Syllabus

Syllabus is available to registered students at Blackboard Learning Systems: (http://mymason.gmu.edu/).

Faculty
Instructor: Billy “Skip” Powers, PhD; bpowers7@gmu.edu; (703) 919-1403.

Office Hours: Virtual. To schedule a private appointment by phone, email me your preferred mode, date and time (include course number on all communications). Email bpowers7@gmu.edu or call/text (703) 919-1403. Please identify yourself by name/course number if using SMS/IM option.

Textbooks

Course Description
IT 685 Capstone (3:3:0)

Prerequisite: Completion of at least eight (8) of all other course requirements for this degree program or, permission of the Instructor.

This course is a blended team-based (Weeks 1-6) AND individual project analysis (Weeks 8-16) grounded on a solid understanding of the coursework mastered in each of the degree program’s three areas of study. Teams will research and analyze business cases of systems-of-system programs, “mega-systems.” Students will develop critical skills for preparing and delivering effective, verbal briefings and presentations as well as scholarly research of mega/complex systems analysis. Teams will be assigned randomly at beginning of the class.

Students will prepare a Capstone Paper* that focuses on system-of-system programs (APA format, 10-pages (maximum) excluding Title, Abstract and References, with no less than 5 scholarly references).

**Exceptions may be granted for students who wish to collaborate/co-author journal submissions on the use of analytics in mega-systems program management. See Professor for further information.
Delivery Method
This course will be delivered using a blended synchronous (in-class) and asynchronous (online/not live) format. Our academic week will begin on Wednesday’s and conclude on Tuesday’s. The Instructor will establish individual Team Space in BlackBoard Collaborate for each team to communicate, at their own schedule, in preparation for presentations. See Technical Requirements below for the equipment and configuration required for both Asynchronous and Synchronous formats.

Learning Objectives
The class provides an opportunity to explore how the IT professional engages all three areas of study to conceive, design, implement and sustain a system-of-systems program in the federal sector.

Specific learning objectives include:
1. Analyze multi-faceted, systems-of-systems program business cases in terms of their IT, Management and Leadership elements; and
2. Prepare a publish-ready research paper that analyzes management of mega-systems projects in the 21st Century including the use of analytics as the primary mitigation strategy; and
3. Create and deliver effective, engaging verbal stakeholder briefings; and
4. Participate as Leader AND Follower on a team to accomplish a case analysis briefing(s).

Outcomes
Expected outcomes include:
- Understand the complex dynamics imposed by programs of very large scope and scale:
  (a) Understand the ramifications of leading change to a place no one has gone before
  (b) Understand the interdependencies of the three areas of study in defining any one
- Plan for and then successfully lead organizations through change:
  (a) Time-limited stress compresses the team’s work
  (b) Insight and innovation often come from unusual sources
  (c) Managing through the daunting and often conflicting oversight imposed by the federal sector
      is part of the environment that must be understood not endured

Technical Requirements
To participate in this course, students must have the following resources:
- Personal computer with at least 1.0 GHz speed, 250 Mb RAM;
- Microphone/speakers or USB headset compatible with the computer used for the course;
- Video camera compatible with the computer used for the course;
- High-speed Internet access with a standard, up-to-date browser, either Internet Explorer or Mozilla Firefox. Opera and Safari are not compatible with Blackboard.
- Consistent, reliable access to Mason email and Blackboard, the official methods of communication for this course, and;
- Java software plug-in for PCs and Macs respectively, is available for free downloading.

For technical questions regarding Blackboard, see Courses Support for Students and Blackboard Tutorials. If you still have questions, email courses@gmu.edu for assistance. For technical questions regarding computer networking, see ITU Support for Students. If you still have questions, email support@gmu.edu or call (703) 993-8870.
Student Roles and Responsibilities
Students in this class are considered to be adults completing the Master of Science degree program; they are expected to have read and are accountable for all details of this syllabus. Capstone is a synthesis course that will engage all previous MS Applied IT courses.

Team Work (Weeks 1-8)
Capstone project work is done in teams. Your participation in the team’s work is among the most critical factors of your class grade and your team’s success. Instructor will assign team members.

Questions
All questions should be asked and resolved via Mason email or by appointment with the Instructor.

