Grand Challenges Scholars Program
Preparation of GCSP proposal

- GCSP vision
  - Existing and planned activities
  - Program administration
  - Program funding source

- GCSP scholar selection and support
  - Estimate number of participating students
  - Select faculty mentors
  - Assist students to complete the program requirements

- Execution and completion of the five competencies

- Assessment and tracking of scholars
GCSP at CityU

- Viable Business/Entrepreneurship
  - Gateway Education course GE 2304 Foundations of Innovation and Entrepreneurship
  - A business plan / A pitching competition

- Multidisciplinarity

- Multicultural Understanding
  - Exchange program
  - Overseas competition

- Research/Creativity
  - ≥ 120 hours summer research project
  - Final Year Project

- Social Consciousness
  ≥ 30 hours services

4 Gateway Education courses
- A Study of Wake Aerodynamics of Vertical Axis Wind Turbine through Wind Tunnel Tests
- Optimization Design of Vertical Axis Wind Turbine through Computational Fluid Dynamics (CFD) Analysis
- A Study of the Application of Unmanned Aerial Vehicle in Structure Inspection
- Integration of BIM and Sensor Technologies to Provide Visual Monitoring in Facility Maintenance Management
- Seism Resistance Investigation of Sizeable Underground Structure

- Development of Inorganic Perovkite Solar Cells with Superb Stability without Lead
- Boosting Economic Growth in Africa with Solar Energy System

- Develop of Biosensors for Monitoring Autophagy

- Finding the Influential Spreaders in Social Network
- Rumor Centrality
GCSP topics (cont’d)

Advance Personalized Learning
- Touch to Read – A Reading Device for the Blind

Provide Access to Clean Water
- Portable Water Purifier

Engineer Better Medicines
- Engineer Better Medicine: A Reactive Oxygen Species Dependent Prodrug

Restore and Improve Urban Infrastructure
- Proof of Concept of 4D Printed Carbon Fiber Pipes with Spiral Flow Pattern and Adaptable Flow Rate or Capacity Capability

Provide Access to Clean Water
Who can apply?

(1) All College of Science and Engineering students with CGPA 2.70 or above
   • A lower threshold suggested by NAE to recruit more students with potential to join the program
   • CGPA of GCSP students:
     - Average: 3.59
     - Highest: 3.96

(2) Preferably Year 1 and Year 2 students
Assessment

(1) Five competencies
   • Satisfactory completion of all five competencies, e.g.
     • Grade B or above in each Gateway Education course taken
     • a summer research project of more than 120 hours

(2) Final Portfolio
   • Assessment based on:
     • Completeness of the portfolio
     • Commitment to the program
     • Uniqueness of the portfolio
     • Creativity of the portfolio
     • Integration of the chosen grand challenge in fulfilling the program competencies
Challenges & solutions

• Tight timeline for Year 3 students
  → Prepare a well-structured curriculum plan
  → Closely monitor students’ progress and suggest alternatives if possible

• Uncertainty in securing internship/exchange affects the success rate of GCSP
  → Students are advised to complete an overseas activity at an earlier stage of their study, preferably in year 2 or 3.
  → Integration with existing systems to enhance the success rate of GCSP

• More publicity effort of the program targeted at Year 1 students
  → Encourage early entry to the program to enhance the success rate
Integration with existing systems

Collaboration with the Co-operative Centre of the College

• Priority given to GCSP students to participate in selection interviews of the Overseas Internship Scheme.

• Bonus points granted to GCSP students in their 2\textsuperscript{nd} application of the Student Exchange Program.
For more details, visit our website: