Maryland BMF Programs of Study

Capstone Guide

2012

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Capstone is defined by the American Heritage Dictionary (2009) as a "crowning achievement or final stroke, the culmination or acme". As the pinnacle of a student's academic experience they mark a unique opportunity for students to showcase their knowledge, skills, and abilities acquired during their time in an academic program through a comprehensive, intensive, and integrative individualized experience. In a capstone experience, students synthesize, integrate, and/or apply their previous knowledge, in a way that demonstrates mastery while building a deeper level of understanding. The student created products generated from the capstone experience should be designed to help assess crucial learning outcomes of the BMF completer program in which the student is enrolled. Additionally, demonstration of general education and/or interdisciplinary outcomes should also be evident in the capstone such as effective written and oral communication, critical thinking, information accessing and information processing, and problem solving (Buzzetto-More and Pinhey, 2007).

A capstone course is a transformative educational experience predicated on student-centered constructivist pedagogy. In a capstone course, the tutor is not the foci of erudition, rather there is a shift of responsibility as the instructor becomes a facilitator who guides the tutee on their self-charted scholarly expedition (Buzzetto-More, 2013).

Various incarnations of student capstone courses can be found in higher education, most commonly within undergraduate and graduate nursing, education, computing, engineering, and/or or business programs. While still considered an unusual occurrence in K-12 teaching and learning in the United States, recognition of the benefits of capstone experiences has been growing steadily, albeit slowly, during the past fifteen years.

The pioneer of public K-12 capstone experiences is the State of Rhode Island. Under the Rhode Island Diploma System, students demonstrate proficiency through multiple sources of evidence gathered over time. State assessment results count for no more than 10 percent of this evidence. Other factors considered include: portfolios, capstone projects, public exhibitions, and the State's Certificate of Initial Mastery. As the culminating achievement of a student's K-12 studies, the Rhode Island Capstone Project requires students to focus in-depth on a core question, the product of which plays an essential part in demonstrating that a student can meet applied learning standards, RI Grade Span Expectations, and other content standards (Rhode Island Skills Commission, 2012).

There are many different models for capstone course delivery and conducting these courses is a complex task. Clear, Goldweber, Young, Ledwig, and Scott (2001) addressed the complexity of creating, implementing and delivering a successful capstone experience. They explained that there are a number of important issues that need to be addressed. These questions include: Goals of the Course; Characteristics of Projects; Project Deliverables; Prerequisites and Preparation; Grading and Assessment; Administration and Supervision; and Reflection, Analysis and Review.

The concept of social constructivism was defined by Vygotsky (1978) referring to an individual's construction of meaning within a social context predicated on the idea that new knowledge is built upon prior knowledge forming new cognitive structures. When applied to teaching and learning it becomes constructivism, a theoretical educational concept that suggests that learning is most effective when students are actively engaged in a learning process that involves discovery, questioning, discussion, reasoning, judgment making, and idea and opinion formation (Buzzetto-More and Alade, 2006).

Capstone experiences are highly constructivist and almost always project based whereas project, or problem based learning, it is a constructivist form of instruction where students engage in critical thinking, synthesis, evaluation, multilayered decision making, goal setting, problem solving, and

collaboration (Page, 2006). Further, the exploratory and inquiry oriented nature of project based learning activities helps to build and/or reinforce information literacy skills (Buzzetto-More, 2009; Kuhlthau and Todd, 2007) where students demonstrate the ability to: plan, select sources, find and locate information, engage in critical analysis, apply multilayered decision making, and generate meaning (Page, 2006).

According to John Cook who discussed constructivist teaching practices and their role in motivating K-12 learners, in a constructivist learning experience "students are able to dialogue with their peers, other experts in the academic community or experts outside of education to solve problems" (p.1).

Capstone courses are inquiry oriented as students seek out knowledge, evaluate information, and synthesize meaning. Kuhlthau and Todd (2007) identified characteristics that they felt are inherent to well-crafted inquiry oriented instruction:

- Students learning through active engagement
- Students learn by building on what they already know
- Students need guidance to help them develop their higher order thinking skills
- Students development occurs in sequenced stages
- Students vary in their learning styles
- Student learn through symbolic interactions with others

Building upon these characteristics, they used their ideas to develop the Guided Inquiry Model (Kuhlthau and Todd (2007), a seven activity model involving:

    i.   Initiation
    ii. Selection
    iii. Exploration
    iv. Formulation
    v.   Collection
    vi. Presentation, and
    vii. Assessment

Specifically designed for K-12 schools is the Houghton Valley School Learning Journey Model which literally uses a journey as a metaphor for understanding inquiry based learning (Houghton Valley School, 2007). The model asks the learner to think of five questions:

1. Brainstorming- What do you already know?
2. Where am I going? – What do I want to find out (who, what, when, where, why, and how)?
3. How am I going to get there? –What information resources will I use? Reflecting and Planning.
4. My Travel log.-Keeping track of the journey.
5. So what? – Using the information purposefully.

