



## PJM535: PROJECT METRICS, MONITORING, AND CONTROL

**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 14-20 hours per week in each course reading material, interacting on the discussion boards, writing papers, completing projects, and doing research.

**Faculty Information:** Faculty contact information and office hours can be found on the faculty profile page.

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### **COURSE DESCRIPTION AND OUTCOMES**

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**Course Description:**

Selecting, evaluating, and communicating performance metrics plays a critical role in successful monitoring and control of projects. This course provides an in-depth discussion of project management metrics and Key Performance Indicators (KPIs). Students explore related topics such as value-based project management metrics, dashboards, and measurement-driven project management. The course covers the role of metrics in effective monitoring and control of projects, and provides an overview of the most important considerations in proper use and communication of project performance metrics.

**Course Overview:**

In this course, you will learn financial and success metrics as well as the techniques associated with monitoring and controlling projects. You will examine the steps to monitor the progress of a project as well as develop an assessment plan to measure the effectiveness of the project. Additional topics include scope, pricing, cost, trade-offs, learning curves, and quality management within a project environment.

**Course Learning Outcomes:**

1. Demonstrate the need for project management metrics and benefits of metric-driven project management.
2. Establish the importance of metrics in effective management of time, cost, and scope.
3. Apply the knowledge of project metrics to identify the key characteristics of properly defined metrics.
4. Characterize Key Performance Indicators (KPIs) as used in metric-driven project management.
5. Apply value-based project management metrics as important in selecting the right metrics.
6. Explore project performance dashboards including designs, use, and limitations.
7. Explore the applications of visual project management tools, including project performance dashboards.
8. Create proper performance indicators for application in measurement-driven project management.

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## CAREER INFORMATION

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### PMI-GAC Accreditation and PMP Certification

Among other [requirements](#), Project Management Institute (PMI) requires those who aspire to take the PMP exam to have a minimum of 35 contact hours of documented training in the area of project management. Other PMI certificates have a similar requirement too. Students may utilize PJM courses taken at CSU-Global to satisfy these requirements. Please also note that CSU-Global's Bachelor of Science in Project Management and Master of Project Management are accredited by Project Management Institute Global Accreditation Center for Project Management Education Programs (GAC). GAC accreditation ensures the quality of academic degree programs and their graduates to meet the standards of the rapidly growing field of project management

### PJM Careers

CSU-Global is focused on providing career-relevant project management degree programs that align with industry requirements and best practices. CSU-Global's project management degree programs are designed to provide students with the business and project management skills necessary to succeed in an increasingly global economy and changing business environment. The program focuses on technology facilitated collaboration, innovation and entrepreneurship, systems thinking, ethical and socially responsible leadership, and the globalization of today's market. Faculty members serve as peer cohort mentors and facilitators, career coaches, writing coaches, and résumé reviewers for students, and represent the university at various academic and professional conferences and events. Students who need additional academic support to answer questions about degree programs may request to speak with the Program Chair or can schedule a meeting with a faculty career coach via an online scheduling tool located in the student portal. The career center allows students the opportunity to talk to a career coach, search for jobs and have access to a variety of resources.

A variety of job opportunities exist in various fields of practice in project management and to maintain high standards of practice in this industry, project management practitioners need to pay adequate attention to education and training to ensure they obtain the skills they need to succeed. Obtaining well-known industry certificates is one of the ways that project management practitioners can choose to improve their skills, set themselves apart from competitors, and showcase their credentials. Here are some of the example certificates that project management practitioners may choose to pursue:

- Certificates offered by Project Management Institute (PMI): PMI Professional in Business Analysis (PMI-PBA)<sup>®</sup>, Certified Associate in Project Management (CAPM) and Project Management Professional (PMP).
- Certificates offered by the International Institute of Business Analysis<sup>™</sup> (IIBA<sup>®</sup>) such as ECBA (Entry Certificate in Business Analysis<sup>™</sup>), CCBA (Certificate of Capability in Business Analysis<sup>™</sup>), and CBAP (Certified Business Analysis Professional<sup>™</sup>)
- Certificates offered by the American Association of Cost Engineering (AACE International): Certified Cost Technician (CCT), Certified Scheduling Technician (CST), Certified Cost Professional (CCP), Certified Estimating Professional (CEP), and Planning & Scheduling Professional (PSP)
- Other example certificates include the Certified ScrumMaster (CSM) from Scrum Alliance, the PRINCE2 certificates, CompTIA's Project+ certificate, and construction project management certificates such as Construction the Certified Construction Manager (CCM) by Management Association of America (CMAA).

