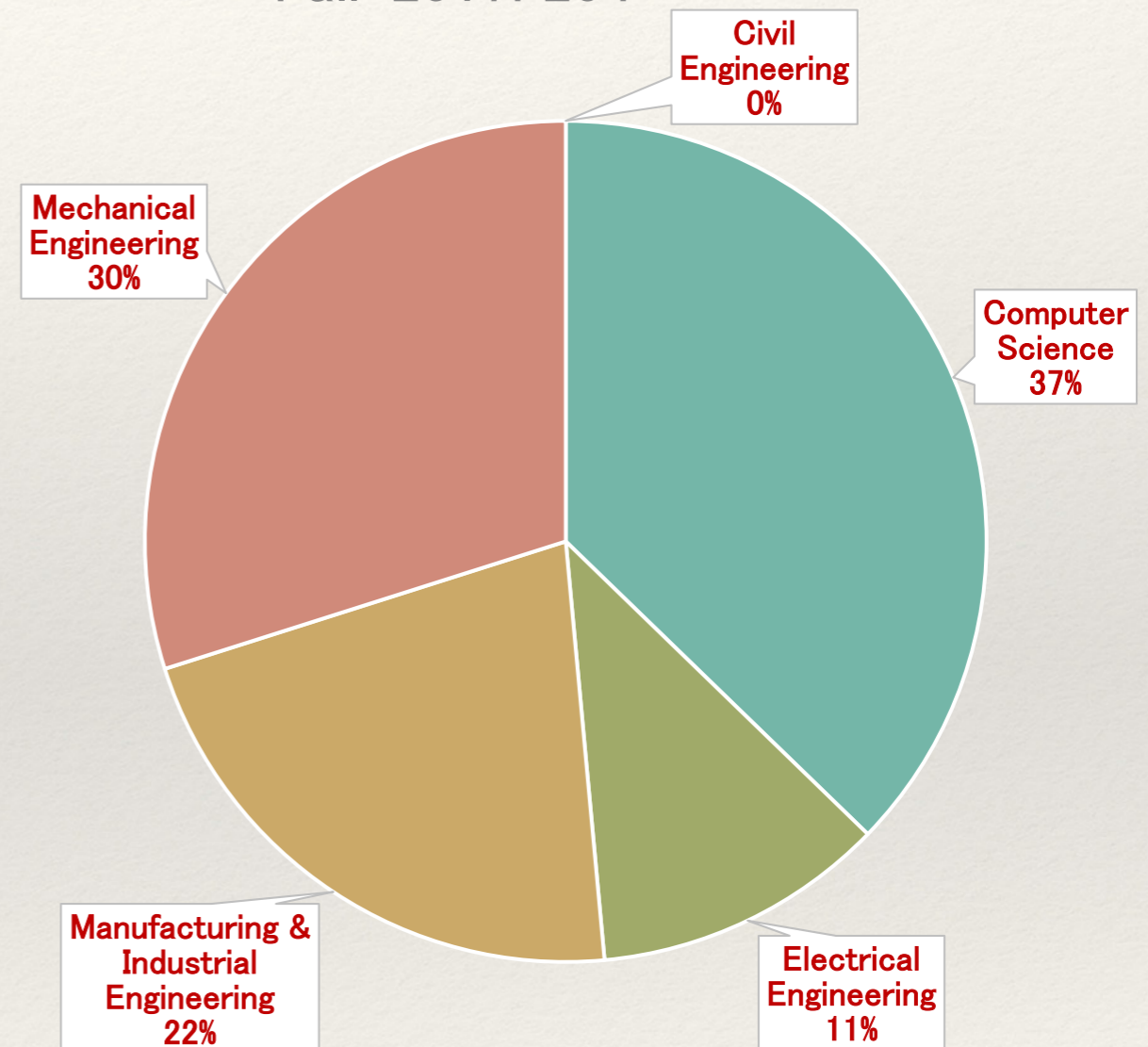
Department	Total UG
Civil Engineering	498
Computer Science	693
Electrical Engineering	735
Manufacturing & Industrial Engineering	81
Mechanical Engineering	893



College Enrollment

Masters Enrollment by Department,
Fall-2017: 204

Department	Total Graduate
Civil Engineering	0
Computer Science	76
Electrical Engineering	23
Manufacturing & Industrial Engineering	44
Mechanical Engineering	61



Where our graduates have gotten advanced degrees.



