Assessment Information/Brief 2022-23

To be used for all types of assessment and provided to students at the start of the module. Information provided should be compatible with the detail contained in the approved module specification although may contain more information for clarity.

Module title	**Instrumentation & Control M1**
CRN	31816/39966
Level	7
Assessment title	**Coursework**
Weighting within module	This assessment is worth 40% of the overall module mark.
Submission deadline date and time	**Friday, 16th December 2022 (16:00pm)** For coursework assessments only: students with a Reasonable Adjustment Plan (RAP) should check their RAP to see if an extension to this submission date has been agreed.
Module Leader/Assessment set by	**Professor T X Mei;** **t.x.mei@salford.ac.uk**
How to submit	You should submit your assessment on Blackboard As the University will mark assessments anonymously where this is possible, please use your student roll number and not your name on your submission.
Assessment task details and instructions	The coursework will consist of two questions. In the first question, the task is to use the root locus method and MATLAB script programming to design a proportional controller for a given plant, to achieve specified closed-loop transient performance specifications. Step response analyses of the designed system performance are also to be undertaken with MATLAB script programming.

In the second question, the task is to use the Bode method and MATLAB script programming to design a cascade phase lead compensator for a given plant, to achieve specified closed-loop transient performance specifications. Bode plot and step response analyses of the designed system performance are also to be undertaken with MATLAB script programming. In addition, simulation of the phase lead compensated closed-loop system is to be undertaken using a SIMULINK model.

The expected submission for the assessment includes:
- A report containing details of design methodology, verification, and analysis results, including MATLAB output files, and specified root locus plots, frequency response plots, and time response plots
- all MATLAB script files and SIMULINK model files

Full details of the coursework can be found in Courework folder on the module BBU site.

Knowledge and Understanding	**Assessed intended learning outcomes** On successful completion of this assessment, you will be able to: a comprehensive and systematic understanding of feedback control systems.
Practical, Professional or Subject Specific Skills	a comprehensive knowledge in the use of MATLAB and Simulink in the design of feedback controls systems.
Module Aims	1. To give a comprehensive and systematic understanding of knowledge in the use of sensors and measurement equipment. 2. To give a comprehensive and systematic understanding of analogue feedback control systems. 3. To give a comprehensive and systematic understanding of digital feedback control systems. 4. To give a comprehensive knowledge in the use of MATLAB and Simulink in the design of feedback controls systems.
Word count/ duration (if applicable)	Your assessment should be up to 5000 words

Feedback arrangements	You can expect to receive feedback three weeks after submission
Support arrangements	You can obtain support for this assessment by email at t.x.mei@salford.ac.uk
askUS	The University offers a range of support services for students through askUS.
Good Academic Conduct and Academic Misconduct	Students are expected to learn and demonstrate skills associated with good academic conduct (academic integrity). Good academic conduct includes the use of clear and correct referencing of source materials. Here is a link to where you can find out more about the skills which students need https://www.salford.ac.uk/library/skills-for-learning.
	Academic Misconduct is an action which may give you an unfair advantage in your academic work. This includes plagiarism, asking someone else to write your assessment for you or taking notes into an exam. The University takes all forms of academic misconduct seriously. You can find out how to avoid academic misconduct here.
Assessment Information **Personal Mitigating Circumstances** **Personal Tutor/Student Progression Administrator**	If you have any questions about assessment rules, you can find further information in Blackboard in the Assessment Support area. If personal mitigating circumstances may have affected your ability to complete this assessment, you can find more information about personal mitigating circumstances procedure here. If you have any concerns about your studies, contact your Personal Tutor or your Student Progression Administrator.
Assessment Criteria	The pass mark is 50% and the scale is: Percentage Mark Level of Performance 90-100 Outstanding 80-89 Excellent 70-79 Very Good 60-69 Good 50-59 Fair 40-49 Below Adequate 30-39 Unsatisfactory 20-29 Poor 10-19 Very Poor

0-9   Extremely Poor..

In Year Retrieval Scheme	Your assessment is/is not (please delete as appropriate) eligible for in year retrieval. If you are eligible for this scheme, you will be contacted shortly after the feedback deadline.
Reassessment	If you fail your assessment, and are eligible for reassessment, you will need to resubmit on or before the August hand in deadline. For students with accepted personal mitigating circumstances for absence/non submission, this will be your replacement assessment attempt. Reassessment will be the same as the original report. August resit deadline