## **Project Management Institute (PMI)® Student Membership**

In keeping with its commitment to the academic and professional success of its students, CSU-Global encourages students enrolled in its Project Management programs to consider becoming members of the Project Management Institute (PMI)®.

Advantages of PMI membership include continuous online access to the PMBOK® Guide, a variety of tools and templates, and many knowledge resources, including on-demand webinars and an online library of articles and books (PMI, 2018). Membership also conveys access to a number of professional communities and volunteer opportunities as well as access to career resources and professional development opportunities. (PMI, 2018). Additional information including membership application can be found on the PMI website:

<https://www.pmi.org/>

PMI®, PMBOK® Guide, Project Management Professional®, and PMP® are registered marks of the Project Management Institute, Inc.

Reference: PMI, (2018). Student Membership. Project Management Institute, Inc.

<https://www.pmi.org/membership/student>

## **Ethics and Professional Conduct**

CSU global is committed to preparing its graduates to approach every situation ethically and professionally. Students are encouraged to reflect upon course topics that focus on ethical and professional conduct issues in business. Students in the Project Management programs of study are encouraged to use the Code of Ethics and Professional Conduct published by the Project Management Institute (PMI)®. PMI codifies ethical principles for professionals in the field of project management which serve as the foundational principles for students in this program.

Reference: Project Management Institute. (n.d.) Code of Ethics and Professional Conduct. Newtown Square, Pa: Project Management Institute. Retrieved from <https://www.pmi.org/about/ethics/code>

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## **PARTICIPATION & ATTENDANCE**

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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.

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## **COURSE MATERIALS**

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**Required:**

Kerzner, H. R. (2017). *Project management metrics, KPIs, and dashboards: A guide to measuring and monitoring project performance* (3rd ed.). Hoboken: John Wiley & Sons. Print ISBN: 9781119427285, eText ISBN: 9781119427322

Project Management Institute. (2017). [\*A guide to the project management body of knowledge \(PMBOK® Guide\) \(6th ed.\)\*](#). Newtown Square, PA: Project Management Institute, Inc. eISBN-13: 9781628253900 Retrieved from

**NOTE:** All non-textbook required readings and materials necessary to complete assignments, discussions, and/or supplemental or required exercises are provided within the course itself. Please read through each course module carefully.

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## COURSE SCHEDULE

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### 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 at 11:59 p.m. MT. Late posts may not be awarded points.
- **Critical Thinking:** Assignments are due Sunday at 11:59 p.m. MT.

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## WEEKLY READING AND ASSIGNMENT DETAILS

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### Module 1

#### Readings

- Chapter 1 in *Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance*
- Presentation for Chapter 1 from *Project Management Metrics, KPIs, and Dashboards*
- Part 2, Chapter 5.5 in the *PMBOK® Guide*

#### Discussion (25 points)

### Module 2

#### Readings

- Chapter 2 in *Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance*
- Presentation for Chapter 2 from *Project Management Metrics, KPIs, and Dashboards*
- Part 2 Section 5.43 and Part 1 Chapter 13 in the *PMBOK® Guide*

#### Discussion (25 points)

#### Portfolio Milestone (50 points)

For this Portfolio Milestone, perform the following:

- provide a two-page submission in Module 2 noting your selected option for the Portfolio Project found in Module 8,
- a timeline of activities over the remaining weeks for portfolio production,
- concerns and roadblocks you have on the portfolio, and

- how you will overcome those. No need for formal APA submission for this assignment.

Your timeline of activities is most critical as are your concerns, roadblocks, and how you will overcome those. It is expected that your timeline shows at least one task each week from Week 2 through Week 8, and many weeks should have multiple tasks. Every effort should be made to thoroughly examine your portfolio options, and to complete this milestone in Week 2 to give you enough time to complete the work. Once your work on this milestone is graded, you may not change portfolio options and should move forward with your Week 2 selection.