NORTHWESTERN
UNIVERSITY



UNIVERSITY OF
TEXAS
ARLINGTON



STANFORD
UNIVERSITY



Is Engineering for Me

- ❖ Engineering is *not just a man's job*
- ❖ Engineering is very important
- ❖ Engineering is really fun!



Women Faculty in the College

College of Engineering & CS Women Faculty



Dr. Thuy Vu
Assistant Professor
Undergraduate Coordinator



Jingru Zhang
Assistant Professor



Dr. Karen Lozano
Endowed Professor
UT System Outstanding
Teaching Award



Marzieh Ayati
Assistant Professor



Ms. Jazmin Ley
Lecturer



Dr. Nantakan Wongkasem
Associate Professor



Ms. Adriana Olvera
Lecturer



Edna Orozco
Lecturer



Dr. Hasina Huq
Associate Professor
Graduate Director



Dr. Megan Strait
Assistant Professor




Ms. Samantha Ramirez
Lecturer II

Traits of a UTRGV Engineer?

- ❖ Humble/ Caring
- ❖ Persistent/Hard-working
- ❖ Technically excellent (like solving problems and improving processes)
- ❖ Curious and Fun-loving
- ❖ Powerful force for good (want to make a difference)



Career Outlook

- ❖ 2011 average salary: \$99,738 (2011 Engineering Income and Salary Survey, conducted by ASME and ASCE)
 - ❖ 2013 starting average salary \$62,535 (National Association of Colleges and Employers, Job Outlook 2013)
 - ❖ According to Forbes Magazine, job growth from 2010 to 2014 in the following field
 - ❖ Mining and Geological Engineers: 12%
 - ❖ Biomedical engineers: 10%
 - ❖ Industrial Engineers: 10%
 - ❖ Every engineering occupation has added jobs, the most coming among mechanical engineers (21,500 new jobs since 2010)
- 

Where Our Graduates Have Gotten Jobs

Raytheon



IBM



ALPS

Careers/Research by Department

- ❖ Next, we look at the careers/research areas by Dept.

Civil Engineering

Contact:

Department of Civil Engineering

Edinburg Campus:

EACSB 1.202

Phone: (956) 665-3038

Brownsville Campus:

SETB 1.550

One West University Boulevard

Brownsville, TX 78520

(956) 882-6605

Email: cive@utrgv.edu



Civil Engineering Research

- ❖ Structural Health Monitoring
- ❖ Lower Rio Grande Dynamic Channel Routing
- ❖ Transportation Systems
- ❖ Geothermal Energy



Civil Engineering Careers



- ❖ Median Salary \$79,340
- ❖ Management and Monitoring of Municipal Water Supply
- ❖ Design, Construction, and Management of Transportation Systems
- ❖ Design and Construction of Structures
- ❖ Urban and Regional Planning

Computer Science

Contact:

Department of Computer Science

Edinburg Campus:

Engineering Building, Room 3.295

Telephone: 956-665-2320

Brownsville Campus:

SETB 1.550

One West University Boulevard

Brownsville, TX 78520

(956) 882-6605

Email: csci@utrgv.edu



Computer Science Research

- ❖ Big Data and Machine Learning
- ❖ Networking, Cybersecurity, and IoT (Internet of Things)
- ❖ Image Processing and Computer Vision
- ❖ Natural, Artificial, and Computer Intelligence
- ❖ Human Computer Interfaces
- ❖ Bioinformatics and Computational Molecular Biology
- ❖ Algorithmic Self-Assembly of DNA



Computer Science Careers

- ❖ Median Salary \$79,343
- ❖ Software Development
- ❖ Computer Network Design and Management
- ❖ Computational Modeling of Physical Systems
- ❖ Database Development and Management
- ❖ Information Technology