Assignments
Written work should be the product of your best critical thinking. Proper spelling, syntax, sentence structure and vocabulary are the marks of an educated scholar; they should be evident in your work. “IM-speak” is inappropriate for this class. Digital copy of each assignment (1 per team for team assignments) is due to Instructor, via Mason email (bpowers7@gmu.edu), not later than 5PM Tuesday of the week it is assigned, unless otherwise directed by Instructor. Assignments are due as published; late work is not accepted. Collateral materials, such as templates and forms that support assignments and other course content, are available in Course Contents folder in Blackboard. There are four (3) weighted Assignments:

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<tr>
<th>ASSIGNMENT</th>
<th>GRADE WEIGHT</th>
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<tbody>
<tr>
<td>1. Team Roster &amp; Discussion Board Participation</td>
<td>10%</td>
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<tr>
<td>2. Team Presentation Group</td>
<td>40%</td>
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<tr>
<td>3. Capstone Paper (Individual/Group)</td>
<td>50%</td>
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Grades
Grades will be awarded in accordance with the Mason Grading System for graduate students https://catalog.gmu.edu/policies/academic/grading/ Raw scores may be adjusted by the Instructor to calculate final grades. Final grades will be posted to https://patriotweb.gmu.edu which is the only vehicle for students to obtain those grades by the last day of the Term (December 19, 2018). Grades will be composed of the following items and weights:

- **Graded Items: 100%**
  - Roster/Discussions: 10%
  - Presentation: 40%
  - Capstone Paper: 50%

Mason Policies and Resources for Students
a. Students must adhere to the guidelines of the George Mason University Honor Code (see: https://oai.gmu.edu/mason-honor-code/)

b. Students must follow the university policy for Responsible Use of Computing (see: http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/).

c. Students are responsible for the content of University communications sent to/from their George Mason University email account and are required to activate their account and check it regularly. All communication from the program will be sent to students solely through their Mason email account.

d. The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional
counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students’ personal experience and academic performance (see: http://caps.gmu.edu/).

e. Students with disabilities who need accommodations in a course must register with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester (see: http://ods.gmu.edu/).

f. University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing http://writingcenter.gmu.edu

g. Diversity and Religious Holidays https://catalog.gmu.edu

h. Student Privacy https://registrar.gmu.edu/students/privacy/

i. University Libraries http://library.gmu.edu

j. Family Education Rights and Privacy http://registrar.gmu.edu/privacy
**SCHEDULE:** Class schedule for this semester includes: (August 27 – December 19, 2018)

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<tr>
<th>WEEK</th>
<th>Topics</th>
<th>Assignments</th>
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| 1    | **INTRODUCTION**                                                       | Read Hughes – “Saving Prometheus”  
                                            Organize Team(s)/Group(s)  
                                            Read: Meadows – “Thinking in Systems” |
| 2    | PPT: IT Analyses  
                                            PPT: Management & Leadership Analyses  
                                            Best Practices   | **Team Rosters Due: 10% of Course Grade**  
                                            Read: Saving Prometheus / Thinking in Systems |
| 3    | Systems Management Complexities Lecture  
                                            Guest: Michael Niblack (7:45p-9:00p)   | IPR among Academia / Industry / Government  
                                            Discussion Board Activity |
| 4    | Analysis of Alternatives Lecture   | AoA in Systems Engineering Project Management  
                                            Discussion Board Activity |
| 5    | Group Presentation Collaboration   | Group SITREP Due (Post to Discussion Board)  
                                            Group Presentation Collaboration |
| 6    | IT/Leadership/Management Presentations  
                                            ATTENDANCE MANDATORY   | **Group Presentations Due: 40% of Course Grade** |
| 7    | **NO CLASSES: FALL BREAK**   | No action required |
| 8    | Capstone Paper/Journal Submission  
                                            Literature Review Lecture   | Library Journal Research  
                                            Research Collaboration / Capstone Paper Research |
| 9    | Topical Selection / Journal Selection Due   | Final Decision: Individual or Group Journal Projects |
| 10   | Conduct Research & Literature Review(s)  
                                            Library Journal Research  
                                            Research Collaboration / Capstone Paper Research |
| 11   | Conduct Research & Literature Review(s)  
                                            Library Journal Research  
                                            Research Collaboration / Capstone Paper Research |
| 12   | Conduct Research & Literature Review(s)   | **Literature Review Paper Due** |
| 13   | **NO CLASSES: Thanksgiving**   | No action required |
| 14   | Capstone Paper: Best Practices Lecture  
                                            Library Journal Research  
                                            Research Collaboration / Capstone Paper Research |
| 15   | Complete Capstone Paper/Journal Submission  
                                            Library Journal Research  
                                            Research Collaboration / Capstone Paper Research |
| 16   | Final Capstone Paper/Journal Submission  
                                            Final Grades Submitted: PatriotWeb   | **Capstone /Journal Papers Due: 50% of Course Grade**  
                                            Email final papers to: bpowers7@gmu.edu NLT 12.12.18 |

**Students should begin scholarly review early in support of Capstone Paper assignment. Appointments available to discuss individually or collectively, this Capstone Project.**