### **Module 3**

#### **Readings**

- Chapter 3 in *Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance*
- Presentation for Chapter 3 from *Project Management Metrics, KPIs, and Dashboards*
- Part 2 Sections 5.6, 5.7 and 5.10 in the *PMBOK® Guide*

#### **Discussion (25 points)**

#### **Critical Thinking (100 points)**

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: Selecting Metrics for a Home Renovation Project**

Since metrics keep stakeholders in tune to the health of a project, metrics must be a clear and truthful representation of project status. Consider this scenario.

You are the project manager of a company that does home remodeling and you have just been given a major remodeling project which will update the electrical and heat and air systems, kitchen, and the single bathroom of a house built in 1930. Your project also adds another bedroom with a master suite. The client has authorized a budget of \$95,000 and wants the house ready for Thanksgiving, which is six months away.

Your general contractor (GC) has called you in to discuss the project and asks you to put together a set of metrics that will communicate the project status to her, to the homeowners, the building trade groups, and any other stakeholders. Your GC has asked to meet again in three days with your recommendation which you must be able to defend.

Prepare your metrics of project health and be ready to defend the following:

- how many metrics you will use and why that is the “right” number,
- what the metrics are that you have chosen and why,
- explain that you will use both quantitative and qualitative metrics what they are and why,
- explain how and when you’ll get the data,
- what metrics will allow you to find mistakes early enough in the project for correction, and,
- explain which metrics will improve client satisfaction.

Remember that metrics must have a purpose, have a baseline and target, a way to measure, a way to appropriately interpret them and a reporting structure. Be ready to defend your choices relative to those things too. You will present your ideas in a formal paper for the purposes of this class.

Paper Requirements:

- Be sure to properly organize your writing and include an introductory paragraph, headings/subheadings for the body of your work, discussion recommendations, and a conclusion.
- Format your entire paper in accordance with the CSU-Global Guide to Writing and APA.
- Your paper should be at least five pages. The page count does not include the required title page and reference page, nor does the page count include any supplemental pages, should you use them, such as appendices.
- Prepare your work using at least one of this week's required readings and one outside reference (a peer-reviewed scholarly article published in the past five years). The CSU-Global Library is a good place to find these resources. The Library offers this Project Management Resource Guide to assist you with research and writing.

### **Option 2: Selecting Metrics for a Software Upgrade Project**

Since metrics keep stakeholders in tune to the health of a project, metrics must be a clear and truthful representation of project status. Consider this scenario.

You are the project manager of a software upgrade project for the human resources (HR) department of a major import/export company. In order to complete the software upgrade, hardware must be replaced in your company location in Brazil, but the Albany, NY, and San Antonio, TX, locations already have the appropriate hardware in place. The client has authorized a budget of \$95,000 and wants the software ready in all locations in six months when the licensing on the current software expires.

Your Assistant Vice President (AVP) of the information technology (IT) department has called you in to discuss the project and asks you to put together a set of metrics that will communicate the project status to her, to the local IT teams, the hardware vendor, and any other stakeholders. Your AVP has asked to meet again in three days with your recommendation which you must be able to defend.

Prepare your metrics of project health and be ready to defend the following:

- how many metrics you will use and why that is the "right" number,
- what the metrics are that you have chosen and why,
- explain that you will use both quantitative and qualitative metrics what they are and why,
- explain how and when you'll get the data,
- what metrics will allow you to find mistakes early enough in the project for correction, and,
- explain which metrics will improve the HR client's satisfaction.

Remember that metrics must have a purpose, have a baseline and target, a way to measure, a way to appropriately interpret them and a reporting structure. Be ready to defend your choices relative to those things too. You will present your ideas in a formal paper for the purposes of this class.

Paper Requirements:

- Be sure to properly organize your writing and include an introductory paragraph, headings/subheadings for the body of your work, discussion recommendations, and a conclusion.
- Format your entire paper in accordance with the CSU-Global Guide to Writing and APA.
- Your paper should be at least five pages. The page count does not include the required title page and reference page, nor does the page count include any supplemental pages, should you use them, such as appendices.
- Prepare your work using at least one of this week's required readings and one outside reference (a peer-reviewed scholarly article published in the past five years). The CSU-Global Library is a good place to find these resources. The Library offers this Project Management Resource Guide to assist you with research and writing.