Computer Engineering Program

Contact:

Department of Computer Engineering

Edinburg Campus:

Engineering Building, Room 3.245

Phone: (956) 665-7375

Fax: (956) 665-3527

Brownsville Campus:

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One West University Boulevard

Brownsville, TX 78520

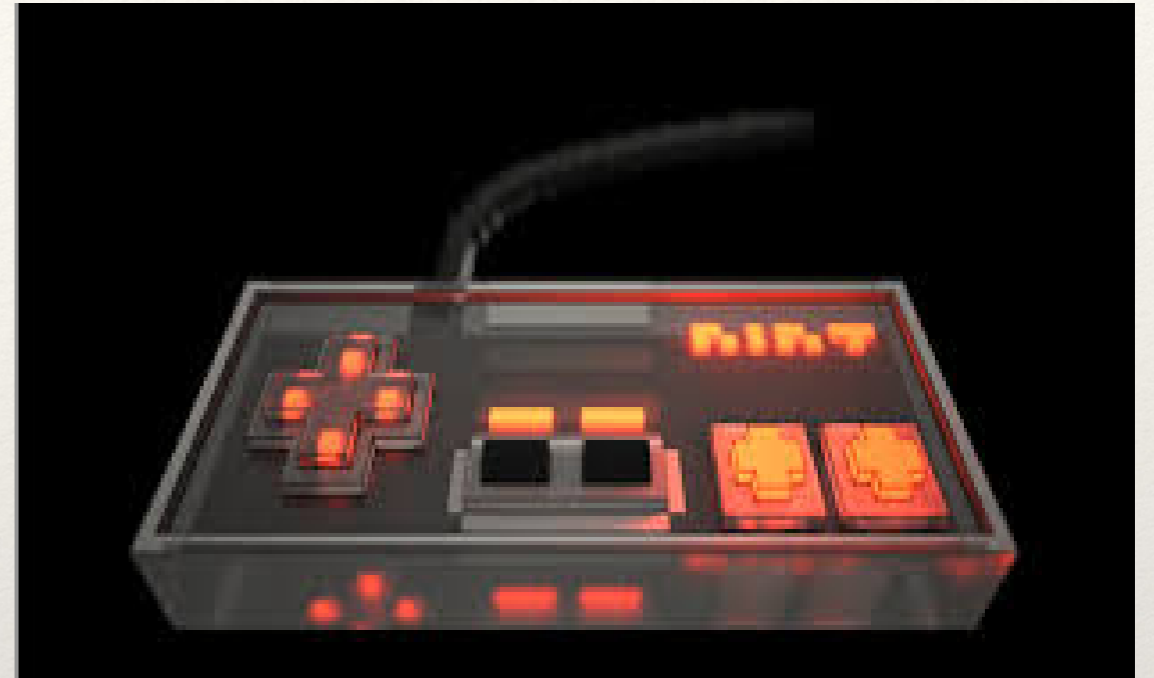
(956) 882-6605

Email: cmpe@utrgv.edu



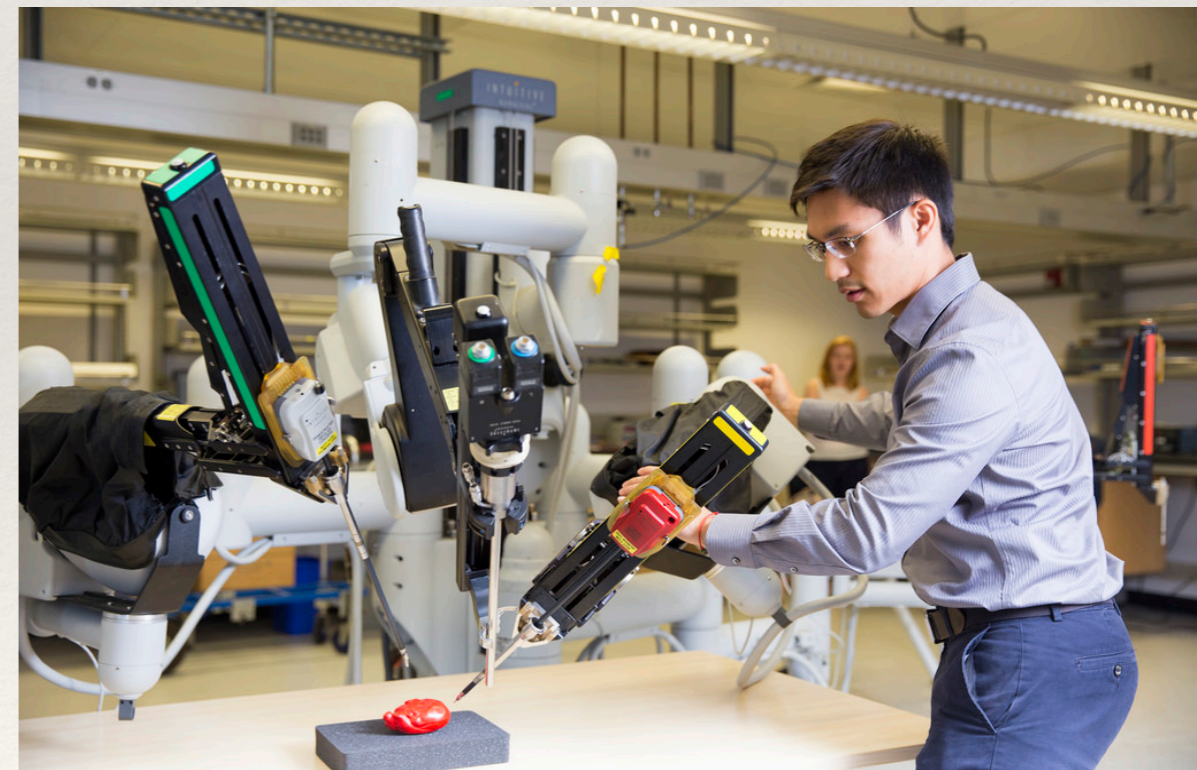
Computer Engineering Research

- ❖ Embedded Systems
- ❖ Computer Architecture
- ❖ Networking
- ❖ Switching and Routing
- ❖ Computer Security
- ❖ Computer communication networks



Computer Engineering Careers

- ❖ Median Salary (Similar to Electrical Engineering)
- ❖ Design and Development of Computer Hardware Systems
- ❖ Design and Development of Network Systems
- ❖ Software Engineer



Electrical Engineering

Contact:

Department of Electrical Engineering

Edinburg Campus:

ENGR 3.214

1201 West University Drive

Edinburg TX 78539-2999

(956) 665-2609

Brownsville Campus:

SETB 1.550

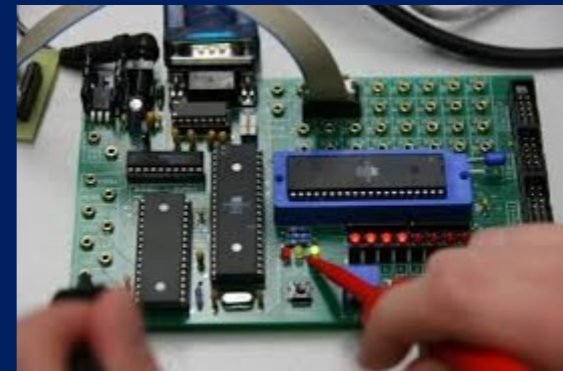
One West University Boulevard

Brownsville, TX 78520

(956) 882-6605

Email: ee@utrgv.edu

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Electrical Engineering Research

- ❖ Wide bandgap semiconductors
- ❖ VLSI, asynchronous digital design, low-power IC design
- ❖ Radar, antennas, and UWB electromagnetics
- ❖ Radar imaging
- ❖ Power generation and electromechanics

Electrical Engineering Careers

- ❖ Median Salary \$87,920
 - ❖ Satellite Communications
 - ❖ Hardware Design
 - ❖ Power Grid Systems
 - ❖ Design and Development of Digital Devices
 - ❖ Communication Systems
- 

