

Grand Challenges Scholars Program

Road to GCSP | Intent to Apply Information Form

Grand Challenges Scholars Program

The College of Engineering Peking University encourages students to pursue their academic and co-curricular involvement keeping the Grand Challenges in mind. The PKU Grand Challenges Scholar Program (GCSP) helps you to organize your time spent focused on exploring results that benefit society.

Each year, the top students who successfully complete the PKU GCSP competencies will be named National Academy of Engineering Grand Challenges Scholars, recognized both by PKU at graduation and the National Academy of Engineering.

Students interested in being designated as Grand Challenge Scholars should demonstrate involvement related to a specific Grand Challenge topic in each of the five competencies. Successful students must carry their involvement related to the challenge across 5 dimensions

The four Grand Challenges *topics* students can work within are as follows:

Sustainability

- Making solar energy economical
- Providing energy from fusion
- Developing carbon sequestration methods
- Managing the nitrogen cycle
- Providing access to clean water

Security

- Securing cyberspace
- Preventing nuclear terror
- Restoring and improving urban infrastructure

Health

- Engineering Better Medicines
- Advancing Health Informatics
- Reverse engineering the brain

Enriching Life

- Enhancing virtual reality
- Advancing personalize learning
- Engineering the tools of scientific discovery

Successful students must describe how they have made contributions to one or more of those topics across 5 *dimensions*:

1. **Research/creative:** Mentored research or project experience related to a Grand Challenge to enhance technical competence and creativity.

Examples can include:

- PKU Makers Lab
- Capstone design program
- Thesis research

2. **Multidisciplinary:** Understanding gained through experience of the multidisciplinary character of implementable and viable Grand Challenge solutions.
Examples can include:
 - The GCSP Seminar
 - IPodium Program
 - “Engineering plus” courses related to 14 GCs

3. **Business/entrepreneurship:** Understanding gained through experience that viable business models are necessary for successful implementation of Grand Challenge solutions.
Examples can include:
 - Engineering World Industrial Mentors Program
 - Global Innovation and Entrepreneurship Center
 - Internship related to 14 GCs

4. **Multicultural/Global Perspective:** Understanding gained through experience that serious consideration of cultural issues is mandatory for all viable Grand Challenge solutions.
Examples can include:
 - Global Innovation Master Project
 - GLOBEX
 - Cross-cultural Design Project

5. **Social consciousness/Service Learning:** Deepen social consciousness and motivation to address societal problems, often gained through service learning, because serving people is the vision served by the Grand Challenges
Examples can include:
 - Summer social service
 - Outreach practices

The Road to GCSP

To prepare you for the application process in the year you plan to graduate, please submit the information that follows so that we may support you in the successfully applying for the GCSP.

Name: _____ Email: _____@pku.edu.cn ID: _____
 Year in School: _____ Major: _____ Minor: _____

My Four-Year Plan

During the next four years at PKU, we have many opportunities inside and outside of the classroom to meet the criteria of the five dimensions listed below over the four Grand Challenge Topics offered. Spend some time brainstorming what you have or can do that might satisfy these requirements and when in your four years you might be able to accomplish those goals.

Project Dimension	Grand Challenge Topic <i>Which topic will you address for this dimension?</i>	Ideas to Meet Criteria of Dimension <i>Briefly describe any work you have done or plan to do that might help you satisfy this dimension</i>	Year of Anticipated Completion
Research/ Creativity			
Multidisciplinary			
Entrepreneurship			
Global Perspective			
Service Learning			

What are some questions or concerns you have about meeting any of the five dimensions above? What kind of support are you looking for?

I intend to apply for the Grand Challenges Scholars Program in my graduating year:

Yes. Tell us about your interest in this program: _____