In 2009 it was decided by the Maryland State Department of Education (MSDE), under the advisement of the MSDE's BMF State Advisory Committee, that a capstone experience would be added to the BMF high school completer programs in Maryland. A wide net was cast and a number of capstone courses in higher education business programs as well as community colleges were examined. Additionally, the capstone literature was reviewed. A comprehensive search was conducted in order to examine various, albeit limited, practices in capstone instruction in K-12 education, in particular the Memphis City Schools Capstone Project, Rhode Island Skills Commission Capstone Requirement, and the State of Tennessee Capstone Project were reviewed.The curriculum development team comprised of the MSDE

BMF Cluster Staffers and MSDE BMF Program Affiliate Director with input and advisement from the BMF State Advisory Council identified a number of best practices in capstone-based instruction, determining that the Maryland BMF Capstone Course would have the following attributes:

- Students involved in the integration and application of course concepts into a comprehensive project that bridges theory with practice individualized to their interests, strengths, and abilities with consideration of the content domain;

- Students involved in the application of higher-order thinking, meta-cognition, reflection, and problem-solving skills;

- A student-centered approach with teachers serving as guides that help facilitate, and not lead, student learning and where students serve as active participant in their learning process;

- Students required to develop time management, planning, and organizational skills ;

- Employ a community centered approach to supporting students;

- Involve a presentation and showcase component before a panel that evaluates the project;

- Employ the use of State-wide rubrics for student performance assessment.

Students involved in the integration and application of course concepts into a comprehensive project that bridges theory with practice;

Student capstone projects take many forms examples include comprehensive research papers, an electronic portfolio, professional marketing and/or business plans, entrepreneurial endeavors, consumer behavior report study, a financial analysis of a real or fictitious company, an internship experience that includes an analytical report, case studies, etcetera. Whatever the project, a capstone experience represents a culmination of a program of study and therefore must require a student to work at the highest possible level by integrating and applying advanced concepts. Teachers are required to discuss with students program learning objectives and major program concepts. Students must identify a core question or series of questions that they will explore as well as how this exploration will be conducted. Identification of the application of program learning objectives as well as how the capstone project will bridge theory with practice must be done before a student commences work on his/her capstone project. For quality assurance purposes, as well as to help students and teachers plan and structure capstone projects, students are required to prepare and submit a capstone proposal. Proposals requiring rework must be returned with a request for revision and resubmission. It is the responsibility of the capstone teacher to insure that students have proper guidance throughout this process.

Students involved in the application of higher-order thinking, meta-cognition, reflection, and problem-solving skills;

Higher order thinking requires students to employ elaboration, brainstorming, modification, associative thinking, attribute listing, metaphorical thinking skills. In the beginning of the course, students must be given opportunities to think critically about major program concepts through intellectual discourse, debates and other rhetorical exercises, simulations, and/or case studies. When selecting a project students are instructed to select a challenging core question. Teachers should guide students through the employment of higher order questioning where students are challenged to defend their position, evaluate consequences, assess task benefits, analyze information to determine relevance and usefulness, forecast/predict likely outcomes, and reflect on personal understanding and the meaningfulness of

activities. The Student Capstone Guide provides project examples and guidelines in order to insure that projects require students to engage in higher order thinking.

A student-centered approach with teachers serving as guides that help facilitate, and not lead, student learning

In a capstone course, the tutor is not the foci of erudition, rather there is a shift of responsibility as the instructor becomes a facilitator who guides the tutee on their primarily self-charted scholarly expedition. In a traditional learning environment, the teacher is the center of knowledge and serves as the authority from which the students are exposed to, and come to understand, content. A capstone course is far from traditional. In a capstone course, the instructor becomes a learning facilitator who assists students in the acquisition and building of new knowledge (Buzzetto-More and Pinhey, 2007). The capstone teacher supports without leading as he/she establishes the necessary structures for student success.

Instructional planning for a capstone teacher is also non-traditional with little need for daily lesson plans. When a school district requires ongoing lesson plans, then it is recommended that weekly or bi-weekly lesson plans are developed to reflect student learning activities, project progress, and any benchmarking that may occur during a specific timeframe.

How can ongoing assessment scores be generated from a capstone experience? The answer is the inclusion of a number of critical benchmarking activities along the way. These benchmarks serve as the ongoing course assessments while also helping students to stay organized and on track. Further, they give a teacher an opportunity to review student progress and provide meaningful formative feedback. Additionally, it was noted that while some benchmarks will be consistent for all students, others may be individualized to reflect the nature of a particular student's experiential learning project.

Traditional classroom-based instruction is heavily dependent of lectures. Capstone courses are not lecture based at the same time, teachers may want to incorporate limited lectures, important readings, group discussions, and supportive assignment work in order to support student learning.

Students are required to be an active participant in the learning process by selecting their topic, developing a project proposal, preparing a project timeline, and identifying all tasks they intend to complete. Teachers must provide the student with ongoing feedback as well as employ the art of questioning to help guide students.

