

**University of Nebraska-Lincoln College of Engineering**  
**Grand Challenge Scholars Program Curriculum – Beginning January 2019**

The UNL GCSP curriculum is designed to be completed in as quickly as 1 year but many students may choose a 2 or 3 year path and receive the same benefits. We encourage students to apply early and complete as many activities as early as possible.

Scholars must complete both required activities for Component 1. For Components 2-5, Scholars must complete 1 component at the *Expertise Level*. The remaining 3 components must be completed at the *Experience Level*.

<b>Component #1 – Talent</b>	
<b>Required Activity 1</b>	<b>Required Activity 2</b>
Mentored Undergraduate Research Project, 100 hours minimum, topic relevant to Grand Challenge. Preferred Experience: UNL UCARE project, UNO FUSE project, or a National Science Foundation-sponsored Engineering-related Summer Research Experience for Undergraduates (REU).	Presentation at the Grand Challenge Showcase (held annually in Spring term). All Scholars are required to present their research and culminating knowledge from all activities from components 1-5 during the spring term in which they complete the program.
<b>Component #2 – Multidisciplinary</b>	
<b>Expertise Level (choose 1)</b>	<b>Experience Level (choose 1)</b>
<ul style="list-style-type: none"> <li>6 Credit Hours of Non-Engineering Coursework in an area relevant to the Grand Challenges. Each course will need to be approved. See list.<sup>4</sup></li> <li>Choose 2 “Experience Level” options to complete</li> <li>Propose your own option</li> </ul>	<ul style="list-style-type: none"> <li>Professional Conference relevant to the Grand Challenge<sup>2,3</sup></li> <li>3 Credit Hours of Non-Engineering Coursework in an area relevant to the Grand Challenge.<sup>1,2,4</sup></li> <li>Propose your own option</li> </ul>
<b>Component #3 – Viable Business/Entrepreneurship</b>	
<b>Expertise Level (choose 1)</b>	<b>Experience Level (choose 1)</b>
<ul style="list-style-type: none"> <li>Entrepreneurship, Management, or Finance course (3 credit hours)<sup>2</sup></li> <li>Substantial contribution to a Maker Club or related student group (minimum 1 year of active membership)</li> <li>Choose 2 “Experience Level” options to complete</li> <li>Propose your own option</li> </ul>	<ul style="list-style-type: none"> <li>Business Plan or Pitch Competition, must pitch solution to Grand Challenge</li> <li>Hackathon participation</li> <li>UNL Engler Entrepreneurship Program “Gear Up” course completion</li> <li>Professional Conference or Training relevant to Entrepreneurship</li> <li>Propose your own option</li> </ul>
<b>Component #4 – Multicultural</b>	
<b>Expertise Level (choose 1)</b>	<b>Experience Level (choose 1)</b>
<ul style="list-style-type: none"> <li>Study Abroad or Study Tour (minimum of 10 days abroad in a university approved program)</li> <li>International Internship</li> <li>Global Services Student Organization active member for 1 year and at least one in-depth service trip/project</li> <li>Non-Engineering Course relevant to Multiculturalism and the Grand Challenge (3 credit hours)<sup>1,2</sup></li> <li>UNO Sustained Dialogue Moderator (minimum of 1 year active participation and required facilitations)</li> <li>Propose your own option</li> </ul>	<ul style="list-style-type: none"> <li>Multicultural or Global Service Student Organization (minimum 1 year of active membership or service)</li> <li>Professional Conference relevant to the Grand Challenge or Multicultural component<sup>2,3</sup></li> <li>UNL Cultural Ambassadors Program (one semester commitment minimum)</li> <li>English Conversation Partner Program (minimum of 1 year active participation)</li> <li>Propose your own option</li> </ul>
<b>Component #5 – Social Consciousness</b>	
<b>Expertise Level (choose 1)</b>	<b>Experience Level (choose 1)</b>
<ul style="list-style-type: none"> <li>Engineering Ambassadors Network (1 year of service minimum)</li> <li>Service Learning course, including a significant service project (3 credit hours)<sup>2</sup></li> <li>Propose your own option</li> </ul>	<ul style="list-style-type: none"> <li>Volunteer or Service experience (40 hrs.) relevant to the Grand Challenge</li> <li>Service-Study Alternative Spring Break (ASB) (1 ASB minimum)</li> <li>Service-related Student Organization (1 year minimum active commitment)</li> <li>Propose your own option</li> </ul>

