

Authors	CSL Schutte, B Peters, CJ Nel	Project Detail
Document	Project Assignment	Project Management 412 Assignment 3
Date	2021-04-12	
Revision	01	

Project Assignment Number: 3

1 DESCRIPTION OF ASSIGNMENT

Organise a Post Completion Project Review (“Post Mortem”) meeting with your team and submit a Project Closure Report evaluating both the Simulated Project and your team’s real-life project execution and multi-disciplinary group work. The Simulated Project performance assessment should include an Earned Value Analysis for the project.

1.1 Earned Value Analysis Spreadsheet

Develop an Excel Spreadsheet, detailing the progress of the simulated project up to the end of Period 12, for each period, making use of Earned Value Analysis (EVA) for your simulated project. The following aspects need to be included in the EVA:

- **Use as analysis dates, a date at the close of business (COB), which is 4 working days before the actual completion date of the simulated period, for each period.**
- Each period must be on a separate sheet in the Excel file
- On a separate summary sheet in the Excel file (make it the first sheet)
 - Show the calculation of AC, PV and EV for the end of **Period 9** (end of period 9 min 4 work days, COB)
 - Show the calculation of SPI and CPI for the end of **Period 9** (end of period 9 min 4 work days, COB)
 - Show the calculation of likely project cost at completion, based on data up to the end of **Period 9** (end of period 9 min 4 work days, COB)
 - Plot AC and EV for all periods up to Period 9, and explain the results within the context of your simulated project’s progress
 - Plot PV and EV for all periods up to Period 9, and explain the results within the context of your simulated project’s progress
 - Plot SPI vs CPI for all periods up to Period 9, and discuss the trends seen, within the context of your own simulated project
 - Include on this summary sheet a short discussion on the status of your project as at the end of Period 9, discussing time and cost, using the graphs at your disposal

Bonus points will be earned if you include Training and Management activities in your Earned Value Analysis.

It should be noted that the EVA spreadsheet and supporting calculations will be assessed in detail. In addition, the progress discussion included in the summary sheet (as at the end of period 9) will be assessed against your updated *MS Project* file. Lastly, the EVA up to period 12 will be assessed against the project completion report and updated *MS Project* file.

1.2 Post Completion Project Review Meeting.

Organise and conduct a Post Completion Project Review meeting with your team. During this meeting, you must evaluate both the Simulated Project, as well as your team’s real-life Group Project Execution that you performed by taking periodic decisions and submitting assignments. (Refer to Chapter 5 in the textbook for a description of a *Post Completion Project Review*.) Ensure that this review meeting is thoroughly minuted, and include the minutes in the report.

1.3 Project Closure Report

Develop and submit a project closure report that addresses both the **Simulated** project that was executed via Sim4Projects, as well as the **Real-life Group Project Execution** that you as a multi-disciplinary team performed by taking periodic decisions and submitting assignments.

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1.3.1 Simulated Project section of report

The section of the **closure report** for the **Simulated Project** needs to include and discuss the following:

- Project Performance Review (Use Earned Value management where appropriate)
 - Use your Earned Value Analysis for all the periods (**also actual period completion minus 4 working days for periods 10 and 11, but for period 12, use the actual completion date of the simulated project**), and base your discussions on the EVA results up to period 12 where applicable.
 - Include an 'Actual Cost' vs Budget Analysis and Review, and discuss the major variances using your EVA results as the basis for discussion.
 - Include a Schedule Analysis and Review, and discuss the major variances in milestones (actual vs plan) using your EVA results as the basis for discussion.
- Team Development
 - Review and discuss your Resource Strategy – what was it, and did it work?
 - Did you develop your resources and what was the effect?
 - Did you adapt your resources strategy during the project? If so, why and what was the outcome?
 - If you had to re-do a similar project, what would you do differently in terms of your resource strategy and why?
- Risk Management Plan (RMP) Success
 - If required, update the Risk Register submitted in Assignment 2 with unwanted events that occurred during the simulation (if not included in original Risk Register). Provide a copy of the prioritised risk register in the Appendix to the report.
 - Based on the unforeseen events during the project, how successful was your Risk Management Strategy?
 - The team needs to demonstrate their ability to successfully manage the project risks as a multi-disciplinary team.

1.3.2 Real-Life Group Project Execution and Multi-Disciplinary Group Work section of report

The section of the closure report for the **Real-Life Group Project Execution** needs to include and discuss the following:

- Lessons Learnt:
 - What did you as a group learn from the project?
 - Did it help to apply the techniques, which you learnt in theory, in practice?
 - In hindsight, what would you as a team do differently with respect to managing the simulated project and managing the workload of the real-life team?
 - As a group, reflect on the experience of working together as a multi-disciplinary team, including how you managed team dynamics as a result of different personalities and skills in the team.
- Individual Review of Multi-Disciplinary Group Work
 - Each Team member (under the heading of his/her name) should write at least one full page in the report (preferably in the appendices), explaining:
 - What you learnt from yourself as an individual when tasked to function in a multi-disciplinary group environment. Factors to consider could include level of contributions, time management, attitude, preparedness, quality of work, ability to work with others, etc.
 - What would you do differently the next time you should work in a multi-disciplinary team?
 - What skills did you observe from other disciplines and/or individuals which could be of value to yourself in project execution?