Students required to develop time management, planning, and organizational skills

Through their participation in the BMF Capstone Course, students are required to develop time management, and organizational skills by preparing a project proposal that includes an activity timeline with benchmarks, and addresses all tasks to be completed and resources to be used. Students are responsible for staying on task and adhering to the schedule as planned. Teachers should use benchmarking to help students remain on schedule. During each benchmark a student submits or demonstrates progress. Additionally, among the criteria in which students are assessed is their ability to adhere to the schedule that they designed. It is expected that the project (which does not include class discussions, presentation preparation, etcetera) will reflect a <u>minimum</u> of 40 hours of concentrated effort on the student's behalf.

Employ a community based approach to supporting students

Counties are instructed that students should be supported by business discipline teachers as well as by professional business practitioners. Additionally, guidance from university, college, and/or community college faculty with content expertise and/or experience in capstone instruction is also a recommended practice.

For teachers in Maryland a best practice is to incorporate colleagues both from within the business discipline as well as from outside the discipline preferably representing core teaching areas. Additionally, external members of each counties business advisory group should also be incorporated.

Involve a presentation and showcase component before a panel that evaluates the project

While the faculty member who teaches the course is ultimately responsible for submitting students' course grades, most capstone projects are evaluated by a group of stakeholders in order to insure the validity of the assessment regime (Berheide, 2012, Buzzetto-More, 2010). For teachers in Maryland a best practice is to incorporate colleagues both from within the business discipline as well as from outside the discipline preferably representing core teaching areas. Additionally, external members of each counties business advisory group should also be incorporated.

Presentation of a completed project is considered an essential part of the Capstone experience. As capstone projects will vary tremendously, the style and content of the presentations will likewise vary. Students will be required to use PowerPoint to create and deliver professional presentations. Standards and requirements for student PowerPoint presentations are outlined in the student section of this guide.

Employ the use of State-wide Rubrics for student performance assessment.

The holistic rubric to be used across the State of Maryland for consistent evaluation of BMF student capstone products is included on the next couple of pages. While not required, rubric data can be collected and aggregated as part of a departmental/ program wide assessment regime (Buzzetto-More, 2007).

It is followed by the student guide. Please note, the guide is designed to inspire teachers and students with ideas as well as to provide minimal acceptable standards and requirements. The examples provided in the guide do not represent a list projects from which a student is required to select. Each project should be unique in some way and individualized to the learner as such while two students could conceivably be examining the same core question, it would not be acceptable for them to be working on identical projects.

Teaching a capstone course is an exciting and ever changing experience. It requires an ongoing and meaningful dialogue to occur between tutor and tutee, the unique nature of which stimulates learning in a way that is without parallel. As such, an enthusiastic and supporting attitude is paramount.

CRITERIA FOR EVALUATION OF CAPSTONE PROJECTS

Capstone Proposal	10%
Perceived Difficulty/Effort and Thoroughness of Project	10%
Writing	10%
Quality of Presentation	20%
Adherence to Proposed Deliverables & Schedule	10%
Overall Quality of Project	40%

CAPSTONE EVALUATION RUBRIC

TABLE 1: MARYLAND BMF CAPSTONE RUBRIC				
Expectations	Exceeds Expectations	Meets Expectations	Almost meet expectations	Unacceptable
Capstone Proposal	Clearly defines the core question & the learning activities. Skillfully demonstrates an understanding of the theoretical support for the project. Provides robust background information & justification. Methodology proposed logically supports the core question Skillfully analyzes a condition or situation of significance as the basis for exploration & reflection. Thoughtful & realistic timeline included.	Defines the core question & the learning activities. Demonstrates an understanding of the theoretical support for the project. Provides background information & justification. Methodology proposed supports the core question. Analyzes a condition or situation of significance as the basis for exploration & reflection. Timeline included.	Attempts to define the core question & the learning activities Demonstrates an attempt to theoretical support for the project. Some attempt to provide background information & justification. Presents a methodology for the project. Attempts to analyze a condition or situation of significance as the basis for exploration & reflection. Attempt to include timeline.	Components are either inadequate or missing
Perceived Difficulty/ Effort & Thoroughness of Project	The project is clearly challenging, requiring a sizable effort & commitment on the part of the student; is multifaceted & complex and will require the student to implement/explore multiple program concepts. The project is clearly represents a culmination of learning…	The project is challenging, & will require effort & commitment on the part of the student. The project is will require the student to implement/explore program concepts.	The project attempts to require the student to implement/explore program concepts. The project attempts to represents a culmination of the learning experience.	Components are either inadequate or missing
Writing	Skillfully uses precise & descriptive language that clarifies & supports intent & establishes an authoritative voice. Demonstrates consistent grammar, punctuation, mechanics, syntax, sentence structure, & spelling.	Uses language that clarifies & supports intent. Demonstrates control of grammar, usage, punctuation, mechanics, syntax, sentence structure, & spelling.	Attempts to use language that clarifies & supports intent. Attempts to control of grammar, usage, punctuation, mechanics, syntax, sentence structure, & spelling with errors evident.	Components are either inadequate or missing
Quality of Presentation (See separate grading criteria)	The presentation is professional in style, color, format, & overall design. Slides are neither be empty or cluttered. All required slides as identified are included. The presentation is clearly cited: The presentation is free from errors in spelling, grammar, word usage, & punctuation. The content is clear, complete, & demonstrates an ability to critically analyze concepts. Exemplary verbal & non-verbal skills are employed. The presentation is extemporaneous with any reading of content, indicating prior practice. Student wears professional attire.	Presentation is for the most part professional in style, color, format, & overall design; has citations & the work is not plagiarized. The presentation is mostly free from errors in spelling, grammar, word usage, & punctuation. The content is clear, & indicates an effort to analyze concepts. Appropriate verbal & non-verbal communications is employed. The presentation is extemporaneous. Student wears professional attire.	Presentation attempts to be professional. The presentation attempts to employ proper mechanics; however, errors are evident. Attempt is made to have content that is clear, & indicates an effort to analyze concepts. Attempt at appropriate verbal & non-verbal communications is employed.	Components are either inadequate or missing
Adherence to Proposed Deliverables & Schedule	Student continuously meets all project deliverables in accordance with planned timeline. Student is clearly able to organize his/her time appropriate to the project.	Student meets project deliverables in accordance with planned timeline. Student is usually able to organize his/her time appropriate to the project.	Student attempts to meet project deliverables. Student attempts to organize his/her time appropriate to the project.	Components are either inadequate or missing
Overall Quality of Project	Clearly defines the core question & the learning activities. Supports the core question with an analysis of	Defines the core question & the learning activities. Supports the core question	Attempts to define the core question & the learning activities. Attempts analyses. Attempts to	Components are either inadequate or

