

**GCC 5501 Grand Challenge Knowledge to Impact: Creating Action with
Your Grand Challenge Project Idea**

3 credits, T/Th 4:00-5:15, Bruininks 420A

Spring 2020

Meeting time

Twice per week, 75 minute sessions

(Lead) Co-Instructors

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Requirements

Students must have previously completed a GCC course (or similar course). Undergraduates students should be junior level or above. Graduate or professional students of any level may enroll. Students should have a Grand Challenge area they will focus on for the class. This does not have to be fully developed project idea but some focus is necessary to work on during the class and to be placed in the appropriate working group. Students who have not previously taken a GCC course need to request instructor approval.

Course description

This course provides an intensive, hands-on experience designing and developing a sustainable intervention to an aspect of a Grand Challenge. In other words, converting knowledge to impact. The target audience is students and student teams who have identified and/or worked on a specific problem in a previous GCC course and wish to dig deeper in developing a project plan.

Students should enter the class with a problem statement identifying the challenge they aim to address, a target location or community, and a proposed solution or intervention that they wish to develop. Student teams working on a project are welcome to enroll in this class together. Student solutions should address a problem that is about a broadly defined Grand Challenge; examples of

applicable areas include water, immigration and refugees, energy, housing, educational opportunity gap, public health, food and sustainable agriculture. Ideas outside this range are also acceptable.

By the end of class, students will create a plausible design and implementation plan for a solution that addresses their self-created Grand Challenge problem statement. This solution or intervention could take many forms, depending on student interest and problem statement. Business or non-profit plans, policy and advocacy plans, media and awareness campaigns and activism plans are all possible. Determining the correct path(s) is part of the learning objectives for the course.

Throughout this document (and course), the terms solution and intervention will be used somewhat interchangeably. This reflects the fact that different disciplines use different words to describe similar aspects of the overall process covered in this class. Understanding some of those differences is part of the learning objectives for the class.

The course structure will be:

- Online lectures on primary concepts. These concepts are further discussed below in learning objectives.
- In class workshops applying these concepts to student projects.
- In class studio time. This time is for students to work on their projects with advice from the instructional team.
- Out of class work time. Students will be responsible for interviewing stakeholders in their Grand Challenge topic.
- Student Community of Practice working groups, to allow smaller, regular discussion groups.
- Coaching from instructional team and mentors. These will be fixed times in an extended office hour format or studio time.
- We plan to spend some time working in the [Impact Hub MSP](#), which is close to campus.

Instructional Model

Each student will be working on a project throughout the course. For each topic covered during the course, the student will be applying those concepts to their project. The project also provides the context for the interactions in studio time with instructors. The Design Studio concept has been extensively developed by the College of Design, that model provides a basis for this structure. Multiple class periods will be devoted to studio time, that is time for students to work on their project with instructors taking time to coach each project. Most lecture time will be online resulting in a hybrid-flipped model. There will also be optional Studio time that occurs outside regular class time (called Impact Studios). These sessions can be thought of as extended office hours and will be held in a common location, with coaches available on a rotating basis.

Student cohort models are an effective technique to provide additional support to students.

Students will be grouped into Communities of Practice. These will be theme-based groups, around Grand Challenge topics (water, energy, etc.) or geographies. This process will happen over the first two weeks of class. It will give students a smaller working group with like-minded students.

In addition to the instructors, there are a few select faculty and staff that have committed some time to the course. The Studio sessions (in-class and out-of-class) are a primary way for students to interact with these co-instructors and this allows some pairing up of instructors to student and student teams. These co-instructors are representative of colleges and disciplines across the university. Each co-instructor will have defined studio and office hours over the course of the semester.

Students are expected to know necessary background for their project of interest. For example, if the project is dealing with public health issues, the student should have the appropriate academic and/or work background necessary to address the problem credibly. This will be part of the discussion and Community of Practice selection process.

Learning Objectives

The course has one overall learning objective:

- Students will create a plausible design and implementation plan for the solution or intervention that addresses their self-created Grand Challenge problem statement.

