MIS480: Capstone - Business Analytics and Information Systems

Credit Hours: 3
Contact Hours: This is a 3-credit course, offered in accelerated format. This means that 16 weeks of material is covered in 8 weeks. The exact number of hours per week that you can expect to spend on each course will vary based upon the weekly coursework, as well as your study style and preferences. You should plan to spend 10-25 hours per week in each course reading material, interacting on the discussion boards, writing papers, completing projects, and doing research.

Course Description and Outcomes

Course Description:
This capstone course provides students with the opportunity to demonstrate competency on the key domains of business analytics. Students will integrate knowledge gained throughout the program—including leadership and management principles, business policy and strategy, information systems analysis and design, database concepts, big data and cloud computing, data mining, and statistics—to complete capstone assignments in this course.

Course Overview:
In this capstone course, you will complete capstone assignments that address the program outcomes for the Bachelor of Science in Management Information Systems. There is no textbook for this course; your required reading for each week includes two journal articles and the module lecture, which will orient you to the material covered in that week’s capstone assignment. The course begins with an exploration of resume building and career planning. In Modules 2-7, you will have the opportunity to demonstrate what you learned throughout the management information systems program by applying leadership, critical thinking, problem-solving, and creativity skills to real-world situations. In the last module of the course, you will complete a resume and career plan.

Course Learning Outcomes:
1. Develop a resume and career plan.
2. Navigate the CSU-Global career center.
3. Apply managerial and business processes to information systems.
4. Conduct systems analysis to manage complex projects.
5. Design business intelligence solutions to meet organizational objectives.
6. Analyze complex data to support strategic decision-making.

Participation & Attendance

Prompt and consistent attendance in your online courses is essential for your success at CSU-Global Campus. Failure to verify your attendance within the first 7 days of this course may result in your withdrawal. If for some reason you would like to drop a course, please contact your advisor.

Online classes have deadlines, assignments, and participation requirements just like on-campus classes. Budget your time carefully and keep an open line of communication with your instructor. If you are having technical problems, problems with your assignments, or other problems that are impeding your progress, let your instructor know as soon as possible.
Textbook Information is located in the CSU-Global Booklist on the Student Portal.

Course Schedule

Due Dates
The Academic Week at CSU-Global begins on Monday and ends the following Sunday.

- Discussion Boards: The original post must be completed by Thursday at 11:59 p.m. MT and Peer Responses posted by Sunday 11:59 p.m. MT. Late posts may not be awarded points.
- Capstone Assignments: Assignments are due Sunday at 11:59 p.m. MT.
- Live Classroom: Although participation is not required, Live Classroom sessions are held during Week 2 and Weeks 5 or 6. There are two total sessions.

<table>
<thead>
<tr>
<th>Week #</th>
<th>Readings</th>
<th>Assignments</th>
</tr>
</thead>
</table>
| 1      | Module Content  
| 2      | Module Content  
| 3      | Module Content  
Capstone Assignment (100 points) |
| 4      | Module Content  
Live Classroom (0 points) |
| 5      | Module Content  
Capstone Assignment (125 points) |
| 6      | Module Content  
Assignment Details

This course includes the following assignments/projects:

Module 1

CPC-Based Comprehensive Exam—Introduction

From now through Week 7 of this course, CSU-Global will be conducting a program assessment called the Common Professional Component (CPC)-based Comprehensive Exam, provided by Peregrine Academic Services. The purpose of this exercise is to provide CSU-Global with data that will help assess the quality of its academic programs, so that the school can improve its program content and provide the best possible educational experience for all students. Because this is an assessment of the quality of CSU-Global programs, and not an assessment of individual student performance, there is no need to prepare for this exam. This exam must be completed in one sitting, and we do ask that you complete the exam to the best of your ability. You will receive 50 points for completing the exam; these points are a part of the total points for this course. This assignment will be reflected in your grade book.

Upon completion of the exam, you will receive a PDF-downloadable certificate (sent to your CSU-Global email account from Receipt@PeregrineAcademics.com). To receive the 50 points for this exam, you must upload the certificate to the appropriate dropbox on the Week 7 Assignments page.

You can complete the CPC-based Comprehensive Exam at any time during Weeks 1 through 7. For exam content and requirement-related questions, please review the Week 7 Assignments page and the exam FAQ information here.