	relevant & accurate evidence. Elaborates on significance of new knowledge acquired or makes insightful connections to thesis/topic. Skillfully analyzes a condition or situation of significance as the basis for reflection. Makes connections between personal ideas & experiences & more abstract aspects of life, leading to new perspective or insights. Thoroughly maintains focus. Provides closure leaving the reader with something provocative to think about.	with analysis. Presents new knowledge acquired or makes connections to thesis/topic. Makes connections between ideas & experiences. Maintains focus. Provides conclusion.	present new knowledge acquired or makes connections to thesis/topic. Attempts to makes connections between ideas & experiences Attempts to remains focused. Conclusion attempted...	missing

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SUGGESTED RESOURCES

The Capstone Project: State of Tennessee (an amazing resource. Downloading the guide is highly recommended.
tnelc.org/DownloadFiles/CapstoneManual.doc · DOC file (cut and paste into your browser navigational pane)

Rhode Island Capstone Manual (a pioneer in high school capstone project integration this guide includes templates, tips, and suggestions) http://www.ride.ri.gov/highschoolreform/dslat/pdf/exh_050103.pdf

Memphis City Schools Capstone Manual http://www.mcsk12.net/schools/kingsbury.hs/site/documents/CapstoneManual091049.pdf

Helen Barrett's E-Portfolio Resource Pageshttp://electronicportfolios.org/myportfolio/versions.html and https://sites.google.com/site/eportfolioapps/online-tutorials-sites/sites-how-to and https://sites.google.com/site/eportfolioapps/online-tutorials-sites/sites-how-to

Weebly http://www.weebly.com/

Stock Market Game: http://stockmarketgame.org/

Virtual Enterprise International: http://veinternational.org/

Purdue Owl: http://owl.english.purdue.edu/

Research Paper Guide: http://www.ccc.commnet.edu/mla/index.shtml

Free Business Management Library online: http://managementhelp.org/relatedtopics/bizresearch-rlt.htm

Questgarden: http://questgarden.com/

EduBlogs: http://edublogs.org/

DECA Competitions (may spark ideas by looking at past competitions): http://www.deca.org/competitions/highschool/

BusSim Simulations: http://bussim.info/catalog.htm

Knowledge Matters Simulations: http://www.knowledgematters.com/

Maryland BMF Programs of Study

Capstone Guide

For Students

2012

STUDENT GUIDE TO THE CAPSTONE PROJECT

WHAT IS THE CAPSTONE PROJECT?

The Capstone project is a personally-designed independently conducted activity which enables you to further your knowledge/skill in one or more of the course topics which you have found or believe to be especially interesting or beneficial to you. Your capstone project provides you with a forum for analyzing, synthesizing, and implementing the skills and knowledge that you have gained throughout your education. It offers an opportunity to think critically about a subject of profoundinterest to you while you demonstrate that you have mastered a content area and can apply what you havelearned to create a tangible product or service.As you will be required to present your Capstone project before your fellow students, it will be necessary for you to create a PowerPoint presentation for end of the semester delivery. Students will learn many skills through the completion of a Capstone Project. Some skillsinclude complex problem solving, evaluation and synthesis of research, writing,communication, organization, time management, and presentation skills.

WHAT'S THE PURPOSE OF THE CAPSTONE?

The capstone is designed as a way for you to:

- Integrate and apply learned concepts into a single project.
- Take a significant step toward your educational and/or career goals. So choose a topic that relates to your goals and will look great on your resume.
- Research and work on a topic you care deeply about.
- Showcase your research skills and academic interests in anticipation of college or the job market.
- Learn and hone leadership and organizational skills as you work through the capstone process.