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- How, in the future, you would combine the strengths of the various disciplines and/or individuals to ensure successful project execution.
- Signed minutes of the Post Completion Project Review (“Post Mortem”) meeting.
- Submit signed minutes of all team meetings, from 19 April 2021 to close of project. These minutes shall clearly describe decisions taken and allocated actions. Ensure that the multi-disciplinary aspects of your project team are taken into consideration.

2 EXPECTATIONS AND OBJECTIVES

The Project Closure Report shall be outlined clearly and the conclusion and recommendations must be clearly shown and discussed in the report.

The team need to demonstrate their ability to use the progress information, as contained in the project plan, to derive a detailed Earned Value Analysis **from first principles**. This should demonstrate a full understanding of Earned Value Analysis and the complexities that may arise when performing it.

The team also needs to demonstrate an ability to use the Baseline Plan, take progress into account and measure this progress over all 12 periods against the budget, while making use of Earned Value Analysis. In particular, the team need to demonstrate their ability to manage their plan successfully, by:

- updating their plan in *MS Project*,
- assigning additional resources,
- continually levelling the resources,
- analysing and refining their plan to determine the impact on subsequent periods, and
- discuss the simulated project's progress up to Period 9 on the summary sheet in an executive summary style, using the data provided. This progress discussion should not be included in the Closure Report, and only reside in the Summary Sheet of the Excel Spreadsheet.

By also analysing and discussing progress during the Real-life Group Project Execution, the group demonstrates an ability to critically self-assess their success as a project team.

By submitting minutes of meetings in the appendix of the report, the team demonstrates an ability to organise the planning of their simulated project in a multi multi-disciplinary context.

Please take note of the mandatory ECSA Exit Level outcomes in section 6 of the Study Guide.

3 DELIVERABLES

- A project closure report covering:
 - the Simulated Project,
 - the Real Life Group Project Execution, and
 - the project closure report must be complete and should include everything in a single PDF file, including relevant printouts from *Excel* (such as the risk register) **and** *MS Project*. This document will form part of the final assessment documentation that will be provided to the internal and external examiners at the end of the semester.
- An Excel Spreadsheet, submitted electronically, containing the Earned Value Analysis as performed, for all periods. All Earned Value calculations must be performed in Excel, to demonstrate your full understanding of the Earned Value calculation mechanism. The Spreadsheet should also include a summary sheet (as first sheet) showing EVA

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calculations, graphs and progress discussion up to Period 9 (i.e., as if progress feedback was given at the end of Period 9).

- An updated *MS Project* plan, based on your baseline plan (in *MS Project* format), with all progress up to the end of Period 12 incorporated. This must be submitted only electronically via SUNLearn.
- A colleague assessment appraisal (Buddy Rating) to be done online with the login information provided.

4 SUBMISSION REQUIREMENTS

Deadline	<p><i>31 May 2021:</i></p> <ul style="list-style-type: none"> • <i>Electronic Submission¹: Before 23h55 on SUNLearn.</i> <p><i>1 June 2021:</i></p> <ul style="list-style-type: none"> • <i>3rd Buddy Rating Submission: Before 23h55.</i>
Method	<ol style="list-style-type: none"> 1) <i>A Project Closure Report for the Simulated Project as well as for the Real-Life Group Project Execution: Electronically submitted as *.pdf document via the SUNLearn Turnitin mechanism.</i> 2) <i>Excel Spreadsheet with Earned Value Calculations up to Period 12, including summary sheet with progress discussion up to Period 9: Electronically as an Excel file via SUNLearn.</i> 3) <i>Updated MS Project File up to Period 12: Electronically as a MS Project file via SUNLearn.</i> 4) <i>Colleague Assessment by 23h55 on evening of 1 June 2021, using the online "Buddy Rating" system.</i>
Point of submission	<i>Electronically on SUNLearn – make sure you use the correct link for each deliverable.</i>
Document requirements	<p><i>The body of the document (excluding title page, table of contents and appendices) should not exceed 8 pages (11pt single line spacing, with open lines between paragraphs).</i></p> <p><i>Ensure that the report is of a professional nature – typical of what you would be expected of you as professional engineer in practice. Use a professional technical language; proper use of references; a title page with team name, team ID and team members; page numbers, paragraph numbers, etc.</i></p> <p><i>If the electronic submissions are not named correctly or in the correct format, then a penalty of 5% per file will be applied. As an example, for group A-1, the files should be submitted as:</i></p> <p><i>Group A1 Assignment 3.pdf, Group A1 Assignment 3.xlsx/.xls & Group A1 Assignment 3.mpp (or other related MS Project file format).</i></p>
Late submissions	<p><i>5% penalty for every hour, or part thereof, after the deadline.</i></p> <p><i>No submission will be accepted after 15h00 on the day after submission.</i></p> <p><i>The buddy rating penalty as specified in the main assignment document will be applied to the individual project mark for all assignment submissions.</i></p>

¹ The permanent Group Leader is responsible for submitting the electronic files.

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