This large objective requires many secondary learning objectives:

- Students will construct a logic model and theory of change for their project.
- Students will be familiar with and can apply design thinking techniques used by the Stanford d.school and IDEO for human-centered design.
- Students will develop a basic understanding of the concept of system thinking and stakeholders.
- Students will understand and apply the analysis and presentation techniques used in the value proposition and business model or social model canvases.
- Students will understand different paths to implementation and apply the appropriate path to their proposed intervention or solution.
- Students will be able to develop advocacy and implementation strategies for public policy focused projects.
- Students will discuss and identify key leadership traits as they apply to their project.
- Students will deepen their ability to develop collaborations or partnerships to support venture success.
- Students will defend in oral and written communications the various stages of their design and development of their problem statement, theory of change and solution.

- Students will understand and apply funding principles (including grant funding, investor funding and crowd funding) to their plan and apply financial analysis tools to improve the feasibility of their project.

Course activities will require students to demonstrate skills such as:

- Develop a solution or intervention to a selected Grand Challenge topic
- Synthesize knowledge from other courses
- Work effectively in a team
- Understand the societal implications of their proposed intervention
- Make effective oral and written presentations

At the end of the course, each student should have:

- A deeper understanding of the process and how to apply it.
- A clear and executable plan for going forward, matched to resources available.
- A solid and compelling presentation.
- An introduction to tools and techniques for program management, design thinking, communication and business models.
- Confidence in the ability to make a difference in solving a grand challenge
- Connections to
 - Mentors
 - Policy Advocates
 - Impact entrepreneurs
 - Non Profit leaders
 - Faculty

Texts:

Value Proposition Design by Alexander Osterwalder and Yves Pigneur, 2014, Wiley.

Reference Texts (not required):

- *Measuring and Improving Social Impacts: A Guide for Nonprofits, Companies, and Impact Investors*, Epstein, Marc J., 2014
- *The Social Entrepreneur's Playbook: Pressure Test, Plan, Launch and Scale Your Social Enterprise*, Macmillan, Ian C., 2013
- *Financial Intelligence for Entrepreneurs: What You Really Need to Know About the Numbers*, Berman, Karen, 2008
- *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, Ries, Eric, 2011
- *Slicing the Pie - Funding Your Business Without Funds* Moyer, Mike, 2012
- *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*, Osterwalder, Alexander, 2009

- *A More Beautiful Question: The Power of Inquiry to Spark Breakthrough Ideas*, Berger, Warren, 2014
- *Talking to Humans*, Constable, Giff, 2014
- *The Field Guide to Human Centered Design*, IDEO, 2015.
- *Development Impact and You*, Nesta and Rockefeller Foundation, 2015
- *Ten Types of Innovation: The Discipline of Building Breakthroughs*, Keeley, Larry, 2013
- *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*, Banerjee, Abhijit V., 2011

Course agenda

This agenda is subject to change. There are two class sessions per week. The assignments listed here are draft ideas on assignments, please refer to the Canvas class site for actual assignments and due dates.

Week 1: Introductions, Objectives, Baseline

- Session 1. Introduction to class structure, procedures and expectations. Introduction to Community of Practice; design thinking introduction/refresher
- Session 2. Design thinking - drawing, interviewing, prototyping exercise.
- Individual Assignment: Initial student choices for “communities of practice”.

Week 2: Design research

- Video Lecture: Introduction to Design Thinking
- Session 3. Discussion of personas, empathy maps and customer/beneficiary research.
- Session 4. Introduction/refresher of value proposition canvas and jobs to be done.
- Individual Assignment. Student defined customer/beneficiary interaction plan.

Week 3: Community of Practice research

- Session 5. Work day; discussion of COP themes and structure. Workshop to help students clarify COP themes and their roles.
- Session 6. Student presentations of project status; Mentors invited
- Individual/COP Assignment: Final COP definition and grouping.

Week 4: Business Model and Theory of Change

- Video Lectures: Business Model; Theory of Change
- Reading. *Theory of Change*, Rogers, Patricia, UNICEF methodological briefs, Sept 2014

- Session 7. Background and workshop of business model and theory of change; defining impact.
- Session 8. Mentor Day: Three 15 minute presentations; consultation time.