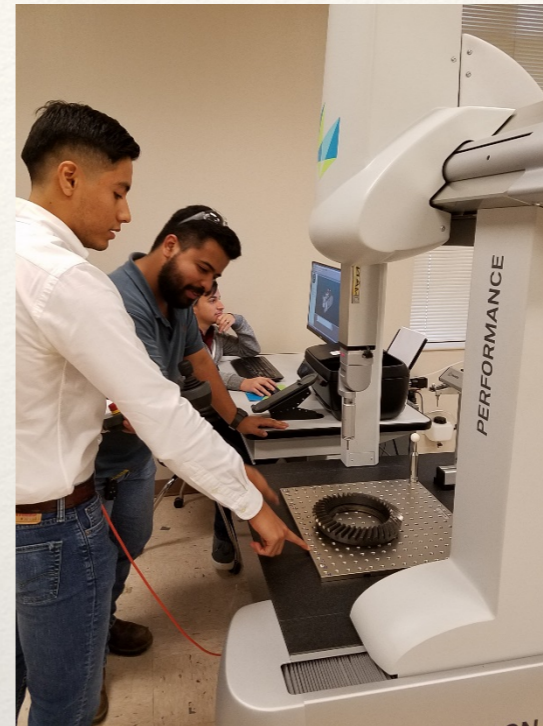
Engineering Technology

Contact:
Program of Engineering Technology

Edinburg Campus:
EASFC 1.316C
Telephone: 956-665-7056

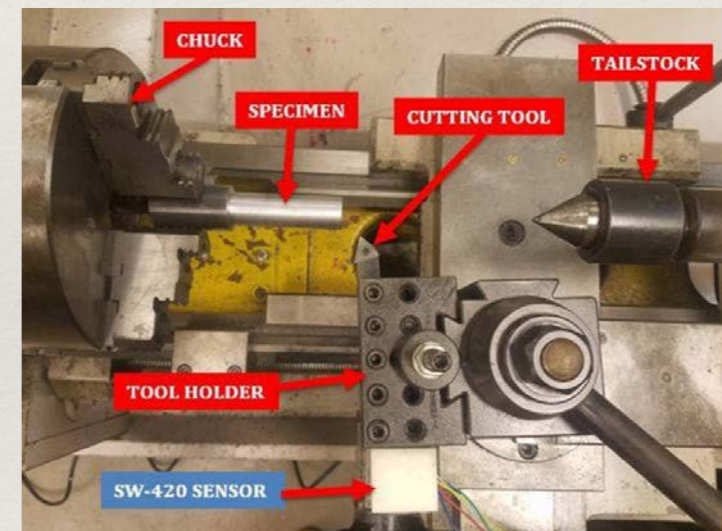
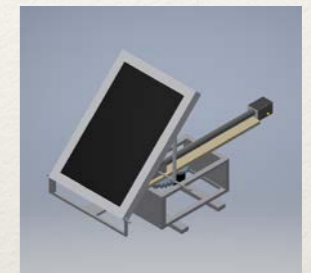
Brownsville Campus:
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One West University Boulevard
Brownsville, TX 78520
(956) 882-6605

Email: engt@utrgv.edu



Engineering Technology Research

- Renewable Energy Devices
- Intelligent monitoring and Control of Industrial equipment
- Smart Environments
- Automated Inspection Planning for CMM metrology



Engineering Technology Careers

- ❖ Median Salary \$73,000
- ❖ Manufacturing Industry
- ❖ Quality Assurance
- ❖ Automation
- ❖ Renewable Energies
- ❖ Project Management

Manufacturing Engineering

Contact:

Department of Manufacturing Engineering

Edinburg Campus:

EASFC 1.316C

Telephone: 956-665-7056

Brownsville Campus:

SETB 1.550

One West University Boulevard

Brownsville, TX 78520

(956) 882-6605

Email: me@utrgv.edu




Manufacturing Engineering Research

- ❖ Rapid Response Manufacturing
- ❖ Lean Manufacturing
- ❖ Manufacturing and Characterization of Nanomaterials and Coatings
- ❖ Sustainable and Environmentally Benign Manufacturing
- ❖ Supply Chain Management



