

Texas Pre-Freshmen Engineering Program

(TexPREP)



TexPREP Goals

Program Purpose

- To improve access to careers in sciences, mathematics, and engineering for under-represented students through:
 - Academics
 - Role modeling
 - Mentoring
 - Hands on experience
 - Career awareness
- Year round contact with the university faculty, students, and college life.

Academic Program

- Seven-week summer program from June 5-July 21, 2017.
- One Saturday follow-up meeting per month during the school year
- Four year Curriculum
- The Texas Education Agency has authorized schools districts to award one innovative Career and Technical Education (CTE) state elective credit each year to middle and high school students that complete the program successfully.

TexPREP Achievements

Of the 19,101 former PREP students who are of college age, PREP obtained data* from 15,439. The results are as follows:

- 81%** of all students who are of college age have attended or graduated from college.
- 52% of the college attendees graduate from college
- 73% of the senior college graduates are members of underrepresented minority groups.
- 44% of the senior college graduates are engineering, mathematics, science or computer science majors.
- 67% of the engineering, science or computer science and mathematics college graduates are members of underrepresented minority groups.
- 48% of the engineering, science, computer science and mathematics senior college graduates are female.
- 90% of the college students attended or graduated from Texas colleges.

*Source: Data derived from THECB, National Student Clearinghouse, and student follow-up surveys.

**81% is a minimum number, as data is unavailable on the remaining college eligible students.

TexPREP Requirements

Eligible Students:

- Students with an average of “B” or better in their current math course and an overall “B” average in all courses of current year.
- Current 6th to 8th graders may enter PREP 1
- Must score a 70 or better in program math placement exam
- Submit an essay, recommendation forms, current report card, completed application, etc.

2016 TexPREP Graduates by District

| District | PREP 1 | PREP 2 | PREP 3 | PREP 4 | Total |
|------------------|------------|-----------|-----------|-----------|------------|
| Edcouch-Elsa ISD | 10 | 17 | 1 | 3 | 31 |
| Edinburg ISD | 42 | 7 | 11 | 2 | 62 |
| Idea Schools | 4 | 1 | 0 | 0 | 5 |
| La Joya ISD | 60 | 25 | 18 | 9 | 112 |
| McAllen ISD | 30 | 11 | 14 | 3 | 58 |
| Mission CISD | 22 | 21 | 25 | 5 | 73 |
| Monte Alto CISD | 1 | 2 | 1 | 2 | 6 |
| PSJA ISD | 16 | 4 | 0 | 15 | 35 |
| Sharyland ISD | 2 | 4 | 0 | 0 | 6 |
| South Texas ISD | 2 | 0 | 2 | 2 | 6 |
| Valley View ISD | 12 | 1 | 1 | 1 | 15 |
| Weslaco ISD | 4 | 2 | 1 | 0 | 7 |
| Other | 1 | 0 | 0 | 0 | 1 |
| Total | 206 | 95 | 74 | 42 | 417 |

Program Content

| PREP 1 | PREP 2 | PREP 3 | PREP 4 |
|--------------------------|----------------------|--------------------------|--------------------------|
| Logic | Algebraic Structures | Probability & Statistics | Computer Science |
| Problem Solving | Problem Solving | Problem Solving | Intro to Water Science |
| Intro to Engineering | Physics | Technical Writing | Computer Aided Design |
| Computer Science | Seminar | Seminar | Engineering Systems |
| Seminar/Career Awareness | Career Awareness | Career Awareness | Seminar/Career Awareness |

Summer Program

- Seven week session
- TexPREP students attend Monday through Friday from 1:00pm-5:50pm.
- Regular classes are held Monday through Thursday
- Weekly project competitions and guest speakers are held each Friday.
- Students are rewarded with a fun day during the last week of the program.