WHAT ARE THE ESSENTIAL INGREDIENTS OF EVERY CAPSTONE?

Choose a topic/core question that:

- Focuses on a topic/core question about which you feel passionate and committed.
- Demonstrates appropriate-to-the-subject research skills and methodologies.
- Results in a final project that will contribute to knowledge on the topic.
- Becomes a substantial final product.
- Includes a finished written component that will be placed in the library.
- Acts as a stepping stone toward your career or college goals.

HOW DO I SELECT MY CORE QUESTION/TOPIC

According to the Rhode Island Skills Commission Capstone Toolkit (2005, p. 2),

> "The core question should be open-ended and exploratory. It is a path to knowledge, which allows you to acquire knowledge and use that knowledge to solve problems. Your core question should focus on applied learning and works best when it is rooted in real-world issues. Your core question will lead you to the creation of an identifiable product that can be judged for how well it meets the applied learning and content standards you have chosen."

WHAT WILL MY CAPSTONE LOOK LIKE WHEN IT'S DONE?

Your prospectus should explain clearly what final product you plan to generate. The following examples provided in the guide are designed to inspire teachers and students with ideas as well as to provide acceptable standards and requirements. They do not represent a list of projects from which a student is required to select.

- Will it be a research study? With primary research you start with a focused research question, and then create the primary data that you analyze, interpret, and report. You could do a survey or a series of interviews. Carefully design the instrument by which you gather your primary data. Gather your data in a thorough and systematic way. Analyze your data to answer your research question. Secondary research requires you to gather knowledge that is not original, but you do something with it that hasn't been done before. Regardless of the research methodyou must address: Method: Describes in detail how the project was completed. This information allows the reader to evaluate the appropriateness of the methods used. Results: Describes what has been learned from the project. The Results section may have multiple subdivisions that clearly organize and present the material.Conclusions: An evaluation or interpretation of the results, in light of the original problem statement and supporting theory. What contributions to your topic have been made by this project? How has this project helped to resolve the original problem? What conclusions and theoretical implications can be drawn? Bibliography: All resources used to complete the project listed using correct format (APA, MLA, or Chicago style sheet, depending on your disciplines).

- You can also choose to put together a literature review with synthesis of knowledge. This means you answer your capstone question by reading, summarizing and synthesizing other people's research materials. Begin by writing an introduction that explains what question you're asking, why it's an important question to address and why a literature review is an appropriate approach. Plan to read approximately 10 scholarly articles, two or three recently published text, and no more than three creditable Web sites. At your prospectus meeting, reach an agreement with your committee on exactly how much reading you'll be required to do. As you write your final paper, demonstrate what you learned from each article, text and Web site by discussing similarities and differences in findings. Does there seem to be a consensus regarding your topic or question? Are there conflicting opinions or research results? Explain the significance of what you have learned from the readings in terms of clarifying your topic or question. Draw conclusions based on what you have learned. Discuss what you think is the best answer to your capstone question based on what you learned from your readings. Bibliography: All resources used to complete the project listed using correct format (APA, MLA, or Chicago style sheet, depending on your disciplines).

- You can choose to do a creative capstone project that brings something new into the world. For example, you may film a documentary covering a relevant topic, create a sample Website to promote an e-commerce endeavor, or another approved project includes a supporting document that explains what you're doing, why you're doing it and what research you did to bring it into being. Your paper should show how you've used the knowledge and skills you've learned in your three areas of emphasis, and should be formatted appropriately to your disciplines, including a complete bibliography citing your sources. (APA, MLA, or Chicago style).

- Business or Marketing Plan or other proposal. All plans and/or proposals must contain: Executive Summary, Vision orMission Statement, Milestones, Market Analysis, Competitive Analysis, Strategy, Products/Services, Strategic Positioning, Promotions/Publicity/Marketing/Sales (as applicable), Operations, Budget, Explanation of what you would hope to achieve through this initiative, how learned concepts are being applied, what you learned doing the project, and a complete bibliography. They must be detailed and cannot take the form of a PowerPoint Presentation as that would not be a substantive enough effort.

- Maybe you will take on an entrepreneurial design project where you develop, and initiate a small entrepreneurial endeavor. Document all your activities and include a supporting document that explains what you did and why, what you hoped to accomplish, how learned concepts are being applied, what you learned doing the project, how the business should be expanded, and a complete bibliography.Include the operating budget and profit and loss statement. This must be an individual and not a group experience and the entrepreneurial endeavor must be substantive.

- Case studiescan be very interesting. Why not select a particular issue, phenomena, or concept and locate and discuss several cases relevant for example if you were doing business ethics and accounting you may select Enron, Tyco, WorldCom, and Arthur Anderson to examine. You would then want to address: background information about the company(ies) involved, background of the problem, the prevailing ethical culture of the company that allowed the events to transpire, the actual events, any ethical compliance or other program that either were or were not in place, why the case is ethically relevant to explore, the ethical issues at stake, what are the long and short term ramifications of the events, what did you learn from the case, what could have prevented the events, what are your recommendations, and what are your personal reflections.