## **Module 4**

### **Readings**

- Chapter 4 in *Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance*
- Presentation for Chapter 4 from *Project Management Metrics, KPIs, and Dashboards*
- Part 2 Section 5.9 in the *PMBOK® Guide*

### **Discussion (25 points)**

#### **Critical Thinking (100 points)**

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: KPI, RI, PI, and KRI**

Badawy, Abd El-Aziz, Idress, Hefny, and Hossam (2016) stated that many organizations are using the wrong metrics that they call key performance indicators. Instead, they offered four types of performance measures:

1. Key result indicators (KRIs): it tells you how you have achieved in a perspective or critical success factor.
2. Result indicators (RIs): tell you what you have done.
3. Performance indicators (PIs): tell you what you must do.
4. KPIs: tell you what to do to highly increase performance. (p. 47)

For this assignment:

- Interview someone you know who is currently working on a project.
- Discuss the project success factors, what has been accomplished to date, what is left to be done, and what your interviewee thinks might increase performance on the project.
- Find out what types of metrics are being used and if, in the opinion of the interviewee, they are useful.

In your written paper, consolidate what you learned in your interview and provide a synopsis of the information in less than one page. The interviewee may remain anonymous if requested. While the interviewee may remain anonymous, the organization should be an actual one with which you are familiar and noted in the paper. In the remainder of the paper, suggest whether the metrics being used are KRIs, RIs, PIs, or KPIs, and why, and if you were to recommend a change to more effectively report on the project what KRIs, RIs, PIs, or KPIs would you suggest.

#### Paper Requirements:

- Be sure to properly organize your writing and include an introductory paragraph, headings/subheadings for the body of your work, discussion recommendations, and a conclusion.
- Format your entire paper in accordance with the CSU-Global Guide to Writing and APA.
- Your paper should be at least five pages. The page count does not include the required title page and reference page, nor does the page count include any supplemental pages, should you use them, such as appendices.
- Prepare your work using at least one of this week's required readings and one outside reference (a peer-reviewed scholarly article published in the past five years). The CSU-Global Library is a good place to find these resources. The Library offers this Project Management Resource Guide to assist you with research and writing.

#### Reference

Badawy, M., Abd El-Aziz, A. A., Idress, A. M., Hefny, H., & Hossam, S. (2016). A survey on exploring key performance indicators. *Future Computing and Informatics Journal*, 1, 47-52.

#### Option 2: KPI Wheel

Your textbook authors present a KPI Wheel in Figure 4-10. In the section titled "Putting it all together – the KPI wheel," Kerzner (2017) described an interview process for using the KPI Wheel.

- Find three team members on the same project to help you with your assignment.
- Conduct an interview of the team members using the KPI Wheel. You may collect as much information as you wish, but you will need at least one KPI Wheel for each interviewee as part of your Appendix to the paper. So, at least three KPI Wheels will be in your Appendix. Do not just ask questions, but let the interview flow organically.
- In less than one page, explain the project, and the titles of the interviewees (you do not have to use their names, but name the organization and describe the project). Using current scholarly research discuss the purpose of the KPI Wheel.
- Next, discuss the use of the KPI Wheel to direct the interview.
- What did you learn about the practical application of collecting KPIs through this process?
- How did the interviewees' information agree or disagree among them, and why was that the case?
- How did the interviewees' information agree or disagree with current scholarly research?
- If you were to use this information to determine a set of KPIs, what additional information would you need, and how would you proceed?
- What KPIs would you suggest for the project and why?

#### Paper Requirements:

- Be sure to properly organize your writing and include an introductory paragraph, headings/subheadings for the body of your work, discussion recommendations, and a conclusion.
- Format your entire paper in accordance with the CSU-Global Guide to Writing and APA.
- Your paper should be at least five pages. The page count does not include the required title page and reference page, nor does the page count include any supplemental pages, should you use them, such as appendices.
- Prepare your work using at least one of this week's required readings and one outside reference (a peer-reviewed scholarly article published in the past five years). The CSU-Global Library is a

good place to find these resources. The Library offers this Project Management Resource Guide to assist you with research and writing.

