GCSP 401 – Grand Challenges Program Seminar Syllabus

Course Description
This seminar provides an opportunity for students completing the Grand Challenge Scholars Program to reflect on their experiences, share their learning and insights with new Scholars, and engage in outreach to the broader UMBC and local community. Students will work towards completion of their e-portfolios, mentor and help to train the entering cohort of Scholars, and present their experiences and knowledge they have learned in class and in public forums on and off campus. Restricted to students who have been admitted to the Grand Challenge Scholars Program. This course is intended for students who have completed GCSP 301 and GCSP 302, but may in exceptional cases be taken concurrently with GCSP 302.

Overview of Course Structure
GCSP 401 is intentionally co-scheduled at the same time as GCSP 301 (fall) or GCSP 302 (spring). Students may take either offering of GCSP 401 (fall or spring). Students will engage in four primary GCSP-related activity groups throughout the semester: (1) completion and documentation of their program experiences, (2) peer mentoring of first-year students in the program (who are taking GCSP 301 or GCSP 302), (3) leadership training and development, and (4) service to the program in the form of program review and advocacy.

Completion and documentation of program experiences. GCSP 401 students typically take the course in the fall or spring of their senior year. All students in the Grand Challenge Scholars Program 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.   GCSP 401 students who are in their final semester before graduation must document the completion of all of their program experiences in an e-portfolio (which they will have started working on in GCSP 301 and 302). Students who are taking the course before their final semester in the program must submit a partially completed e-portfolio, along with a detailed timeline of their planned completion.

Peer mentoring of first-year students. Co-scheduling GCSP 401 with GCSP 301 or GCSP 302 allows the second-program-year students in 401 to work closely with the first-program-year students as the latter students enter the program and begin to design and document their experiences. GCSP 401 students will be placed into small groups, typically with 2 GCSP 401 students and 3-4 GCSP 301/302 students, depending on the particular ratio during that semester. These groups will be formed with the goals of having common interests (shared or related Grand Challenge focus areas) and diverse perspectives (different majors, backgrounds, and demographic characteristics), but

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avoiding students from particular groups (gender, race, major) being isolated as an "only" in their group. GCSP 401 students will serve as peer mentors within these groups, supporting the entering students throughout the semester on their program activities, providing a two-way learning experience. While the entering students are learning about the program, starting to design their pathways, and developing their individual teamwork skills, the peer mentors are developing leadership skills, communication skills, and the ability to help others bridge differences.

During the GCSP 301 (fall) semester, the GCSP 401 students will support the GCSP 301 students in learning about the Grand Challenges and program areas, preparing an in-class presentation about an assigned Grand Challenge, preparing a first draft of their e-portfolios, and presenting those e-portfolios in class. During the GCSP 302 (spring) semester, the peer mentors will support the 302 students in designing their program experiences, locating appropriate outside mentors, preparing their program experience proposals, creating their e-portfolios, and presenting their e-portfolios at the end of the semester.

Leadership Training and Development. Students in GCSP 401 will complete a series of assigned readings and discuss them in class to explore how the concepts they are learning apply to the Grand Challenges, their program experiences, and their longer-term career and educational goals. During the 301 (fall) semester, the 401 students would work together to prepare and deliver the 301 class session on "Teamwork and Handling Conflicts." During the 302 (spring) semester, the 401 students would work together to prepare and deliver the 302 class session on "Leadership Characteristics."

Service to the Program. Students in GCSP 401 will collectively carry out a structured process of reviewing, assessing, and making suggestions for improvement of the overall GCSP program. This process serves as a service learning opportunity within the program, and also helps them to develop entrepreneurial skills of marketing, needs assessment, and iterative "product" improvement. There are three assignments that are used to assess this component: an initial Program Analysis, in which students will review the different aspects of the program and how effective they believe they have been in their own experience; an Advanced Program Analysis, in which students select an area to focus on more intensively; and a Program Extension assignment, in which students identify and design a potential addition to the program (e.g., an additional option for a program experience; a new recruiting mechanism; or outreach materials for K-12 students).

Students' grades will be based on the following weights:

Class participation	20%
Peer mentoring & reflections	20%
Leadership presentation & reflections	20%
E-portfolio	20%
Program review and improvement plan	20%

The expectations for each of these assignment areas are straightforward, as is

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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 provide peer mentoring support and feedback.

Peer Mentoring. Students will be graded on the appropriateness of their interactions with their assigned groups (75% of peer mentoring grade). (A rubric will be developed for specific aspects of the collaborative work and peer mentoring. In addition to a self-assessment by each student, input will be collected from the group members over the course assessment that may be used to adjust the grade. In all cases, students will be able to see a summary of their team member's assessment, and can respond to any concerns that are raised during that process.) Students will also be asked to complete several short reflections on the teamwork in these groups; those reflections will count as 25% of the overall peer mentoring grade.

