GCSP 302 – Grand Challenges Program Seminar
Syllabus

Course Description
Students will take this one-credit seminar in their second semester in the program. The seminar will provide a structured environment for students to design their pathways through the required program experiences, beginning to construct the e-portfolios that will serve as documentation of their experiences, and that will be used for assessment and verification of the program requirements. The Program Seminar is the second of three one-credit seminars that are required for Grand Challenge Scholars. Permission required.

Overview of Course Structure
Students will work individually and in groups to develop and document their Grand Challenge program experiences. Students in the Grand Challenge Scholars Programs are required to identify one of the National Academy of Engineering's 14 Grand Challenges and complete experiences related to their Grand Challenge in five *program areas*: research, interdisciplinarity, entrepreneurship, global perspectives, and service. Students must submit a short proposal for each of the program areas in order to have their planned experience approved, and must then document completion of the experience in an e-portfolio. Students in this course will have begun creating their e-portfolio in GCSP 301, and will be at different points in their progress. Therefore, this seminar is designed to be flexible, but also to ensure that students have proposed all five program experiences by the end of the semester, and to have begun documenting them in the e-portfolio.

Most classes will be run as working sessions, with students working in groups to develop and refine their program area proposals and e-portfolios documenting their participation in the GCSP and their completion of the program requirements. Each of the five experiences has a set of associated core learning objectives, and the students also select several personalized learning objectives. We are currently developing rubrics for each of the required learning objectives, and an open-ended rubric for assessing achievement of the personalized learning objectives.

Students' grades will be based on the following weights:

Class participation	30%
Writing journal	10%
Program area proposals	20%
E-portfolio	40%

The expectations for each of these assignment areas are straightforward, as is appropriate for a one-credit seminar:

Class Participation. Students are expected to attend class daily (unless they have a documented medical or athletic excuse, or are attending an approved professional conference or other academic event), to work on their assignments, to contribute to class discussions, and to support and provide feedback to other students on their work.

Writing/Reflection Journal. Students are expected to keep a writing/reflection journal, informally recording their thoughts about their program experiences and the seminar, making notes about outside readings that they do related to their own Grand Challenge, and drafting material for their e-portfolios. The purpose of the journals is to encourage and incentivize students to be writing and recording their thoughts informally as "pre-writing" for building their e-portfolios. These journals will be collected/reviewed three times during the semester, and graded primarily for completion rather than for style, grammar, or deep content assessment.

Program Area Proposals. Over the course of the semester, students must submit their five proposals for program area experiences. Students will receive full credit for an approved proposal, and partial credit for a disallowed proposal (but may resubmit to increase their proposal grade for the seminar). Proposals require a short description (one paragraph) of the proposed experience, an estimate of the amount of time (expected completion date and total hours spent), a short explanation about how the experience relates to their Grand Challenge, and a very brief (one to two sentence) explanation of how the experience is anticipated to achieve each of the learning objectives. The purpose of the proposal is to ensure that the program experiences are of an appropriate nature and level of effort to meet the program requirements, and to provide an opportunity for early feedback and guidance about how to make the most of the experiences.

E-Portfolio. Students should already have created an initial "shell" for their e-portfolio in GCSP 301, and added a personal profile and a description of their selected Grand Challenge and why they chose it. In GCSP 302, they are expected to complete at least two of the five program-area sections of the e-portfolio. Many students will complete these two experiences by the end of the semester, and can fully document the experience and how it meets the learning objectives. Others will not yet have finished one or both of the experiences, but can still receive full credit for creating an e-portfolio section that is essentially an extended version of the program area proposal.

Weekly Schedule

Week	Topic	Assigned Reading	Assignments and Notes
1	Getting Started & Expectations		
2	Interdisciplinary	Miller & Mansilla	
3	Writing session		Proposal #1
4	Writing session		
5	Entrepreneurship	TBA	Journal #1
6	Writing session		Proposal #2
7	Writing session		
8	Leadership Characteristics	Martin	
9	Writing session		Proposal #3
10	Writing session		Journal #2
11	Global Perspetives at Home and Abroad	TBA	
12	Writing session		Proposal #4
13	Summer Plans & Next Steps		
14	Summer Plans & Next Steps		Proposal #5
(Exam week)			Journal #3

Readings

Matthew Miller and Veronica Boix Mansilla, "Thinking Across Perspectives and Disciplines," Harvard Graduate School of Education Interdisciplinary Studies Project Technical Report, March 2004.

Robert Martin, "How Successful Leaders Think," Harvard Business Review, 2007.

Learning Objectives

Program-Wide Learning Objectives. The GCSP program-wide learning objectives are centered around five of the affective functional competencies (AFCs) that have been proposed at UMBC for assessing applied learning experiences: Ethics and Integrity, Innovative Leadership, Teamwork, Resilience and Adaptability, and Self Awareness. Students must achieve six core program-wide learning objectives, and must also document and achieve two to four additional personalized learning objectives (from a list provided to the students, or they may propose their own unique objectives).