## **Module 5**

### **Readings**

- Chapter 5 in *Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance*
- Presentation for Chapter 5 from *Project Management Metrics, KPIs, and Dashboards*
- Part 1 Chapter 7 in the *PMBOK® Guide*

### **Discussion (25 points)**

#### **Critical Thinking (125 points)**

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: Earned Value Analysis for Project Management Institute Exams**

This option includes practice questions similar to those found on the Project Management Institute's (PMI) certification exams. Unlike the exams, you are also asked to explain your reasoning for your choice.

If you wish to practice for the PMP exam, this option may be useful to you. If you already are certified or if you have no desire to be certified, you may still select this option. It will give you an opportunity to test your skills. You may find Table 7-1 in the *PMBOK® Guide* of use in this Critical Thinking assignment.

#### **Assignment Requirements:**

- Use the worksheet provided for this assignment: PJM535\_CT\_Mod05\_Option1.docx
- You only need to include your name, answer to the 10 questions, and provide your reasoning for each answer.
- Type your answers and reasoning in a Word file for submission. There are no requirements for research or APA format.
- A rubric will not be used to grade this assignment; rather, each correct answer earns five points, and each correct reason for the answer selected earns 7.5 points.

#### **Option 2: Earned Value Analysis**

Earned Value Analysis (EVA) has been used effectively on some projects and has been difficult to use on other projects.

- Explain why EVA is useful to the project team and management, and explain in what ways it is problematic on other projects.
- You must give examples of projects from your experience or research on both the usefulness and problematic EVA categories.

#### **Paper Requirements:**

- The body of your paper, the part between the thesis and conclusion, should be equally balanced between the usefulness and problems with EVA.
- Please note that this paper should be at least five pages long.

- Be sure to properly organize your writing and include an introductory paragraph, headings/subheadings for the body of your work, discussion recommendations, and a conclusion.
- Format your entire paper in accordance with the CSU-Global Guide to Writing and APA.
- Your paper should be at least five pages. The page count does not include the required title page and reference page, nor does the page count include any supplemental pages, should you use them, such as appendices.
- Prepare your work using at least one of this week's required readings and one outside reference (a peer-reviewed scholarly article published in the past five years). The CSU-Global Library is a good place to find these resources. The Library offers this Project Management Resource Guide to assist you with research and writing.

## **Module 6**

### **Readings**

- Chapter 6 in *Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance*
- Presentation for Chapter 6 from *Project Management Metrics, KPIs, and Dashboards*
- Part 1 Section 4.5 in the *PMBOK® Guide*

### **Discussion (25 points)**

#### **Critical Thinking (125 points)**

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: Create a Dashboard**

Select a project without a current dashboard. This project may be one you have, are, or will work on, or you may select a project from research.

- Describe the dashboard design process.
- Identify the inputs needed for creating your project's dashboard, and who should be involved in its creation and its distribution.

#### **Paper Requirements:**

- Be sure to properly organize your writing and include an introductory paragraph, headings/subheadings for the body of your work, discussion recommendations, and a conclusion.
- Format your entire paper in accordance with the CSU-Global Guide to Writing and APA.
- Your paper should be at least five pages. The page count does not include the required title page and reference page, nor does the page count include any supplemental pages, should you use them, such as appendices.
- Prepare your work using at least one of this week's required readings and one outside reference (a peer-reviewed scholarly article published in the past five years). The CSU-Global Library is a good place to find these resources. The Library offers this Project Management Resource Guide to assist you with research and writing.

#### **Option 2: Operational, Tactical, and Strategic Dashboards**

Dashboards serve many purposes one of which is to capture and communicate performance.

- Explain the different purpose of each of the three types of performance dashboards: operational, tactical, and strategic.

- Explain the differences in terms of the users, scope, information, frequency of updates and the emphasis for each.
- Include an example of a dashboard as an appendix to your paper and include which type it is. (Remember that appendices are after the references page in APA format.)

