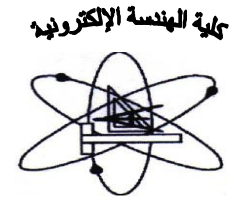


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## Course Syllabus

Department offering the program: Industrial electronics and Control Engineering  
Department offering the course: Industrial electronics and Control Engineering

| Course basic information :         |  |                            |
|------------------------------------|--|----------------------------|
| Course Code: AC343                 | Course Title: Linear Control Systems   | Level : (3)<br>Semester :1 |
| Department requirement             | Teaching hours: Lecture [3] Tutorial [2 ] - Lab [ 0 ]  |                            |
| Course objectives                  | <ol style="list-style-type: none"><li>1. To explain the several ways of dealing with the analysis of linear systems.</li><li>2. Having acquired a good knowledge of design linear system controllers, and perform system desired specifications and stability.</li><li>3. To acquire relevant design skills using MATLAB .</li></ol> |                            |
| Course Contents                    | Introduction to linear systems - Root Locus analysis - Root Locus Design - Frequency response - Stability based on frequency domain - Frequency domain compensation - Design of classical controllers - Ziegler-Nicole Design methods - Applications in MALAB  |                            |
| Assessment                         |  |                            |
| Weighting of Assessment            | - Class tutorial and quizzes : 8 %<br>- Mid-term examination: 16 %<br>- Case study and/or practical exam: ... %<br>- Final – term examination: 68 %<br>- Other types of assessment: 8 %  | Total 100 %                |
| List of text books and references: |  |                            |
| Text books                         | <ul style="list-style-type: none"><li>• Katsuhiko Ogata "Modern Control Engineering ", 5-th Edition, Wiley and Sons, Sep 4, 2009.</li><li>•</li></ul>  |                            |
| Recommended books                  | James Melsa and Donald Schultz, " Linear Control Systems ", TSTC Publishing, Oct 1, 1992,  |                            |