- Planning a work study experience? A capstone project can take the form of a detailed report and analysis coinciding with an internship experience. In this instance, a student would be required to develop a detailed history of the company; prepare an organizational chart; report on the major department/divisions and job descriptions of pertinent personnel; discuss company operations; address the products and/or services that the company offers; discuss the company's mission and whether the company is meeting the goals set forth; analyze the company's strategy, strategic positioning, and perform a competitive analysis; discuss the management structure and decision making strategies; and address the long term outlook for the company in the current economic climate. Students will also want to keep a detailed log of their internship activities; produce artifacts that demonstrate the application of knowledge in a practical professional setting and reflect on the meaningfulness of their experiences. Please note, a student cannot work at a school store and attempt to use this as an internship experience.

- Can a project that began as part of a CTSO competition be used? Yes, a project that began as a CTSO effort can be expanded and enhanced so as to become part of an individualized capstone experience. It will be crucial that any work produced as part of a group effort is clearly identified and the student will not get credit for the prior work done as part of a collaborative effort. Additionally, a specific set of substantive activities as well as a comprehensive paper or product to be produced around a core question or set of questions must be assigned.

- How about a simulation? There are a number of excellent business simulations available. The Stock Market Game for example involves students in a two month investment cycle where they invest a hypothetical $100,000 in NASDAQ, AMEX, and NYSElisted common stocks. Students can research stocks; discover how financial markets work; choose portfolios; manage budgets; follow companies in the news; and make decisions on whether to buy, sell, or hold.Students will need to maintain a detailed log of their activities; keep a reflective journal where they chronicle their portfolio's performance, trades and transactions made, their decisions, the ramifications of their decisions, what economic factors are impacting the performance of their stocks, any additional internal and external factors impacting performance, etcetera.

- Interested in a virtual enterprise? Virtual Enterprises International is a trademark of the New York City Department of Education. A Virtual Enterprise (VE) is a simulated (virtual) business that is set up and run by students with the guidance of a teacher/facilitator and a business partner. This program allows students to experience, in a simulated business environment, all facets of being an employee in a firm. The Virtual Enterprise involves students in every aspect of a business, including human resources, accounting, product development, production, distribution, marketing, and sales. The difference between a Virtual

Enterprise and an actual business is that no goods are produced nor actual currency exchanged. The transfer of virtual funds is made electronically through a web-based simulated banking system, provided by the New York City Department of Education that links all U.S. firms with each other and with the rest of the world. Students will need to maintain a detailed log of their activities, and maintain a reflective journal.

- Will you select the extended essay? An extended essay is a 4,000-5,000 word written product. Under the supervision of a faculty mentor, the student conducts extensive research and produces the formal written paper, which is externally assessed.

- Like event planning and project management? Take responsibility for all aspects of planning and organizing a significant event or activity from concept to completion, making good use of the resources of people, time, money, materials and facilities. This event must include content standards, relate to program learning objectives, include an activity log, a reflective journal, a professional plan developed before undertaking the event, and be accompanied by a paper that provides an expected and actual budget, performance analysis, explains how the project linked to core learning outcomes, description of what was learned as a result of the event, evaluation of the decisions made and the effectiveness of each decision, etcetera.

- An e-portfolio may be your choice. An e-portfolio is an organized compilation that demonstrates knowledge, skills, values, and/or achievements and that includes reflections or exegesis which articulate the relevance, credibility, and meaning of the artifacts presented (Buzzetto-More, 2011). E-portfolios have been shown to be a valid way to document student progress, encourage greater student involvement in the learning process, showcase work samples, and provide learning outcomes assessment and curriculum evaluation. Built around the learning goals of the completer program a student generates his/her e-portfolio either using a valid e-portfolio tool such as LiveText or the Mahara, or by creating and maintaining a wiki, or through the development of a voice thread (PowerPoint is too simplistic for this effort). You will be entering or selecting the learning goals, locating and importing artifacts (at least three with four preferred per learning goal), authoring reflections, preparing the look and layout of your portfolio, and inviting guests to view and evaluate your portfolio. Reflections provide crucial insight into your understanding. You must have one reflection per learning goal. Your reflections must be a minimum of 1000 words and no more than 2,000 words. Please refer to the word count feature in MS Word.

Reflections must explain in a thorough, lucid, and professional manner the following:
- Your understanding and impression of the learning objective in question,
- The meaningfulness of the learning goal,
- How your interpretation of the learning goal has changed over time,
- A description of each artifact that includes how, and why, you selected this particular artifact,
- How, and why, the artifacts you have selected demonstrate mastery of the particular learning goal,
- The strengths and weaknesses of your selections,
- Your strengths and weaknesses with respect to the learning goal, and
- How the learning objective will relate to you professionally and/or academically in the future in your career (feel free to give examples).