Manufacturing Engineering Careers

- ❖ Median Salary \$78,860
 - ❖ Plant Manager
 - ❖ Supply Chain Management
 - ❖ Facilities and Human Resources Optimization
 - ❖ Human Factors and Ergonomics
- 

Mechanical Engineering

Contact:

Department of Mechanical Engineering

Edinburg Campus:

Engineering Building, Room 3.222

Telephone: 956-665-2394

Brownsville Campus:

SETB 1.550

One West University Boulevard

Brownsville, TX 78520

(956) 882-6605

Email: mece@utrgv.edu



Mechanical Engineering Research

- ❖ Railway Safety Systems
- ❖ Nanocomposites Synthesis and Characterization
- ❖ Biomaterials and Biomechanics
- ❖ Vehicle Systems Modeling and Control
- ❖ Aerodynamics and Propulsion
- ❖ Human-Machine and Haptic Interfaces




Mechanical Engineering Careers


- ❖ Median Salary \$80,580
- ❖ Materials Science
- ❖ Automotive Design and Development
- ❖ Aerospace Design and Development
- ❖ Robotics
- ❖ Prosthetics and biomechanics
- ❖ Product Design and Testing
- ❖ HVAC Systems Design and Control



Why UTRGV

- ❖ A Commitment to Academic Excellence
 - ❖ An Ideal Pathway to Career Success
 - ❖ A Location in the Gateway to the Americas
 - ❖ A Bilingual, Bicultural, Biliterate Education
 - ❖ A Hub for Innovation and Emerging Technology
 - ❖ A 21st-Century School of Medicine
- 


Why UTRGV College of Engineering and Computer Science

- ❖ A faculty committed to and focused on undergraduate student success
 - ❖ Widespread undergraduate research opportunities not commonly available at Tier 1 research institutions
 - ❖ Our graduates are highly recruited for both Industry and graduate programs
 - ❖ Programs committed to the community and the region
 - ❖ Programs which incorporate high level of “hands-on” experience
- 

Scholarships at the UTRGV/College of Engineering and Computer Science

- ❖ UTRGV offers numerous scholarships as well as other forms of financial aid
- ❖ New Student Scholarships - Entering & Transfer Students
 - ❖ **Merit Based** Scholarships-Entering Freshmen
 - ❖ **UTRGV Scholars Program; UTRGV Housing Scholarship; Entering Freshman Gateway**
 - ❖ UTRGV and Departmental Scholarships
 - ❖ Through a variety of memorials and endowments
 - ❖ *All high school seniors are encouraged to apply starting October 1st. The application must be submitted online by **Jan. 15th.***
 - ❖ VAMOS/UTRGV Endowed Scholarship Program
 - ❖ *All high school seniors are encouraged to apply starting October 1st. The application must be submitted online by **Feb. 15th.***
- ❖ [More info at: https://www.utrgv.edu/ucentral/paying-for-college/scholarships/index.htm](https://www.utrgv.edu/ucentral/paying-for-college/scholarships/index.htm)

Research Opportunities/Experiences for Undergraduates

- ❖ Nanocomposites
 - ❖ Digital Communications
 - ❖ Forensics and Cybersecurity
 - ❖ Railway systems and safety
 - ❖ Rapid response manufacturing
 - ❖ Machine Learning/ Artificial intelligence/Computer Vision
 - ❖ Robotics
 - ❖ Energy
 - ❖ Transportation
 - ❖ Water resource management
 - ❖ Biomedical applications
 - ❖ Geotechnical
 - ❖ Environmental
 - ❖ Material science
- 

Questions or Comments

Please forward any comments, questions, or suggestions to the dean's office:

❖ **Brownsville Campus:**

SETB 1.550

One West University Boulevard

Brownsville, TX 78520

(956) 882-6605


❖ **Edinburg Campus:**

ENGR 1.294

1201 West University Drive

Edinburg TX 78539-2999

(956) 665-3510





Thank you on behalf of the whole team
Go Vaqueros