Thank you in advance for taking this exam and helping CSU-Global sharpen its program content and delivery!

RESUME AND CAREER PLAN:

For this course, you will develop a resume and career plan. Although the assignment is not due until the end of Week 8, you should begin working on it this week and continue working on it throughout the course. For complete information about the assignment and its requirements, review the Week 8
Module 2

**Capstone Assignment: Data Evaluation for Decision Making (100 Points)**

Successful, fact-based managerial decision-making depends, in part, on identifying sources of relevant information that are suitable for analysis. However, even with the most suitable information, bias can compromise your decision-making process.

For this assignment, you will assume the role of a manager and discuss how you would apply the “CRAP Test,” or other respected evaluation technique(s) you will cite, to determine the suitability of data from your IT system for use in making a key decision. In the event you have not had such an experience, assume the role of a big-ticket-item purchaser evaluating Open Data and other public data sources to make your purchase decision.

Then consider how you would use the team you manage to assist you in eliminating bias from that key decision. In the event you are evaluating a big-ticket-item purchase, consider how you would use friends, including those from social media, to help you eliminate decision-making bias.

Develop a well-written and well-organized paper that includes the following elements:

- Describe the key decision you must make and the kind of information you would need to perform your evaluation.
- Discuss how you determined whether the information at hand for decision-making was sufficient, in both quality and quantity. Which tests did you apply and what were the results?
- Discuss the biases present in your decision-making process. How did your colleagues, subordinates, or friends participate in your bias-elimination quest and what were the results?
- Discuss the outcome of the evaluation and indicate the decision that you made.

You may write in the first person for this assignment, taking the perspective of a manager. Your paper should meet the following requirements:

- Be 3-4 pages in length
- Cite at least two academic sources from the CSU-Global Library databases
- Be formatted according to the CSU-Global Guide to Writing and APA Requirements

Module 3

**Capstone Assignment: Requirements Gathering and Structuring (100 Points)**

You are an IT manager tasked with assisting your business colleague stakeholders to acquire a new internet-based “order-to-cash” sales system. You are new to this organization and will start this software acquisition process with a clean slate.

Develop a well-written and well-organized paper that addresses the following:

- With offshore and ERP in mind, outline your approach to gathering and structuring requirements for this new system, including which roles you plan to engage and how you plan to collect, validate, and represent the requirements you elicit.
- Considering the offshore and ERP approaches, will you perform data modeling as part of your requirements gathering and structuring process? Will you include process models, such as data flow diagrams? What about human interface specifications? How will you balance the requirements effort?
Discuss alternatives and defend your decisions on what you include in your requirements specification.

You may write in the first person for this assignment, taking the perspective of an IT manager. Your paper should meet the following requirements:

- Be 3-4 pages in length
- Cite at least two academic sources from the CSU-Global Library databases
- Be formatted according to the CSU-Global Guide to Writing and APA Requirements

Module 4

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Project Feasibility Analysis (100 Points)

For this assignment, you are a project manager. Your management has asked you to plan a project to develop an online shopping application to run on the newest model of the Blackberry smartphone. You know Blackberry has had its challenges in the marketplace, and this causes you concern.

Develop a well-written and well-organized paper that addresses the following:

- Discuss how your organization selected this project for further consideration. Be sure to include an overview of how decision rights are allocated.
- Perform a feasibility analysis for this application development project, indicating for each risk:
  - The likelihood that the risk will materialize
  - The magnitude of its impact
  - Risk avoidance, mitigation, and transference approaches.
- Based on your feasibility analysis, give your recommendation for how this project should proceed.

You may write in the first person for this assignment, taking the perspective of the PM. Your paper should meet the following requirements:

- Be 3-4 pages in length
- Cite at least two academic sources from the CSU-Global Library databases
- Be formatted according to the CSU-Global Guide to Writing and APA Requirements

Option #2: Project Feasibility and Planning (100 Points)

Your management has decided to have you, the project manager, perform a proof of concept project for a Blackberry online shopping application.

For this assignment, develop a well-written and well-organized paper that addresses the following:

- Your concerns about technical and schedule feasibility, given the challenges Blackberry has experienced in recent years.
- Your approach to examining and elucidating both of these concerns in a proof of concept. Describe the project using key project planning documents.

You may write in the first person for this assignment, taking the perspective of the PM. Your paper should meet the following requirements:

- Be 3-4 pages in length
- Cite at least two academic sources from the CSU-Global Library databases
Module 5

Capstone Assignment: Finding Quality Data (125 Points)

You are an internal data management consultant. Your organization wishes to “know its customer” much better in order to improve customer satisfaction and identify up-sell and cross-sell opportunities. Leadership has asked for your advice on a roadmap for this purpose.

Develop a well-written and well-organized paper that addresses the following:

- How you will find the appropriate sources of record for customers in the organization and gain access to them
- How you will assess the quality of the data in candidate sources of record
- How you will provide a proof of concept for a single view of a customer
- Your recommendation and justification for a pilot project data architecture, which will provide insights into historical and up-to-the-minute activities for any given customer

You may write in the first person for this assignment, taking the perspective of the internal data management consultant. Your paper should meet the following requirements:

- Be 3-4 pages in length
- Cite at least two academic sources from the CSU-Global Library databases
- Be formatted according to the CSU-Global Guide to Writing and APA Requirements

Module 6

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Business Intelligence Dashboard (125 Points)

For the Module 5 capstone assignment, you provided a roadmap to help your organization “know its customer” better. Now, management needs your help in designing an operational BI dashboard that combines information from in-store sales and website conversion activity.

For this assignment, develop a well-written and well-organized paper that addresses the following:

- The differences between an operational BI dashboard and an analytical dashboard
- Your approach to tracking the effect of a website coupon offer to be redeemed with an in-store purchase
- Your approach to tracking the impact of a new online display advertisement for website purchases
- Your approach to collecting and displaying near real-time shopper satisfaction survey results from shoppers’ mobile phones

You may write in the first person for this assignment, taking the perspective of the internal data management consultant. Your paper should meet the following requirements:

- Be 3-4 pages in length
- Cite at least two academic sources from the CSU-Global Library databases
- Be formatted according to the CSU-Global Guide to Writing and APA Requirements

Option #2: Self-Service Analytics and Visualization (125 Points)
Your organization has an English-language commerce website. Your manager has asked you, a business intelligence consultant, to use self-service analytics and visualization to determine the need for commerce websites in other languages.

For this assignment, develop a well-written and well-organized paper that addresses the following:

- Your null and alternative hypotheses about alternative-language commerce sites
- Your approach to analyzing website visitor information to determine how many non-English language visitors arrived at the site, and how many converted. Which information did you use to classify a visitor as English-speaking or non-English speaking? Defend your choice.
- Your design for a simple test on the English-language website to confirm potential interest in an alternative-language site. How would you analyze the results of the test to inform your analysis of the value of an alternative-language commerce site?

You may write in the first person for this assignment, taking the perspective of the business intelligence consultant. Your paper should meet the following requirements:

- Be 3-4 pages in length
- Cite at least two academic sources from the CSU-Global Library databases
- Be formatted according to the CSU-Global Guide to Writing and APA Requirements

Module 7

CPC-Based Comprehensive Exam (50 Points)

The Common Professional Component (CPC)-based Comprehensive Exam is an assessment that measures the foundational knowledge areas of the following programs: Business Finance, Business Integration & Strategic Management, Economics, Information Management Systems, Legal Environment of Business, and Management. The exam is conducted by Peregrine Academic Services, and the exam data will help CSU-Global assess the quality of its academic programs so that the school can improve its programs and provide the best possible educational experience for all students. This is not an individual assessment of knowledge, so there is no need to prepare for this exam. But, take your time and do your best. You have three hours (180 minutes) to complete the exam, though most students are able to finish it in 90-120 minutes. You must complete the exam in one sitting, but you are allowed two 15-minute breaks. Additionally, you will not receive an individual grade based on how well you do on the exam, but you will receive 50 points for completing it. These 50 points will factor in as part of your total course grade.

Before starting, read the Frequently Asked Questions document (available on the Week 7 Assignments page) for more information about this exam.