- **Integrity:** Identify and be able to elaborate on and justify core beliefs and values; act consistently in accordance with those beliefs and values across contexts; regard themselves as accountable for those actions.
- **Perspectivism:** Seek out and fairly consider ethical perspectives and concepts other than own, and ensures these perspectives and concepts appropriately inform their own actions and views.
- **Realistic vision:** Be imaginative in thinking about alternatives to the way things are, while being sensitive to the constraints of the real world.
- **Being a team member:** Identify strengths and weaknesses of all members of a partnership or collaboration; empower group members to use their strengths, and support weaker team members. Both assign and accept duties and roles intelligently and flexibly.
- **Persistence:** Confront difficulties resolutely, and persevere in trying to manage them. Reframe failures and mistakes as learning opportunities, and does not allow them to become disabling or discouraging. Follow through on commitments.
- **Flexibility:** Adapt quickly and thoughtfully to unexpected changes and developments and accommodate them fluidly in plans and projects. Incorporate new information to progress toward intended outcomes.

Research Learning Objectives. The learning objectives for the Research program element are based on a set of objectives that have been developed at UMBC to assess the learning of URA recipients, and on the Critical Agency AFC. In addition to these six core research learning objectives, students must select two to four additional objectives from a longer list.
- **Effective Communication:** Express ideas in an organized, clear, concise, and accurate manner.
- **Disciplinary Communication:** Write clearly and effectively in discipline-specific formats.
- **Creativity:** Effectively connect multiple ideas and approaches.
- **Practice and Process of Inquiry:** Demonstrate the ability to formulate questions and hypotheses within their discipline.
- **Nature of Disciplinary Knowledge:** Show understanding of the way practitioners think within the discipline and view the world around them.
- **Understanding Ethical Conduct:** Predict, recognize, and weigh the risks and benefits of the project for others.

Interdisciplinarity Learning Objectives. The four Interdisciplinarity core learning objectives are based on the Scholarship of Interdisciplinarity curriculum at the core of UMBC's INDS program. (Note that the Interdisciplinarity program area does not currently include optional learning objectives beyond the core. This may change as the program develops and additional potentially beneficial learning objectives are identified.)
- **Defining Interdisciplinarity:** Recognize and define the different qualities of interdisciplinary and multidisciplinary work.

- **Bridging Perspectives:** Define, cite, and give examples of the core strategies for creating common ground between different disciplinary perspectives.
- **Integrating Disciplines:** Define, cite and give examples of the bridging strategies that facilitate the conscious integration of different disciplines.
- **Analyzing Interdisciplinarity:** Identify and discuss the scholarship of interdisciplinarity in a given case study (e.g., a team project completed by the student) and the value it has added to the project.

Entrepreneurship Learning Objectives. The Entrepreneurship learning objectives are drawn from UMBC's assessments of existing entrepreneurship coursework and activities at UMBC. In addition to these four core learning objectives, students will select a single personalized learning objective.

- **Assessing Risk:** Develop strategies for recognizing opportunities and identifying the tools for quality risk assessment.
- **Effective Communication:** Exhibit skills for communicating ideas in a concise and logical way.
- **Effective Teamwork:** Work effectively in teams focused on entrepreneurship-related projects.
- **Entrepreneurial Thinking:** Apply entrepreneurial thinking to social issues and social problems.

Global Perspectives Learning Objectives. The learning objectives for the Global Perspectives element of the GCSP are based in UMBC's global learning assessments, and on the Intercultural Development and Perspective AFC. In addition to the four core Global Dimensions learning objectives, students will select two personalized learning objectives.
- **Working With Diverse Teams:** Exhibit proficiency working in or directing a team with ethnic or cultural diversity.
- **Global Citizenship:** Show self-awareness as "citizens of the world" as well as citizens of a particular country, and appreciation of the challenges facing mankind, such as sustainability, environmental protection, poverty, security, and public health.
- **Cultural Awareness**: Identify the broad attitudes, beliefs, values, assumptions, histories and communication styles of themselves and others and their relationship with others. Support and validate the cultural experiences of others, and incorporate multiple, potentially conflicting, perspectives into evaluative and analytical work.
- **Openness to Difference:** Welcome personal and cultural difference, seek to maximize the community of relevant stakeholders, and interact non-judgmentally with these stakeholders.

Service Learning Objectives. The learning objectives for the Service program area are centered around the Social Responsibility AFC (AFC5). In addition to the three core learning objectives, students will select one personalized learning objective.

- **Community Engagement:** Participate in community action, including campus community, neighborhood/city/state community, national community, global community, and others.
- **Civic Agency:** Regard themselves as connected to communities and social groups, and as able to proactively interact with them. Seek ways to make positive change.
- **Capacity for Reflection:** Consider role as social actor, impact on community, and effect of community involvement on self. Seek to strengthen and multiply skills for sustainable social solutions.