COMPETENCIES

**4123.1.1** : **Capstone**

The learner integrates and synthesizes competencies from across the degree program, thereby demonstrating the ability to participate in and contribute value to the chosen professional field.

INTRODUCTION

This task will consist of a proposal for a data analytics project that was approved by an instructor. The proposal will identify a problem and propose a data solution to the problem. Your proposal will also explain how you plan to implement your project to successfully resolve the problem, including a methodology for project development.  
  
Your work for Task 2 will not be evaluated until the appropriate forms in Task 1 have been submitted and evaluated.

REQUIREMENTS

Your submission must represent your original work and understanding of the course material. Most performance assessment submissions are automatically scanned through the WGU similarity checker. Students are strongly encouraged to wait for the similarity report to generate after uploading their work and then review it to ensure Academic Authenticity guidelines are met before submitting the file for evaluation. See [Understanding Similarity Reports](https://cm.wgu.edu/t5/Frequently-Asked-Questions/Understanding-Similarity-Reports/ta-p/252) for more information.    
  
**Grammarly Note:**   
Professional Communication will be automatically assessed through Grammarly for Education in most performance assessments before a student submits work for evaluation. Students are strongly encouraged to review the Grammarly for Education feedback prior to submitting work for evaluation, as the overall submission will not pass without this aspect passing. See [Use Grammarly for Education Effectively](https://cm.wgu.edu/t5/Academic-Coaching-Center/Use-Grammarly-for-Education-Effectively/ta-p/52276) for more information.    
  
**Microsoft Files Note:**  
Write your paper in Microsoft Word (.doc or .docx) unless another Microsoft product, or pdf, is specified in the task directions. Tasks may not be submitted as cloud links, such as links to Google Docs, Google Slides, OneDrive, etc.  All supporting documentation, such as screenshots and proof of experience, should be collected in a pdf file and submitted separately from the main file. For more information, please see [Computer System and Technology Requirements.](https://cm.wgu.edu/t5/WGU-Student-Policy-Handbook/Computer-System-and-Technology-Requirements/ta-p/78)    
 *You must use the rubric to direct the creation of your submission because it provides detailed criteria that will be used to evaluate your work. Each requirement below may be evaluated by more than one rubric aspect. The rubric aspect titles may contain hyperlinks to relevant portions of the course.*

**Project Overview**

A.  Create a proposal for a data analytics project by doing the following:

1.  Describe a research question or organizational need that your project will solve.

2.  Describe the context and background for your project.

3.  Summarize **three** published works that relate to the research question or organizational need in part A1.

*Note: These published works should serve as background information to support your proposed project and may include interviews, white papers, research studies, or other types of work by industry professionals.*

a.  Describe how *each* published work informs the development of the project.

4.  Describe the deliverables (e.g., reports, visuals, apps, or models) for the data analytics solution you will implement to address the research question or organizational need described in part A1.

5.  Explain how the data analytics solution will benefit the organization and support a decision-making process.

**Data Analytics Project Plan**

B.  Describe your data analytics project plan by doing the following:

1.  Describe the goals, objectives, and deliverables for the project.

2.  Describe the scope of the project.

3.  Explain how you will use a project planning methodology (e.g., ADDIE, SDLC, Agile, CRISP-DM, or SEMMA) to organize and implement your project.

4.  Provide a timeline with milestones for your project, including the duration and start and end dates for *each* milestone.

5.  Provide a list of resources and *any* associated costs needed to implement the project (e.g., hardware, software, work hours, third-party services).

6.  Describe the measurable criteria you will use to evaluate the success of project execution.

**Design of Data Analytics Solution**

C.  Describe the data analytics solution you will use to address the research question or organizational need identified in part A by doing the following:

1.  Identify the hypothesis of the project.

2.  Identify the analytical methods (i.e., descriptive, diagnostic, predictive, or prescriptive) you will implement in your data analytics solution.

a.  Justify why the analytical methods identified in part C2 are appropriate for your project.

3.  Describe the tools and environments that you will use to produce the data analytics solution, including any applicable third-party code.

4.  Describe the methods and metrics you will use to evaluate the output of your data analytics solution or model.

a.  Justify why the chosen methods and metrics are appropriate for evaluating the output of your data analytics solution or model.

5.  Describe how you will assess the practical significance of the data analytics solution, including specific criteria to determine whether it has provided the expected benefits and supported a decision-making process.

6.  Describe the tools and graphical representations you will use to visually communicate the findings of your data analytics solution.

**Description of Dataset(s)**

D.  Write a description of the data by doing the following:

1.  Identify the source(s) of the data.

2.  Discuss why this dataset is appropriate for the stated goals of your project.

3.  Describe the data collection methods you used.

4.  Summarize your observations on the quality and completeness of the data.

5.  Discuss data governance; data privacy and security; and ethical, legal, and regulatory compliance considerations that relate to the dataset and the proposed project.

a.  Describe the precautions you will need to take when working with and communicating about the data for *each* of the considerations in part D5.

E.  Acknowledge sources, using in-text citations and references, for content that is quoted, paraphrased, or summarized.

F.  Demonstrate professional communication in the content and presentation of your submission.