



Louisiana Tech's Model for Running a GCSP at Minimal Cost

LA Tech GCSP Oversight Committee

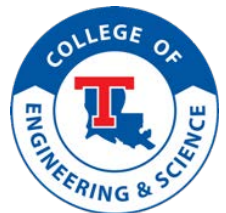
Dr. Jenna P. Carpenter

Dr. Brad Ciccirelli

Dr. Katie Evans

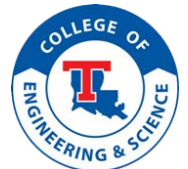
Dr. Leland Weiss

Dr. Patrick O'Neal



Program Aspects

- **Recruiting**: getting word out about the program and getting students interested
- **Grand Challenge Scholars Program fulfillment**: giving students different options to meet criteria in each of the five areas:
 - Research experience
 - Interdisciplinary curriculum
 - Entrepreneurship
 - Global dimension
 - Service learning
- **Showcasing Results**: let GCSP apprentices completing the program discuss their experiences



Recruiting

Means of communication and information:

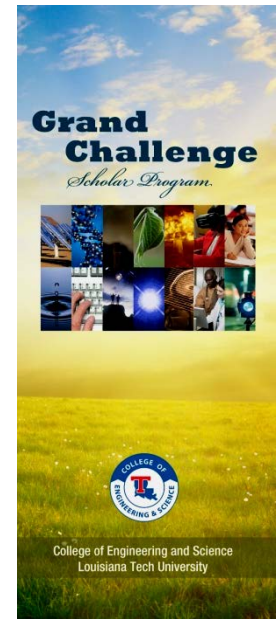
- webpage
- presentations from oversight committee members to classes
- posters and plasma slides around engineering building
- information booths at campus events w/ brochures

Interest meetings

- held twice per year
- slides about GCSP program shown
- steering committee members available for Q & A
- pizza/snacks and drinks provided

Incentives to students

- no financial incentives currently available
- recognition by National Academy of Engineering
- unique opportunity not available to all students nationwide
- prestigious distinction for job or grad school applications

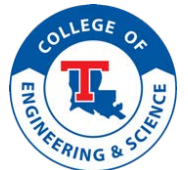


Program Fulfillment: Research Experience

- Senior capstone research or design project/course(s)
- Team or independent project
- Must be related to a Grand Challenge Theme or specific Grand Challenge problem

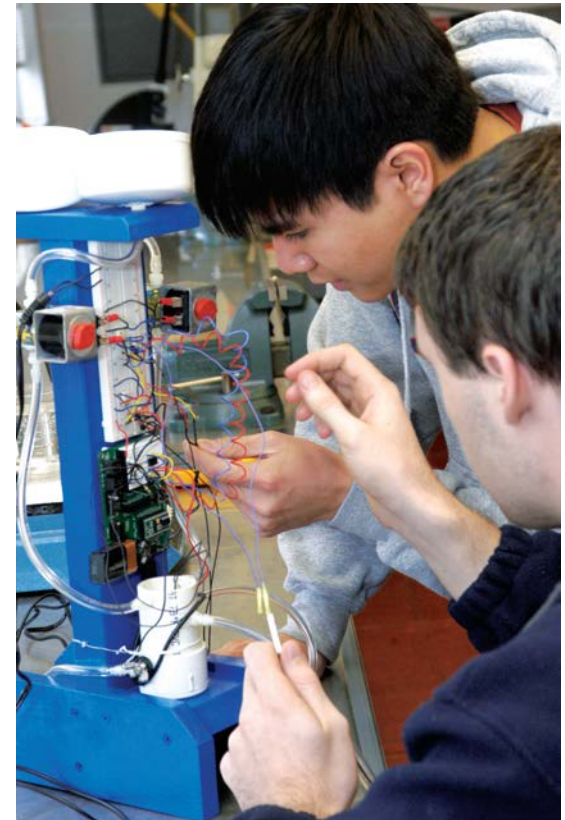
Costs associated with senior design projects are handled through those classes. Some are

- industrial or client-sponsored
- funded by grants or the department
- funded by the students themselves



Program Fulfillment: Interdisciplinary Curriculum

- Living With the Lab Integrated Engineering Curriculum, or “hands-on” project-based learning with student teams from all engineering majors
 - Integrated Science Curriculum
- plus
- A specified course in one of the following:
 - medical ethics,
 - international business relations,
 - business law,
 - cultural geography,
 - government, or
 - sociology



Program Fulfillment: Entrepreneurship

- Grand Challenge-related project in the Top Dawg Business Plan Competition

or

- specified courses in:
 - innovative product design and
 - innovative venture research



Program Fulfillment: Global Dimension

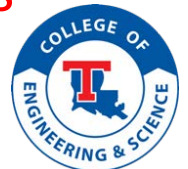
- **Tech Study Abroad Program**, or
- **International Study Program**, or



Students traveling abroad must pay their own way, but some have been successful in finding scholarships

- **Internship /Research Experience** with significant global focus, or
- **Specified course in Cultural Geography and one of the following:**
 - Modern History of Eastern Europe, Near East, or Latin America
 - Politics of Developing Nations
 - Asian Politics
 - Comparative Foreign Governments
 - International Relations
 - American Foreign Policy

Students must justify how the selected experience cultivates global awareness



Program Fulfillment: Service Learning

- Engineers without Borders project*, or
- Work as Supplemental Instructor or BARC Tutor for 1+ years, or
- Louisiana Tech Engineering & Science Association service project*
or
- Equivalent approved project*



*must be a sustained, substantial contribution for 1 or more years

Curricular Connectivity

- GC Curricular Plan must demonstrate connectivity across the 5 curricular components and a GC-themed problem
- All courses must be completed with a grade of “B” or higher

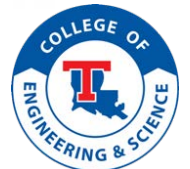
Scholar Designation

After successful completion of the program, GC Scholar Apprentices will be

- Designated *Louisiana Tech College of Engineering and Science Grand Challenge Scholars* at graduation

- ❑ Special recognition by University President at commencement
- ❑ Awarded bronze medal to be worn at ceremony

- Recognized by the National Academy of Engineering



Total Costs

Monetary costs minimal

- **Information** – posters, brochures, etc.
- **Food** – refreshments for information and showcase meetings
- **Medals**

Strategic
Initiatives
budget for
the COES

Time costs

- **Information** – preparing brochures, visiting classes, updating website, etc.
- **Meetings**
 - ❑ GCSP steering committee meets to review applications, plan events, etc.
 - ❑ GC Mentors meet with apprentices once per quarter to review progress

Very manageable for a small enrollment

Louisiana Tech (~1500 total students in COES):

- ❑ 12 students enrolled first year
- ❑ ~12 students have enrolled for next year

