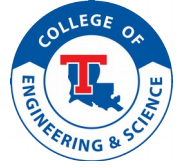




Louisiana Tech College of Engineering & Science Grand Challenge Scholars Program Application & Curricular Plan (2019+)



Note: Annual progress ‘check-ins’ with GCSP faculty mentors to help make adjustments to your plan as you go. Be sure to sit down with a GCSP mentor to help plan this initial application document before submitting online to Moodle.

5 GC Competencies:

Each GC Scholar Apprentice must develop a Curricular Plan which satisfactorily addresses each of the following competencies. Each GCSP Apprentice must complete at least **one of the five competencies at a Level 3** and **at most one at a Level 1**.

- 1) **Talent Competency:** mentored research / creative experience on a Grand Challenge-like topic

Your plan should include one of the following:

- _____ Level 1: GC theme-related freshman design project and course(s)
- _____ Level 2: GC theme-related senior design project and course(s)
- _____ Level 3: _____ 150 hours faculty-supervised GC-related research* OR
 _____ GC-related Internship Experience* OR
 _____ GC-related REU Program*

*To complete this competency, students must also participate in one of the below, that summarizes their work:

- _____ A poster/presentation at a scholarly meeting OR
- _____ A peer-reviewed technical publication

Additional information: _____

2) **Multidisciplinary Competency:** *understanding multidisciplinary of engineering systems solutions developed through personal engagement*

Should include a satisfactory completion of either:

_____ Living With The Lab or Living with Cyber Freshman Engineering Curriculum and corresponding integrated mathematics (MATH 240, 241, 242) and science (CHEM 100, CHEM101, PHYS 201) courses as required by the major

OR

_____ Integrated Science Curriculum (all math, chemistry, biology and physics courses, including labs, required by the major)

AND one of the following courses (or suggest one of your own):

_____ BISC 470 – Bioethics

_____ BLAW 255 – Legal Environment of Business

_____ HNRS 110 – Foundations of Sociological Thought

_____ POLS 350 – International Relations

_____ HNRS 114 – Foundations of Geographic Thought

_____ HNRS 212 – Foundations of American Political Thought

Suggested alternative: _____

3) **Viable Business/Entrepreneurship Competency:** *understanding, preferably developed through experience, of the necessity of a viable business model for solution implementation*

Your plan should include one of the following:

_____ Level 1: _____ Enter the Top Dawg Idea Pitch and complete through Investor Deck preparation

OR

_____ Complete one of the following courses:

_____ ENTR 430 - Innovative Product Design

_____ ENTR 460 – Innovative Venture Research

_____ Level 2: _____ Top Dawg up through Preliminary Round Participation

_____ Level 3: _____ Top Dawg Final Round Participation OR

_____ ENTR 430 - Innovative Product Design AND ENTR 460 – Innovative Venture Research

_____ Level ____: Your proposed idea, please include additional writeup (no more than ½ page) and proposed Level of completion. Level proposed can be 2 or 3

- 4) **Multicultural Competency:** *understanding different cultures, preferably through multicultural experiences, to ensure cultural acceptance of proposed engineering solutions*

For any Level 2 or 3 activity, students must submit a justification of how their activity meets the goals of the Multicultural Competency. Activities may include:

Your plan should include one of the following (please specify the **program** and **quarter** pursued):

_____ Level 1: _____ GEOG 205 - Cultural Geography OR
_____ HNRS 114 - Foundations of Geographic Thought

AND one of the following courses (for Level 1):

_____ GEOG 470 - Urban Geography	_____ POLS 355 - American Foreign Policy
_____ HIST 406 - Modern Eastern Europe	_____ POLS 350 - International Relations
_____ HIST 436 - History of the Modern Near East	_____ POLS 302 - Comparative Foreign Governments
_____ HIST 441 - History of Latin America since 1824	_____ POLS 460 - Politics of Developing Nations
_____ SOC 360 - Sociology of Terrorism and Social Movements	_____ POLS 465 - Asian Politics

_____ Level 2: _____ An internship with a significant global focus and GC theme OR
_____ A research experience with a significant global focus and GC theme

_____ Level 3: _____ A Louisiana Tech University Study Abroad Program with a GC theme OR
_____ An approved international study program with a GC theme OR
_____ A Bulldogs without Borders project (sustained contribution of a year or more)

_____ Level ____: Your proposed idea, please include additional writeup (no more than ½ page) and proposed Level of completion. Level proposed can be 2 or 3

