# CMGT Personal Portfolio Learning outcomes template *v1.4*

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| *You need 2-4 learning outcomes for every personal portfolio. A learning outcome should represent 20-40 hours of work. Each Personal Portfolio module is 3 ECTS, every 1 ECTS is 28 hours. In total you need to spend approximately 84 hours on every Personal Portfolio module. That equals 1 day of work in every week of the term. Your portfolio item and critical reflection needs to represent this.*  *Please decide before starting if you want to connect your learning outcomes or work on unrelated outcomes. It’s allowed to connect/align multiple learning outcomes across multiple Personal Portfolio modules, as long as it’s clear what you learned and achieved for each separate one.*  SMART  **Learning outcome 1**  “In the 3rd term as an engineer, I will learn how to develop a small VR game (with one goal and one main mechanic) in Unity using C#. This will increase my portfolio diversity and to show potential employers I am capable of learning new technologies, in this case VR, which will be an even bigger part of the gaming industry (but outside the gaming industry as well) in the future. I will know I have completed my learning goal when I have created a main menu, gameplay level and an endscreen. To learn how to create a small VR game, I will analyze existing VR games & watch and read tutorials on the topic. I will examine the Unity documentation as well. I estimate that learning and applying the knowledge on how to create a small VR game will take around 60 hours. I will keep track of my hours in an Excel sheet.“  *CMGT Competence(s):*   1. *Technical research and analysis*   *4. Investigating and analyzing*  **Learning outcome 2**  “In the 3rd term as an engineer, I will learn how to measure and improve performance of this VR game, by using the profiler built into Unity and by running multiple tests, graphics-wise and possibly also code-wise. This will improve the quality of the VR game, as well as future (not necessarily VR) games I will make in the future, and will show potential employers I continuously work on improving performance, from start to end. I will know I have completed my learning goal when I have executed and documented multiple tests, and the performance of the game has been noticeably improved. To learn how to handle the optimization process, I will research official Unity documentation & watch and read tutorials on the topic. I estimate that learning and applying the knowledge on how to handle performance optimization will take around 25 hours. I will keep track of my hours in an Excel sheet.”  *CMGT Competence(s):*   1. *Technical research and analysis* 2. *Designing and prototyping* 3. *Testing and rolling out* | |
| **Describe how your learning activity corresponds with your learning outcome.**  Which assignment(s) and activities will you carry out to achieve your learning outcome? | **Learning goal 1:**  I will work on a prototype for a small VR game. It will probably be an FPS game, since that’s what I’m most familiar with and enjoy making & playing the most. I will continuously test it on my Oculus Quest.  **Learning goal 2:**  Twined together with the learning activity of learning goal 1, I will analyze and improve the performance of this VR game. First, I will research optimization techniques and how they are applied in Unity. Then during the process of making the game, I will run several tests to see how my changes affect the performance. I will document this data in an excel sheet. |
| **Which product(s) (or outcome(s)) will you work on to demonstrate the extent to which you have achieved your learning outcome? Describe what the essential conditions, necessary characteristics, and requirements of each product (outcome) should be?**  What is the least you must do to demonstrate that you have achieved your learning outcomes? | **Learning goal 1:**  The least I must have done is:   * A simple but functional main menu * A gameplay level which contains an environment, where one goal can be completed using one main mechanic. * An end screen, which will be displayed after completing the goal.   **Learning goal 2:**  The least I must have done is:   * Research and choose optimization techniques * Run before and after tests using the chosen techniques * Process and document the results of the tests in a visual way. |
| Describe your portfolio item(s): | A smoothly running small VR game, with one main goal and mechanic. Genre is yet to be determined (but possibly shooter/fps). |
| Which sources (literature, tools, books, blogs, specialist journals, video tutorials, keynote speeches, interviews, etc.) will you consult and why? Which software/hardware will you use? |  |
| **Previous Learning Outcomes**  Please paste the learning outcomes of modules here. Explain the relation with your current learning outcome and/or portfolio item, and or/ other CMGT modules. | Personal Portfolio (or other CMGT module): *(1,2,3,4)*  Learning outcome: …  Short description of portfolio item: …  Relation to current learning outcome: (if applicable) … |