Week 5: Value Proposition

- Video Lecture: Value Proposition Design
- Session 9. 30 minute quick presentations and critique; discussion and workshop – Value Proposition Design
- Session 10. Presentations to peers and guest faculty.
- Team assignment/presentation: Initial problem statement

Week 6: System thinking

- Video Lecture: System thinking in Grand Challenge Interventions.
- Session 11. Workshop session on system thinking, project studio.
- Session 12. Project Studio
- Team Assignment: Stakeholder map.

Week 7: Progress assessment

- Session 13. Mentor Day
- Session 14. Project Studio – assessing team progress
- Team assignment/presentation: Initial Solution/business model/intervention presentation

Week 8: Communication

- Video Lecture: Creating compelling presentations
- Session 15. Student presentations.
- Session 16. Student presentations.
- Individual assignment: TBD
- Team Assignment: Midterm presentation. Mentors invited.

Week 9: Midterm

- Spring break

Week 10: Organizational Model and Multiple paths/Financial Intelligence

- Video Lecture: Many paths to impact
- Session 17. Financial Intelligence; Workshop – many paths to impact.
- Session 18. Mentor Day (Dan Forbes), Studio session
- Team Assignment: Project Funding Plan

Week 11: Funding

- Video Lecture: Funding options
- Session 19. Advocacy Workshop – creating a crowd funding campaign.
- Session 20. Collaboration partnerships; partner interview assignment

- Team Assignment: Project Funding Plan

Week 12: Ethics and Community

- Video Lecture: Ethics in Grand Challenges
- Session 2. Community, role-playing discussion of various ethical issues surrounding Grand Challenge interventions, including institutional procedures such as Institutional Review Board and Institutional Animal Care and Use Committee.
- Session 22. Mentor Day communications
- Team assignment: Summary of ethical issues around team’s selected problem and solution. Community issues

Week 13: Communications

- Session 23. Project Studio
- Session 24. Project Studio

Week 14: Studio Week

- Session 25. Makeup/follow up topics as needed.
- Session 26. Mentor Day, fundraising
- Team Assignments: Final plan and presentation

Week 15: Final Presentations

- Session 27. Project Studio, draft plan due
- Session 28. Final presentations practice

Week 16: Refine presentations

- Session 29. Refine presentations, communications critique
- Session 30. Refine presentations, Mentors Invited.

Exam Week

Final Presentations, Mentors Invited.

Grades

Course grades will be based on the following:

Individual assignments:	20%
Individual class participation:	10%
Project Stage Gate Assignments	30%
<u>Final project presentation/plan:</u>	<u>40%</u>
Total	100%

Expectations

Students should:

1. Complete assignments fully, professionally, and on time. Late assignments are not accepted.
2. Read and watch assigned material prior to class.
3. Attendance and tardiness are counted in class participation grade. It's a team-based class, it's hard to do team exercises without everyone there.
4. This is a class that continues to build on work, project plans are expected to have course changes as the semester progresses.
5. Expect to meet with other students outside of class.

Exams

This is a project driven course. There are no traditional exams. However students will be required to make a final presentation in front of an external panel of reviewers.

Grading:

Students are responsible for ensuring that their assignments are received.

University of Minnesota's Uniform Grading Policy is as follows.

A	Achievement that is outstanding relative to the level necessary to meet course requirements.
B	Achievement that is significantly above the level necessary to meet course requirements.
C	Achievement that meets the course requirements in every respect.
D	Achievement that is worthy of credit , even though it fails to meet fully the course requirements.
F	Represents failure and signifies that the work was either: 1) completed but at a level not worthy of credit , or 2) not completed and there was no agreement between the student and instructors that the student would be awarded an Incomplete.

Persons with disabilities that require accommodations will be assisted on an individual basis. Contact Disability Services (626-1333) and the instructor in advance to make arrangements.

Cheating is not allowed. Anyone found cheating will immediately receive a grade of zero on that assignment. If such behavior occurs more than once, the student will receive a grade of F in the class. **Plagiarism is cheating.** UMN policies on dishonesty are available from the Office for Student Academic Integrity: www.osai.umn.edu. **Harassment** and disruptive and disturbing behavior will not be tolerated; students will be asked to leave immediately if such behavior

occurs. Such behavior is defined in the Student Conduct Code.

Helpful study strategies may be found at www.studygs.net/index.htm and hegis.umn.edu/res.htm.