Important tips before you access the self-registration page:

- Make sure you allow yourself enough time to complete the exam. It contains 60 questions, and you have a total of three hours to complete it, which is an average of about three minutes per question. (While you may not need the full three hours to take the exam, we recommend allowing at least 120 minutes.)
- **This is a timed exam.** You are allowed two 15-minute breaks. If you need a break, you will have the option to do so after finishing the question you are currently working on. Your exam-time will pause and a break timer will begin; you may resume your exam within that 15-minute period when you are ready or, when that 15-minutes period is up, your exam will resume automatically.
- Any technical issues or “locked out” issues need to be addressed through the Peregrine support team, available here: Support@PeregrineAcademics.com
Once you have completed the exam, you will receive a confirmation email and PDF certificate. Download and save the certificate to your computer. To receive credit for taking the exam, you must upload the certificate you received to the appropriate dropbox on the Week 7 Assignments page.

Steps for Self-Registration:

To self-register, have the following information ready:

- Your CSU-Global email address
- Your Student ID # (to locate, click Student Information on your portal dashboard)
- Your degree program
- Your term (such as Spring-A, Winter-C, Fall-B)
- The assessment password: CSUG-1001

To begin the self-registration process, access the Peregrine Academic Services page for CSU-Global using the following link, and follow the instructions provided there:

http://www.peregrineacademics.com/csu-global

The registration process should take about five minutes to complete. Upon completion of your registration you will receive a confirmation email with your exam/course link for taking the exam.

If you have any problems regarding the registration process, visit the Peregrine technical support page at:
http://www.peregrineacademics.com/support.

Thank you for your efforts in helping CSU-Global ensure the highest quality of its academic programs!

**Capstone Assignment: Data Mining and Data Visualization (125 Points)**

Your organization has amassed two years of sales data from its brick-and-mortar and web channels. Management has no idea how to make sense of this yet untapped asset and has asked for your help. As a budding data scientist, you will give them your insights.

Develop a PowerPoint presentation (or the equivalent) complete with a handout that together address the following:

- Present the concept that patterns may exist in the data that are waiting to be discovered.
- Discuss possible insights that analyzing the mass of data might reveal.
- Compare and contrast the results of using pattern discovery and a traditional BI analytics dashboard.
- Defend your idea of data visualization as a rapid, yet effective, approach to finding patterns of interest. Why are we humans especially well-suited to using visualization?
- Present and explain some successful data visualization projects conducted by others.

You should write in the third person for this assignment, and your slideshow should meet the following requirements:

- Include at least 10 slides
- Cite at least one academic source from the CSU-Global Library databases
- Be formatted according to the **CSU-Global Guide to Writing and APA Requirements**

Your handout should meet the following requirements:

- Be no more than two pages in length
- Cite at least one academic source from the CSU-Global Library databases
ETS Proficiency Profile Assessment (50 points)

Take the ETS Proficiency Profile before midnight of Week 7. The ETS Proficiency Profile is a 36-question exam that measures critical thinking, reading, writing, and mathematics. You will not receive a grade for how you do on the exam, but will receive 50 points for completing it. The purpose of this exercise is to provide data to CSU-Global that will help improve courses, curriculum, and instructional practices.

A couple of tips before you get started:

1. Make sure to allow at least 40 minutes to complete the exam.
2. The exam can only be completed using the Internet Explorer browser on a PC. Mac users will have to find access to a PC.
3. Remember to use your CSU-Global email (first.last@csuglobal.edu) address when/if prompted.
4. Have your CSU-Global student six-digit ID number (not SSN) ready.
5. The session number for the exam is: 63312-8585174.

Click here to download detailed instructions for completing the exam.

When you are ready, access the exam by clicking the following URL:

http://proficiencyprofile.ets.org

Program Completer Survey (25 points)

Please complete and submit the Program Completer Survey. This 29 question survey replaces the Module 7 Discussion and is worth 25 points. Begin the survey by clicking on the “Start Survey” button below. Be sure to complete and submit the entire survey.

In order to receive the points associated with this assignment:

1. Click the “Submit” button.
2. Click “Print Screen” on the completion screen to which you are taken.
3. Save a copy of the screenshot.
4. Submit a copy of the screenshot to the Module 7 assignments area.

Module 8

Resume and Career Plan (100 points)

For this assignment, you will be submitting two separate documents—a resume and a career plan—each worth 50 points. You may base these documents on your own personal information or on fictional information, thereby keeping your personal information private. Either is an acceptable choice and you will not be graded based on whether you choose to submit actual or fictional information. The purpose of this assignment is to give you experience developing both a resume and a career plan. If you choose to use fictional information, you can then use what you’ve learned in this assignment to help you develop your own personal resume and career plan. If time permits, you can even develop your real
resume and career plan and the fictional ones for the assignment simultaneously. If you have any questions or concerns about this assignment, please contact your instructor as early in the course as possible so they can be addressed. You will submit both parts separately.