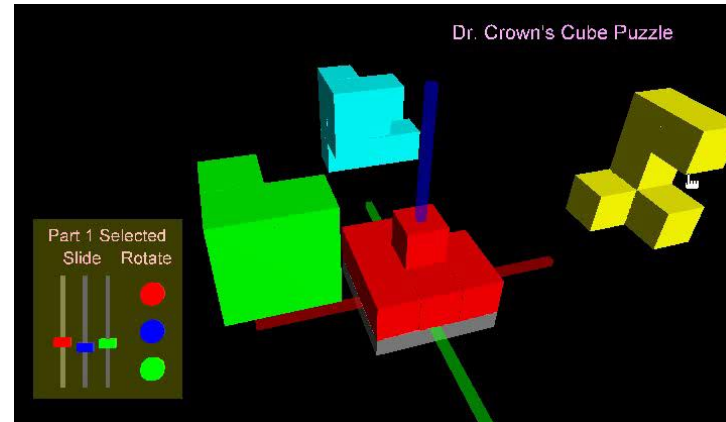
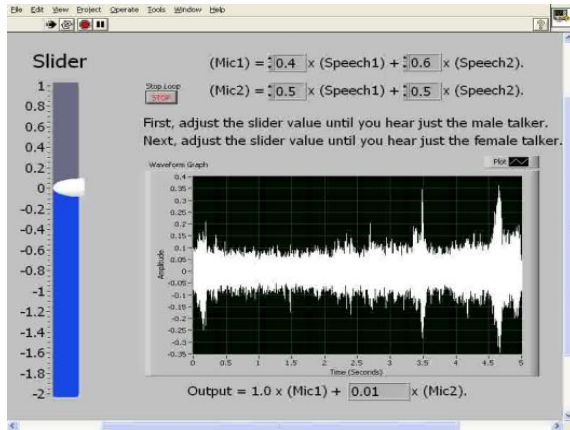


Summer Instruction

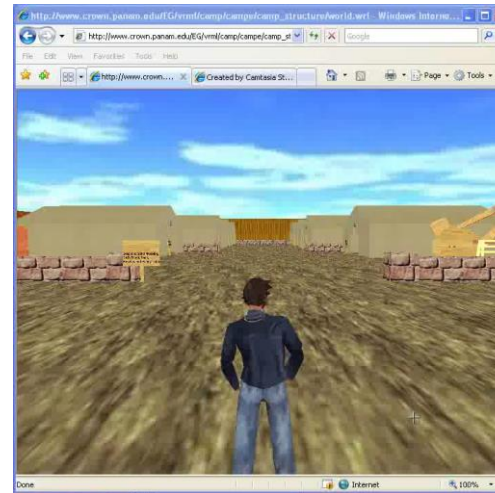
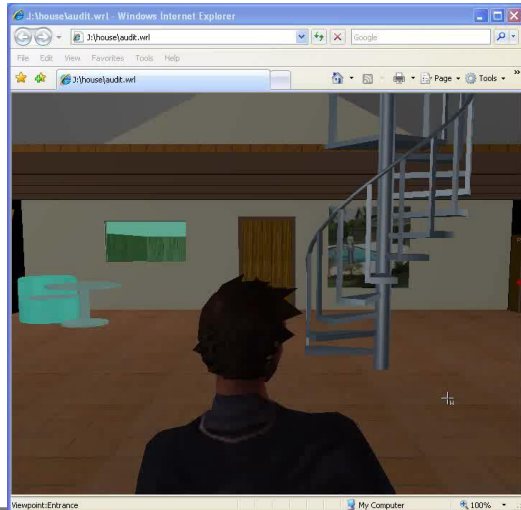
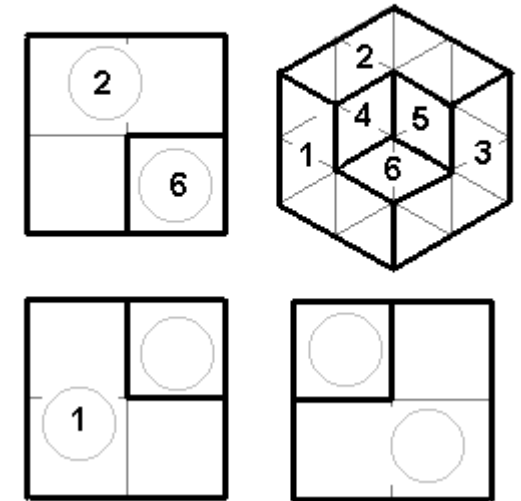
- Instructors (Professors, High School Teachers, etc.) teach STEM preparatory courses from established TexPREP curriculum.
- Program Mentors (former TexPREP students and engineering majors) attend classes with the students and serve as mentor during seminar period.
- Example: Intro to Engineering
 - The Engineering Design Process
 - Bridge Building
 - Infinity Project (Signal Processing)
 - Engineering Graphics (Sketching and Computer Aided Design)



Example Course: Introduction to Engineering



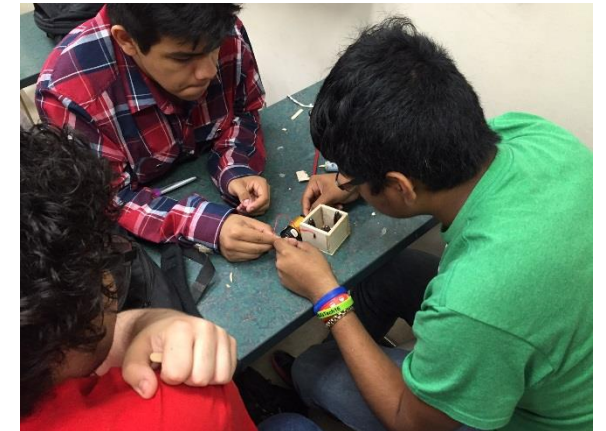
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Weekly Projects

