***Course Report of***

# CSE 631 System Identification

**A- Basic Information**

|  |  |
| --- | --- |
| **Course title:** | System identification |
| **Course code:**  | CSE 631 |
| **Program including the course:** | M.Sc. in Computers and Systems EngineeringPh.D. in Computers and Systems Engineering |
| **Department offering the program:**  | Computers and Systems Engineering |
| **Department offering the course:**  | Computers and Systems Engineering  |
| **Lecture:** 3  |  |  |
| **Lecturer:** | Dr. Ahmed Alenany  |  |

**B- Statistical Information**

|  |  |  |
| --- | --- | --- |
| **No. of students attending the course: No.**  | 3 |  |
| **Results:**  |
|  | **No.** | **%** |  |  |
| **Passed:**  | 3 | 100 |  |  |
| **Failed:**  | 0 | 0 |  |  |
|  |  |
| **Grading of successful students:** |
| **Grade** | **A** | **A-** | **B+** | **B** | **B-** | **C+** | **C** | **C-** | **D+** | **D** | **F** |
| **No.** | 1 |  | 1 |  |  |  | 1 |  |  |  |  |
| **%** | 33.3 |  | 33.3 |  |  |  | 33.3 |  |  |  |  |

**C- Professional Information**

1. **Course Teaching**

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| **Topic actually taught** |
| Introduction to system identification |
| Review of statistical concepts: mean, bias, variance, covariance, and correlation |
| Identification of impulse response parameters from general input-output data  |
| Identification of impulse response parameters using correlation analysis |
| Identification of transfer function using sine wave testing |
| The least squares method: derivation, geometric meaning |
| The least squares method: quality of the estimate |
| Model structures used in identification. |
| Recursive least squares: derivation and simulation |

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| --- |
| **Topics taught as a percentage of the content specified:** |
| **> 90%:**  |  | **70-90%:** | **100** | **< 70 %:**  |  |
| **Reasons in detail for not teaching any topic:**   |
| **If any topics were taught which are not specified, give reasons in detail**  None |

**2- Teaching and Learning Methods**

|  |  |
| --- | --- |
| **Lectures:**  | Yes |
| **Tutorial:**  | No |
| **Lab.** | No |
| **Seminar/ Workshop:**  | No  |
| **Case study:** | No |
| **Other assignments/homework:** | Yes |
| **Others:** | No  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **3- Student Assessment**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Category | Description | No. | Schedule (Week No.) | Mark |
| Semester work | Assignment | 3 | 3, 6, 9 | 30 |
| Written exams | Final Exam | 1 | 16 | 70 |
|  | **Total** | **100** |

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**Members of examination committee** Dr. Ahmed Alenany

**Role of external evaluator** None

**4- Facilities and Teaching Materials**

|  |  |
| --- | --- |
| **Totally adequate**  | Yes  |
| **Adequate to some extent**  |  |
| **Inadequate**  |  |
| **List any inadequacies:**  | None |

**5- Difficulties Faced during the Course**

**6- Student Evaluation of the Course (List any Criticisms)**

|  |  |
| --- | --- |
| **Criticisms:**  | **Response of course team** |
|  |  |
|  |  |

**7- Comments from External Evaluator(s):     Response of course team**

None

**8- Proposals for Course Enhancement:**

|  |
| --- |
| **Progress on actions identified in the previous year’s action plan:** |
| **Action State whether or not completed and give reasons for any non-completion** None |

**9- Action Plan for the Next Academic Year**

- Same as the present year.

**Actions required  Completion date  Person responsible**

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| **Course Coordinator:** Dr. Ahmed AlenanySignature:Date: |