Leadership Presentation & Reflections. Students will read several assigned articles on leadership (samples are included in the Assigned Reading list), and will collectively prepare a presentation for GCSP 301 ("Teamwork and Handling Conflicts") or GCSP 302 ("Leadership Characteristics"). 50% of the grade will based on the quality and delivery of the presentation, and 50% on several written reflections over the course of the semester about how the leadership skills they learn about may have been useful in practice during the class and in their outside activities.

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E-Portfolio. By the time they finish GCSP 302, all students should have completed at least two of the five program-area sections of the e-portfolio (basically a website describing their grand challenge, summarizing the program experiences, and discussing how those experiences allowed them to meet the learning objectives associated with the program (see end of document)). GCSP 401 students in their final semester will be expected to complete the remainder of their e-portfolio, and to submit it for final approval as satisfying the program requirements. GCSP 401 students in their next-to-last (or earlier) semester must document all completed experiences, and complete e-portfolio sections describing any planned not-yet-completed experiences. The grade for the e-portfolio will be based on a "retake rubric": students are expected to have a fully satisfactory completed e-portfolio by the end of class, so they may resubmit in order to address any weaknesses until they have received full credit (100%) for the e-portfolio.

Weekly Schedule

Week	Topic	Assigned Reading	Assignments and Notes
1	Getting Started & Expectations		
2	Peer Mentoring: Designing GCSP Experiences		
3	E-portfolio Planning Workshop		Due: Teamwork reflection
4	Leadership Discussion and Presentation Design	Martin, Covey, Patterson (ch. 1-3)	Due: E-portfolio - 3rd experience
5	Peer Mentoring: Diversity & Bias		Due: Leadership reflection #1
6	Leadership Presentation Practice		Due: Program preliminary analysis
7	Peer Mentoring: Leadership Presentation		
8	Program Review I: Preparation		Due: E-portfolio - 4th experience
9	Peer Mentoring: E-Portfolios		Due: Program advanced analysis
10	Being an Ambassador: GCSP Elevator Pitches		Due: Leadership reflection #2
11	Peer Mentoring: Preparing to Present		Due: E-portfolio - 5th experience
12	Peer Mentoring: Presentation Feedback (rotation)		
13	Reflecting on Leadership	Patterson (ch. 4-11)	Due: Teamwork/ Leadership reflection
14	E-portfolio Completion Workshop (rotation)		Due: E-portfolio - final full submission
(Exam Period)	After-Action Review / Program Review II		Due: Program extension

Note: The dates of sessions and due dates will be adjusted, depending on whether the

course is offered in fall (co-scheduled with GCSP 301; GCSP students in their next-to-last semester) or spring (co-scheduled with GCSP 302; students in their final semester). Graduating seniors would have earlier deadlines in order to complete the program requirements before graduation. Students who are "out of cycle" (e.g., graduating in a fall semester) will have their requirements individually adjusted as appropriate.

Readings (sample)
In addition to the assigned readings specifically for GCSP 401, students are expected to review and refresh their familiarity with the GCSP 301 and 302 readings that they will have completed when they took those classes.

Kerry Patterson, Joseph Grenny, Ron McMillan, and Al Switzler, *Crucial Conversations*, McGraw-Hill, 2012.

The 7 Habits of Highly Effective People: A Summary of the Bestselling Book by Stephen R. Covey, Simon & Schuster.

Robert L. Martin, "How Successful Leaders Think," Harvard Business Review, 2007.
https://hbr.org/2007/06/how-successful-leaders-think

Academic Integrity. GCSP 302 conforms with the UMBC Undergraduate Honor Statement and with UMBC's policy on academic integrity.

> *By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal.*

All work submitted for this course and for the Grand Challenge e-portfolio is expected to be the student's own, original work. Material and ideas from other sources must be properly cited and documented. Collaboration is expected and welcomed, but if work is jointly authored, it should be indicated as such. (For example, students may work together to develop common material for their e-portfolios, if they are focusing on the same Grand Challenge or using the same experience for their GCSP requirements. Each of the students' e-portfolios should indicate this joint authorship by naming the students who jointly developed the material.) Undocumented collaboration will be treated as a violation of the academic integrity policy. Violations will result in a minimum penalty of a grade of zero on the assignment in question and the student will also be required to recomplete the assignment in order to pass the class. At the discretion of the instructor, and in consultation with the Academic Conduct Committee, more serious violations may result in a lowered letter grade, a failing grade in the class, expulsion from the Grand Challenge Challenge program, and/or institutional sanctions.

You do not need to document collaboration in the form of peer editing, suggestions that you receive on your writing, or pointers into the literature that are provided by peers or colleagues.

You do need to document jointly authored text that you and another student are both including in your submissions for the class or e-portfolios, as well as ideas and material from any online source, print source, or individual.   Exact quotes should appear in quotation marks, and a parenthetical or footnote citation should be provided.

If you have any questions about what is permitted under the academic integrity guidelines, please do not hesitate to consult with the course instructor or TA.

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

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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.

Learning Objectives
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