Finally, you must also include a 3-4 page personal paper (Times New Roman Font 12, 2 line spaced, 1 inch margins) where you discuss:

- what you have learned in during your time in the program,
- how you have grown as a student and as a professional (and what experiences have contributed to this growth),
- your strengths and weaknesses,
- how you plan on improving your strengths and eliminating your weaknesses,

- whether you plan on seeking employment or attend college in your area of concentration,
- your college goals and career long and short term goals
- how prepared you feel to enter either higher education or the workforce,
- your immediate plans after graduation,
- your five year plan,
- what you have learned by completing your e-portfolio(s),
- what experiences have most shaped your perceptions of the business world
- your reflections on your time in high school

Need more examples? An accounting completer has a number of options. Here are just two examples

- Assess the financial condition and operating results of a real or fictitious company using MS Excel by analyzing and interpreting financial statements using the appropriate ratios, forecasting the future, and making recommendations to company executives. Include the following: Acid Test, Price Earnings Ratio (PPE), Working Capital Ratio, Inventory Turnover Ratio, Ratio of PPE to Long Term, Liabilities, and Ratio of Stockholders Equity. Include a supporting document that explains what you did and why, what you found during your analysis, how learned concepts are being applied, your recommendations for the future of the company, and a complete bibliography.

- Discuss the following factors in computing depreciation: cost, residual value, depreciable cost, and estimated useful life. Explain the concept of revising depreciation rates and how this works. Set up a basic depreciation schedule in MS Excel, defining each element of the schedule (cost, annual depreciation, accumulated depreciation, and carrying value).Perform necessary accounting procedures to dispose of Property, Plant and Equipment. Include a supporting document that explains what you did and why, how learned concepts are being applied, your recommendations for the future of the company, and a complete bibliography.

It is important to reiterate that a capstone project represents a culmination of a program of study. A project must require a student to work at the highest possible level by integrating and applying advanced concepts.

WHAT STEPS ARE INVOLVED IN THE CAPSTONE PROJECT?

1.Review program materials and select a topic.
Select a topic you find to be believe to be especially interesting or beneficial to you in your future academic/career life.

2. Determine and identify the learning product and means by which you will advance your knowledge/skill levels.
  You must advance your knowledge/skill level beyond that normally expected in the course. It is expected that the project will reflect a minimum of 40 hours of concentrated effort on your behalf.

3. Prepare a brief (2-3 page) capstone project proposal.
  The proposal must …

  o   clearly identify the topic you have chosen, and
  o   describe the learning product, and
  o   describe the means by which you will advance your knowledge/skill levels in the topic you have chosen
  o   describe the deliverables products that will be submitted at the end of the semester include a schedule and detailed timeline for the submission of deliverables
  o   with the help of you teacher identify and describe benchmarks that will be completed and reviewed along the way

4. Submit by your capstone project proposal for consideration and approval by the specified due date.
Note, proposals requiring rework will be returned with a request for revision and resubmission. It is essential for you to work diligently and early to create an acceptable capstone project.

5. Once your proposal has been approved, prepare a task sheet and final timeline/schedule of deliverables with your instructor. work toward the completion of your approved project activity throughout the remainder of the semester.

6. Submit your project various benchmarks/work-in-progress activities or reports by the specified due dates.

7. Develop a MS PowerPoint of your experience by the specified due date.

8. Submit your completed project. Receive feedback from you teacher and make modifications as needed.

9. Present your completed project to your peers

10. Formal presentation and exhibition to review panel

CAPSTONE PRESENTATION GUIDELINES

Presentation of your completed project is considered an essential part of the experience. As projects will vary tremendously, the style and content of the presentations will likewise vary. You will however, be required to utilize a computer-based presentation package to create and deliver your presentation. The use of Microsoft PowerPoint 2010 is required. Your presentation should last 10-15 minutes.

Using Microsoft PowerPoint, create a new presentation consisting of the following slides at a minimum:

- Title/Topic slide that Identifies the Title/Topic of your project and the course title and your name.
- Table of Contents Slide
- Executive Summary Slide
- Project Description Slide
- Problem Slide (what problem were you trying to solve)
- Goals Slide
- 3 Process/Methodology Slides
- Relevance Slide (relates your project to key program concepts)
- 5Results Slides (what happened and/or what were your findings)
- Outcomes Slide Identifies all significant outcomes (i.e., what was and was not accomplished).
- Lessons Learned Slide Identifies the lessons you learned in completing the project
- Recommendations Slide recommendations
- Bibliography

Other Requirements
- A theme applied (use the design tab)
- A slide number footer justified to the right that does not apply to the title slide (use the insert tab)
- A centered footer with your name (that does not apply to the title slide)
- A table of contents slide with hyperlinks added to coordinating slides
- At least four slides that contain pictures, tables, charts, or smart art diagrams
- External Hyperlinks
- References on the final slide with proper APA formatting

Remember, your slides should contain only an outline and you should elaborate on each point as you present.

POWERPOINT PRESENTATION GRADING CRITERIA:

- Professional: The presentation should be professional in style, color, format, and overall design. Slides should neither be empty or cluttered. All required slides as identified are included.
- Properly Cited: The presentation must be cited and the work should not be plagiarized
- Mechanics: The presentation should be free from errors in spelling, grammar, word usage, and punctuation.
- Content: The content should be clear, complete, and indicate an effort to critically analyze concepts.
- Delivery: Appropriate verbal and non-verbal communications is employed. The presentation is extemporaneous with no reading of content. Student wears professional attire. Delivery indicates student practice presentation in advance of delivery.