Paper Requirements:

- Be sure to properly organize your writing and include an introductory paragraph, headings / subheadings for the body of your work, discussion recommendations, and a conclusion.
- Format your entire paper in accordance with the CSU-Global Guide to Writing and APA.
- Your paper should be at least five pages. The page count does not include the required title page and reference page, nor does the page count include any supplemental pages, should you use them, such as appendices.
- Prepare your work using at least one of this week's required readings and one outside reference (a peer-reviewed scholarly article published in the past five years). The CSU-Global Library is a good place to find these resources. The Library offers this Project Management Resource Guide to assist you with research and writing.

## **Module 7**

### **Readings**

- Chapter 7 in *Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance*
- Presentation for Chapter 7 from *Project Management Metrics, KPIs, and Dashboards*
- Part 1 Chapter 10 in the *PMBOK® Guide*

### **Discussion (25 points)**

### **Portfolio Milestone (50 points)**

#### **Option 1 & 2: Progress, Timeline, and Roadblocks**

For this Portfolio Milestone perform the following:

- Provide a one-page submission noting your progress to date on the portfolio project,
- update the timeline of activities remaining for portfolio production originally produced in Week 2,
- update the concerns and roadblocks you have on the portfolio from Week 2 showing those you have resolved and how, along with any remaining concerns or roadblocks, and
- how you will overcome those.

No need for formal APA submission for this assignment. Your timeline of activities is most critical as are your concerns, roadblocks, and how you will overcome those. It is expected that your timeline shows at least one task each week from Week 2 through Week 8, and many weeks should have multiple tasks. Every effort should be made to thoroughly examine your portfolio options, and to complete this milestone in Week 7 to give you enough time to complete the work. Your final Portfolio Project is due next week.

## **Module 8**

### **Readings**

- Chapter 8 in *Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance*

- Part 2 Chapter 6 in the *PMBOK® Guide*

### **Discussion (25 points)**

### **Portfolio Project (250 points)**

Choose one of the following two projects to complete for this course. Do not do both assignments. Identify your project choice in the title of your submission.

#### **Option 1: Develop Applications Relative to Course Objectives**

As part of successfully completing this course, you should be able to master the eight course objectives:

1. Demonstrate the need for project management metrics.
2. Establish the importance of metrics in effective management of time, cost, and scope.
3. Apply the knowledge of project metrics to identify the key characteristics of properly defined metrics.
4. Characterize Key Performance Indicators (KPIs) as used in metric-driven project management.
5. Apply value-based project management metrics as important in selecting the right metrics.
6. Explore project performance dashboards including designs, use, and limitations.
7. Explore the applications of visual project management tools, including project performance dashboards.
8. Create proper performance indicators for application in measurement-driven project management.

In this portfolio project, you are to show your mastery of the eight course objectives at a master's level. You are to write a paper that covers each of the eight topics.

Notice that each objective is written with a verb as the first word to show some action that students must achieve for success in this class. Verbs like “demonstrate,” “apply,” and “create” require that the student takes some action on a project to satisfy the requirement. You should find a project to use in this portfolio where you may take those actions and document them in your paper. You might apply earned value analysis on a project underway to satisfy course objective number 5, for example.

Verbs like “establish,” “characterize,” and “explore” require that the student shows mastery of current thinking on the subject. This part of your paper may be taken from research, or interviews. You might explore an application of dashboards by interviewing a project manager and performing research on current thinking about dashboards, for example.

Therefore, your paper should include sections to address the following:

1. Identify and describe an actual project that was successful in part because it used project metrics, what those metrics were, and why they were a contributing factor to success.
2. Research and report on current thinking in both research and practice about effective management of time, cost, and scope with metrics.
3. Research and report on current thinking in both research and practice about the key characteristics of properly defined metrics, and identify and describe an actual project to compare its use of metrics to your research to determine if the metrics were properly defined.
4. Research and report on current thinking in both research and practice about KPIs.
5. Show your application of value-based project management metrics on a project with which you are familiar and interpret the results of your application.

6. Research and report on performance dashboards including designs, use, and limitations, and visual project management tools, including project performance dashboards.
7. Create proper performance indicators for application in measurement-driven project management on a project with which you are familiar.

Since the key sections of your work correspond to individual module of the course, it is recommended that you progressively develop your project based on the weekly topics.