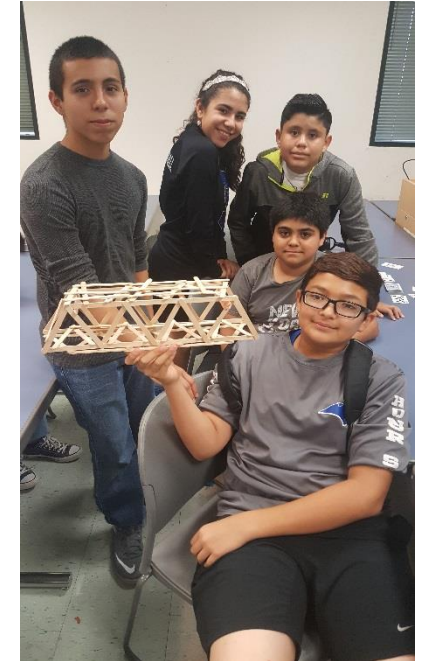
Students are divided into small groups to work on a project from Monday through Thursday to compete on Fridays.

Projects include: water bottle rockets, bridge building, mousetrap cars, catapults, and more.



Mega Project Competitions

- Large Scale
- Design Team
- Project mentors

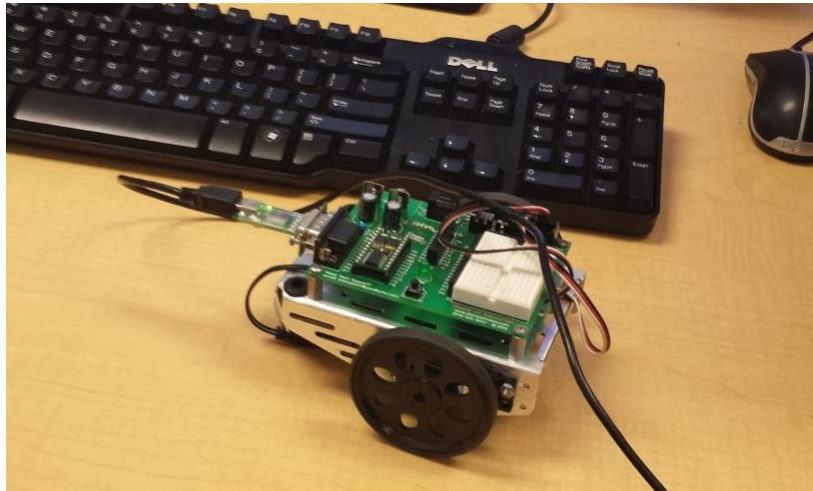


PREP 1 Students

Helicopter Competitions

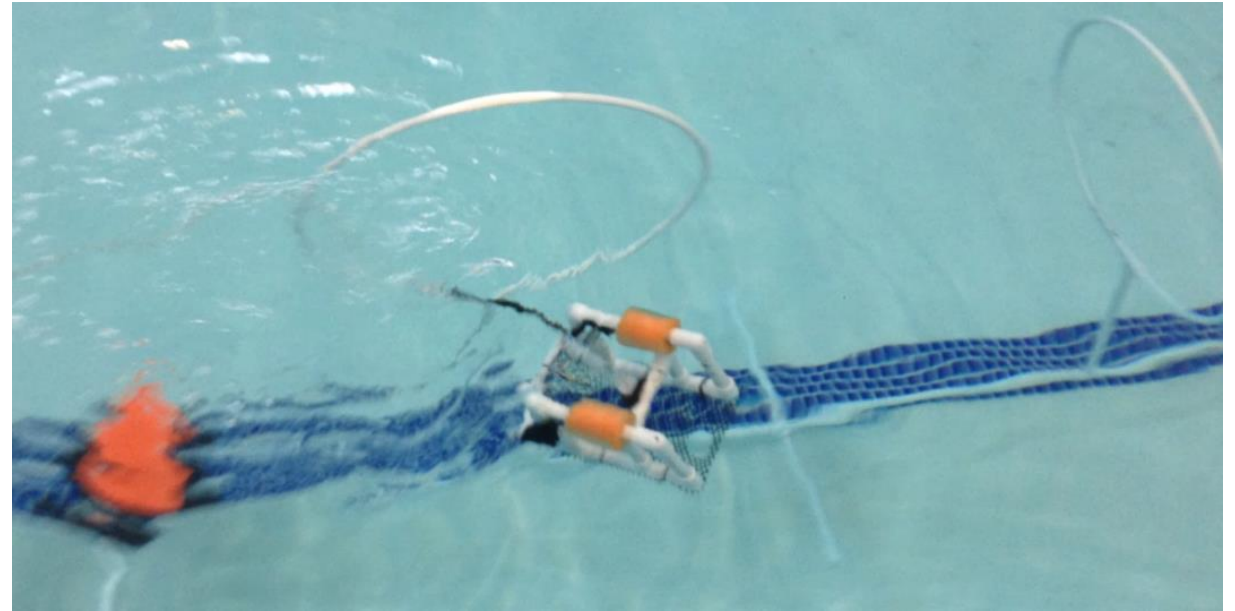
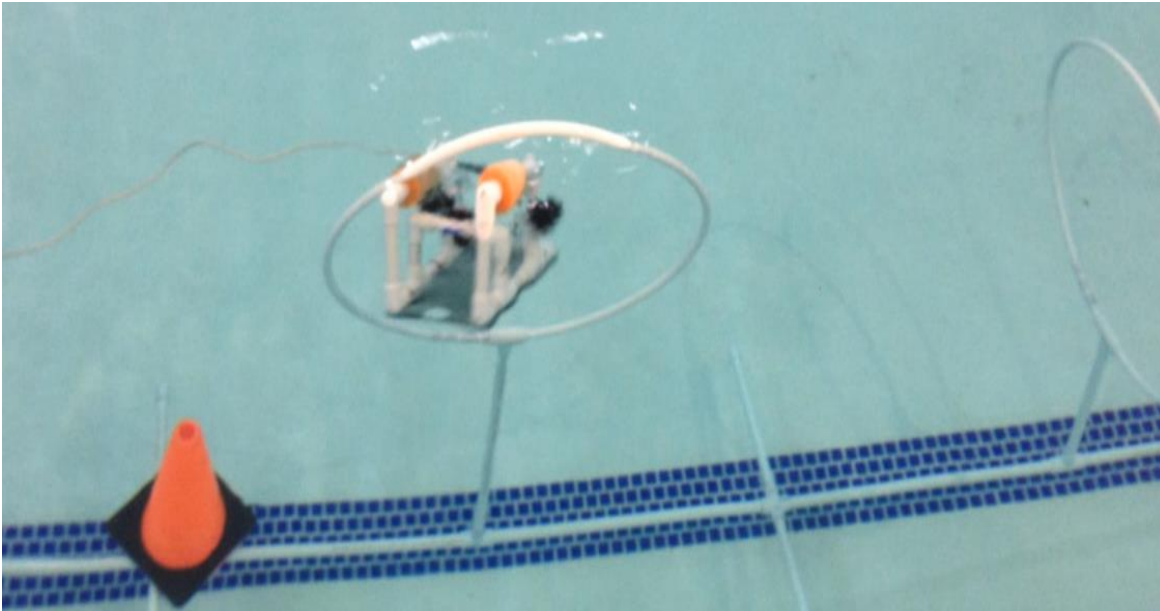


PREP 2 Students Robotics Competition



PREP 3 Students

Underwater ROV Competition



PREP 4 Students Symposium Competition at UTSA



Monthly Meetings

- Once monthly/Saturday 9:00-12:00
- Mega project workdays
- Invited STEM speakers
- Senior design presentations
- Math Placement testing
- Community Hours
- Lunch



Cost

- The cost per student is \$390 for entire year. The cost includes all the materials and staff support.
- Contracts will be sent to the district superintendent and/or designee
- Cost will be divide into a \$75 non-refundable deposit per student. An invoice will be sent to the district in April.
- An invoice with the remaining balance of \$315 per student will be sent to the district the second week of the summer program.
- If the district does not partner with UTRGV-TexPREP, the cost will be the parent's responsibility.

University-PREP 5

- **National Science Foundation Grant:** Science, Technology, Engineering, and Mathematics Talent Expansion Program.



- UTRGV Summer Courses
 - ✓ MATH 1340-College Algebra
 - ✓ ENG 1301-Composition

- Dual Enrollment
- Residential Program
- STEM Mentors
- Summer I (2014-2019)
- 30 students
- Students have earned an average 3.6 GPA



Important Dates

- Application Deadline
 - February 28, 2017
- Test Dates
 - Saturday, March 4, 2017
 - Monday, March 11, 2017
- Results Mail Out
 - March 16, 2017
- Contract to District
 - March 20 & 21, 2017
- Acceptance Packet Due
 - March 30, 2017
- Mandatory Student/Parent Orientation
 - April 1, 2017
- Summer 2017 Program
 - June 5-July 21, 2017



Contact Information

Staff:

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Thank You!