Following are the specific requirements for each component of this assignment:

**Resume**
Find a posting for a job that currently interests you and for which you are qualified. Using either your own information or fictional information, create a resume tailored to this job description. If you are creating this resume for a fictional person, you can feel free to add skills, experiences, or qualifications that you do not possess, in addition to creating fictional contact information, a fictional educational background, etc.

You may choose whatever type of resume seems most appropriate. Your resume should include the following elements:

- Contact information
- Qualifications
- Education
- Experience/History

You may also choose to include additional elements as appropriate and needed. Before submitting your resume, use the Capstone Resume Checklist and have at least one person read through it and check for errors in spelling, grammar and formatting. When you have the final version of your resume, convert it to a PDF format to submit for grading.

**Career Plan**
Using the Career Plan Template, develop a career plan either for yourself or for a fictional person. The information in the career plan should be as specific as possible, even if you are developing it for a fictional person. You should fill out every section of the Career Plan Template.

Your final career plan submission should be well written and free of errors.

**Course Policies**

**Course Grading**
- 5% CPC-Based Comprehensive Exam
- 5% ETS Proficiency Profile
- 12.5% Discussion Participation & Survey
- 0% Live Classroom
- 67.5% Capstone Assignments
- 10% Resume and Career Plan

**Grading Scale and Policies**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>95.0 – 100</td>
</tr>
<tr>
<td>A-</td>
<td>90.0 – 94.9</td>
</tr>
<tr>
<td>B+</td>
<td>86.7 – 89.9</td>
</tr>
<tr>
<td>B</td>
<td>83.3 – 86.6</td>
</tr>
<tr>
<td>B-</td>
<td>80.0 – 83.2</td>
</tr>
<tr>
<td>C+</td>
<td>75.0 – 79.9</td>
</tr>
<tr>
<td>C</td>
<td>70.0 – 74.9</td>
</tr>
<tr>
<td>D</td>
<td>60.0 – 69.9</td>
</tr>
<tr>
<td>F</td>
<td>59.9 or below</td>
</tr>
</tbody>
</table>

**In-Classroom Policies**
For information on late work and incomplete grade policies, please refer to our In-Classroom Student Policies and Guidelines or the Academic Catalog for comprehensive documentation of CSU-Global institutional policies.
Academic Integrity
Students must assume responsibility for maintaining honesty in all work submitted for credit and in any other work designated by the instructor of the course. Academic dishonesty includes cheating, fabrication, facilitating academic dishonesty, plagiarism, reusing/re-purposing your own work (see CSU-Global Guide to Writing and APA Requirements for percentage of repurposed work that can be used in an assignment), unauthorized possession of academic materials, and unauthorized collaboration. The CSU-Global Library provides information on how students can avoid plagiarism by understanding what it is and how to use the Library and Internet resources.

Citing Sources with APA Style
All students are expected to follow the CSU-Global Guide to Writing and APA Requirements when citing in APA (based on the APA Style Manual, 6th edition) for all assignments. For details on CSU-Global APA style, please review the APA resources within the CSU-Global Library under the “APA Guide & Resources” link. A link to this document should also be provided within most assignment descriptions on your course’s Assignments page.

Disability Services Statement
CSU–Global is committed to providing reasonable accommodations for all persons with disabilities. Any student with a documented disability requesting academic accommodations should contact the Disability Resource Coordinator at 720-279-0650 and/or email ada@CSUGlobal.edu for additional information to coordinate reasonable accommodations for students with documented disabilities.

Netiquette
Respect the diversity of opinions among the instructor and classmates and engage with them in a courteous, respectful, and professional manner. All posts and classroom communication must be conducted in accordance with the student code of conduct. Think before you push the Send button. Did you say just what you meant? How will the person on the other end read the words?

Maintain an environment free of harassment, stalking, threats, abuse, insults or humiliation toward the instructor and classmates. This includes, but is not limited to, demeaning written or oral comments of an ethnic, religious, age, disability, sexist (or sexual orientation), or racist nature; and the unwanted sexual advances or intimidations by email, or on discussion boards and other postings within or connected to the online classroom.

If you have concerns about something that has been said, please let your instructor know.