HOW WILL MY CAPSTONE BE GRADED?

CRITERIA FOR EVALUATION OF CAPSTONE PROJECTS

Capstone Proposal	10%
Perceived Difficulty/Effort and Thoroughness of Project	10%
Writing	10%
Quality of Presentation	20%
Adherence to Proposed Deliverables& Schedule	10%
Overall Quality of Project	40%

MARYLAND BMF CAPSTONE RUBRIC				
Expectations	**Exceeds Expectations**	**Meets Expectations**	**Almost meet expectations**	**Unacceptable**
Capstone Proposal	Clearly defines the core question & the learning activities. Skillfully demonstrates an understanding of the theoretical support for the project. Provides robust background information & justification. Methodology proposed logically supports the core question Skillfully analyzes a condition or situation of significance as the basis for exploration & reflection. Thoughtful & realistic timeline included.	Defines the core question & the learning activities. Demonstrates an understanding of the theoretical support for the project. Provides background information & justification. Methodology proposed supports the core question. Analyzes a condition or situation of significance as the basis for exploration & reflection. Timeline included.	Attempts to define the core question & the learning activities Demonstrates an attempt to theoretical support for the project. Some attempt to provide background information & justification. Presents a methodology for the project. Attempts to analyze a condition or situation of significance as the basis for exploration & reflection. Attempt to include timeline.	Components are either inadequate or missing
Perceived Difficulty/ Effort & Thoroughness of Project	The project is clearly challenging, requiring a sizable effort & commitment on the part of the student; is multifaceted & complex and will require the student to implement/explore multiple program concepts. The project is clearly represents a culmination of learning...	The project is challenging, & will require effort & commitment on the part of the student. The project is will require the student to implement/explore program concepts.	The project attempts to require the student to implement/explore program concepts. The project attempts to represents a culmination of the learning experience.	Components are either inadequate or missing
Writing	Skillfully uses precise & descriptive language that clarifies & supports intent & establishes an authoritative voice. Demonstrates consistent control of grammar, usage, punctuation, mechanics, syntax, sentence structure, & spelling.	Uses language that clarifies & supports intent. Demonstrates control of grammar, usage, punctuation, mechanics, syntax, sentence structure, & spelling.	Attempts to use language that clarifies & supports intent. Attempts to control of grammar, usage, punctuation, mechanics, syntax, sentence structure, & spelling with some errors clearly evident.	Components are either inadequate or missing
Quality of Presentation (See separate grading criteria)	The presentation is professional in style, color, format, & overall design. Slides are neither be empty or cluttered. All required slides as identified are included. The presentation is clearly cited: The presentation is free from errors in spelling, grammar, word usage, & punctuation. The content is clear, complete, & demonstrates an ability to critically analyze concepts. Exemplary verbal & non-verbal skills are employed. The presentation is extemporaneous with any reading of content, indicating prior practice. Student wears professional attire.	Presentation is for the most part professional in style, color, format, & overall design; has citations & the work is not plagiarized. The presentation is mostly free from errors in spelling, grammar, word usage, & punctuation. The content is clear, & indicates an effort to analyze concepts. Appropriate verbal & non-verbal communications is employed. The presentation is extemporaneous. Student wears professional attire.	Presentation attempts to be professional. The presentation attempts to employ proper mechanics; however, errors are evident. Attempt is made to have content that is clear, & indicates an effort to analyze concepts. Attempt at appropriate verbal & non-verbal communications is employed.	Components are either inadequate or missing
Adherence to Proposed Deliverables & Schedule	Student continuously meets all project deliverables in accordance with planned timeline. Student is clearly able to organize his/her time appropriate to the project.	Student meets project deliverables in accordance with planned timeline. Student is usually able to organize his/her time appropriate to the project.	Student attempts to meet project deliverables. Student attempts to organize his/her time appropriate to the project.	Components are either inadequate or missing
Overall Quality of Project	Clearly defines the core question & the learning activities. Supports the core question with an analysis of relevant & accurate evidence. Elaborates on significance of new knowledge acquired or makes insightful connections to	Defines the core question & the learning activities. Supports the core question with analysis. Presents new knowledge acquired or makes connections to thesis/topic.	Attempts to define the core question & the learning activities. Attempts analyses. Attempts to present new knowledge acquired or makes connections to thesis/topic. Attempts to makes connections	Components are either inadequate or missing

	thesis/topic. Skillfully analyzes a condition or situation of significance as the basis for reflection. Makes connections between personal ideas & experiences & more abstract aspects of life, leading to new perspective or insights. Thoroughly maintains focus. Provides closure leaving the reader with something provocative to think about.	Makes connections between ideas & experiences. Maintains focus. Provides conclusion.	between ideas & experiences Attempts to remains focused. Conclusion attempted...	

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