#### Paper Requirements:

- Prepare a portfolio paper to address the eight-course objective. All eight course objectives must be addressed. The Course Objectives are:
  1. Demonstrate the need for project management metrics and benefits of metric-driven project management.
  2. Establish the importance of metrics in effective management of time, cost, and scope.
  3. Apply the knowledge of project metrics to identify the key characteristics of properly defined metrics.
  4. Characterize Key Performance Indicators (KPIs) as used in metric-driven project management.
  5. Apply value-based project management metrics as important in selecting the right metrics.
  6. Explore project performance dashboards including designs, use, and limitations.
  7. Explore the applications of visual project management tools, including project performance dashboards.
  8. Create proper performance indicators for application in measurement-driven project management.
- Incorporate at least 10-12 current peer-reviewed scholarly references (current means published in past five years). The CSU-Global Library is a good place to find your sources. Additionally, be sure to visit the Library's Project Management Resource Guide for assistance with research and writing.
- Incorporate any constructive feedback provided by your instructor on your work in Week 2.
- Properly organize your writing and include an introductory section with thesis and mapping, headings/subheadings for the body of your work, discussion, recommendations, and a conclusion.
- Any diagram, figure, or table should be included in an appendix, but clearly discussed in the text portion of the paper. Appendices should be included after the references.
- Format your entire paper in accordance with the CSU-Global Guide to Writing and APA.
- Your paper must be 10 to 15 pages long, not including the required title page and references page or any other supplemental pages such as appendices that you choose to include.

#### **Option 2: Student Developed Case in Project Metrics**

You have had many experiences in this class with measuring, metrics, KPIs, dashboards and scorecards. You had the opportunity to interview a project manager, to calculate EVM, and to develop dashboards and scorecards. Now you have the opportunity to fully develop a case appropriate for publication to include many of the elements we have studied this term. (You are not required to publish your portfolio project, but your final product should be appropriate for publication by a peer-reviewed journals, or conference proceeding. You may wish to examine publication requirements of several journals in preparation for your portfolio development. Ask your instructor for more guidance if you wish to pursue this portfolio project option.)

There are many excellent guides for writing cases. You may use any that you think is appropriate for a scholarly paper appropriate for publication. One such guide is published by Ormerod (2017) and is included in your recommended readings.

1. Develop your own case on project management measuring and metrics issues
2. In no more than two pages, give an overview of the case including scope, cost, timeline, quality requirements, and the project management issues to be covered in more detail in subsequent sections of the paper.
3. Your case must cover, in a logical order for your specific case, application of the following topics central to this course:
  - project stakeholders and reporting needs,
  - challenges in project performance measurement as well as metrics that the team could use for more effective control,
  - KPIs,
  - KPI selection processes and KPI targets,
  - earned value or other value metrics could be incorporated in project performance management
  - dashboards, or other visual tools.

#### Paper Requirements:

1. Prepare a portfolio paper to address the objective of writing a case study on topics of importance to this course, and appropriate for publication.
2. Incorporate at least 10-12 current peer-reviewed scholarly references (current means published in the past five years). The CSU-Global Library is a good place to find your sources. Additionally, be sure to visit the Library's Project Management Resource Guide for assistance with research and writing.
3. Incorporate any constructive feedback provided by your instructor on your work in Week 2.
4. Properly organize your writing based on the case writing guide you have selected.
5. Any diagram, figure, or table should be included in an appendix, but clearly discussed in the text portion of your case. Appendices should be included after the references.
6. Format your entire paper in accordance with the CSU-Global Guide to Writing and APA.
7. Your case study must be 10 to 15 pages long, not including the required title page and references page or any other supplemental pages such as appendices that you choose to include.

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## COURSE POLICIES

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Grading Scale	
A	95.0 – 100
A-	90.0 – 94.9
B+	86.7 – 89.9
B	83.3 – 86.6
B-	80.0 – 83.2
C+	75.0 – 79.9
C	70.0 – 74.9
D	60.0 – 69.9
F	59.9 or below

### Course Grading

20% Discussion Participation  
45% Critical Thinking Assignments  
35% Final Portfolio Project

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## IN-CLASSROOM POLICIES

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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 /repurposing your own work (see CSU-Global Guide to Writing & APA 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 & APA when citing in APA (based on the most recent APA style manual) for all assignments. A link to this guide should also be provided within most assignment descriptions in your course.

### **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](mailto: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.