

STUDENT FEEDBACK FORM: ARM22874486

Generic Assessment Criteria	Marks available	Marks awarded
1. Engagement with Literature Skills		
The report shows reasonable engagement with relevant literature. Key authors such as Nise, Åström & Murray, and Hellerstein are cited, providing credibility. However, the referencing lacks consistency in format and some statements (particularly in the discussion) rely heavily on textbook quotes without deep integration or critique. Future work could engage more critically with sources or explore contrasting viewpoints. Areas to improve and Feedforward: Reduce overreliance on direct quotes. Improve citation consistency (Harvard). Include more recent or application-specific source, for example, industrial PID tuning practices.	20	14
2. Knowledge and Understanding Skills		
Your work demonstrates a solid grasp of mass-spring-dampers, second-order system behaviour, and PID control theory. You have clearly distinguished between open-loop and closed-loop behaviour. The explanation of underdamping, natural frequency, and PID component effects is conceptually sound. There is also a clear understanding of system responses and performance metrics. Areas to improve and Feedforward: While theoretical content is broadly accurate, parts of it read as standard or pre-formulated, for example, “The spring provides a restoring force that is proportional to the displacement from its length. This relationship is given by Hooke’s law, $F_s = -kx$, meaning the spring force opposes the displacement.” A more thoughtful interpretation and integration of the material would better showcase a deeper conceptual grasp, for example, “In this system, the spring acts as a restoring element that resists displacement. According to Hooke’s Law ($F_s = -kx$), any movement from equilibrium results in a proportional force in the opposite direction. For example, if the spring constant k is increased, the system becomes stiffer, leading to faster oscillations and a higher natural frequency. This directly affects how aggressively the system reacts in both open- and closed-loop simulations.”	20	16
3. Cognitive and Intellectual Skills		
The report includes analysis and comparison between system behaviours and tuning choices, with logical reasoning for selecting the final PID gains. However, the depth of reflection and critical evaluation could be more robust- particularly in discussing limitations of the chosen models or exploring alternative control strategies. Areas to improve and Feedforward: Include more critical analysis of results, for example, effects of solver choice, modelling assumptions. Consider presenting a tuning strategy or systematic reasoning beyond trial-and-error.	20	13
4. Practical Application Skills		
Your work shows clear understanding of how to model and simulate dynamic systems using a MATLAB script and Simulink. The tuning loop shows initiative in testing multiple gain sets, and figures are generally relevant. However, some repeated visuals add unnecessary bulk without analysis. Simulink use is implied but not well documented. Areas to improve and Feedforward: Provide more concise, curated figures- remove duplicates. Your work could benefit from more advanced tuning, for example, using pidtune, Ziegler-Nichols method.	25	20
5. Transferable Skills for Life and Professional Practice		
The report is well-organised and clearly presented. The use of MATLAB shows applicable technical competence. Some degree of automation is evident in the tuning loop, showing initiative. However, more depth in reflective commentary (on design trade-offs, control challenges, or limitations of the approach would show stronger professional maturity. Areas to improve and Feedforward: Add personal reflection on challenges or learning. Consider engineering communication style, for example, design justification, clearer captions, etc. A short section on real-world applications would strengthen professional relevance.	15	11

Assessment Mark (Assessment marks are subject to ratification at the Exam Board. These comments and marks are to give feedback on module work and are for guidance only until they are confirmed.)

Late Submission Penalties (tick if appropriate)

Up to 1 week late (40% Max)

Over 1 week late (0%)

74%