### Footnotes from Curriculum

1. Previous experiences or coursework completed before starting the program may count toward GCSP components if they were completed while the student was enrolled in the College of Engineering. Pre-college activities will not be counted. Approval is case-by-case and is up to the discretion of the GCSP Committee.
2. GC Scholars cannot choose the same activities to satisfy multiple components (e.g., you may not use the same course to satisfy Component 2 and Component 4)
3. Scholars attending Professional Conferences and/or Meetings will be required to present on this activity as part of the completion requirements. Presentation opportunities will be determined each semester. Exception: Scholars who are presenting on their research *at* a Professional Conference and/or Meeting will not need to present again.
4. Relevant courses for Component 2's Expertise level includes: Honors Seminars (topic must be approved and related); biotechnology; biomechanics; communication (JGEN 200 may not fulfill this); agricultural leadership education & communications; ethics or philosophy; health or sociology of health; cybersecurity; environmental studies or sustainability; public policy; law; ethics; human behavior; risk; medicine. Courses in other areas may also satisfy, at the discretion of the GCSP Committee.

### Program Requirements & Important Notes

- Scholars must complete both required activities for Component 1.
- For Components 2-5, Scholars must complete 1 component at the *Expertise Level*. The remaining components must be completed at the *Experience Level*.
- Each option has requirements that must be completed in order for the component to be fulfilled. In most cases, a presentation or a portfolio submission will be required. Creative submissions are encouraged.
- Previous experiences or coursework completed before starting the program may count toward GCSP components if they were completed while the student was enrolled in the College of Engineering. Pre-college activities will not be counted. Approval is case-by-case and is up to the discretion of the GCSP Committee.
- Students must be in the program for a minimum of 2 semesters, but must complete the program in full before graduating with their bachelor's degree.
- The GSCP Scholarship Award will be disbursed as an Award once the GCSP Committee determines the student has completed the program. The award is non-renewable.
- Scholars must attend Grand Challenge Scholars Meetings (2 out of 3 meetings must be attended per semester. Only one absence excused or unexcused per semester is allowed.), and must attend one individual meeting per semester with the Program Director or GCSP Committee representative.

### Activity Completion & Portfolio

#### Purpose

Our learning is not done for any one activity in this program until we apply that knowledge. The purpose of reflecting on each activity is to challenge your critical and creative thinking as you evaluate what you learned through each experience. Reflection contextualizes what you learn to your Grand Challenge and helps you process and integrate this new knowledge into your work (now or in the future).

**There are two categories of options to complete your activities. Please read your options carefully.**

**Presentation Submissions: Required for conference attendance. May be requested for other activities at the discretion of the GCSP Committee.**

Students who have attended a conference must present on their conference experience to the other Grand Challenge Scholars at one of the Grand Challenge Scholars Meetings in the term the student attends the conference. *Exception:* Scholars who are presenting on their research at a Professional Conference and/or Meeting will not need to present again.

Some other activities may be well suited for a presentation as a reflective activity. Students wishing to pursue this option must get approval from the GCSP Committee to substitute a presentation for a portfolio submission.

**Portfolio Submissions: Required for completing each activity (unless presentation is required/approved).**

There will be one deadline per semester for portfolio submissions, and scholars must turn in submissions for activities completed that term by that deadline. The program will require a finished portfolio submission early in the final term.

Rubrics will be made available for each type of submission so you know what the committee expects.

Allowable portfolio submissions include:

- Written reflection
- Research paper
- Video project
- Visual art project (photography, design, drawing, painting, mixed media, sculpture, architectural design)
- Makerspace project
- Website or web portfolio
- Blog
- Poster (digital file of the poster)
- Electronic slide presentation (PowerPoint or similar)