**Course Plan**

**Master of Science Courses**

1. **Course Data**

|  |  |
| --- | --- |
| **Course Title** | Statistics and Random Processes Code: ENG 506 |
| **Academic Year / Semester** | 2014 / 2015 First Semester |
| **No. of Hours per week** | Lecture: 3 Tutorial: -- Total: 3 |
| **Course Coordinator** | Ass.Prof. Dr. Saddika Ahmed |
| **Course Instructor** | Ass.Prof. Dr. Saddika Ahmed |

1. **Course Contents and Lectures**

|  |  |
| --- | --- |
| **Lecture / Week** | **Topic** |
| 1 | Statistical data and notations |
| 2 | Measures of central tendency and dispersion |
| 3 | Regression analysis |
| 4 | Probability theory |
| 5 | Discrete and continuous random variable |
| 6 | Distributions : Bernoulli ,Binomial ,Normal ,Gamma ,Possion |
| 7 | T distribution , F distribution and χ2 distribution |
| 8 | Mid-Term Exam |
| 9 | Confidence intervals |
| 10 | Confidence intervals |
| 11 | Test of hypothesis |
| 12 | Test of hypothesis |
| 13 | Test of hypothesis |
| 14 | Correlation coefficients of two random variables |

1. **Assessment Details**

|  |  |  |  |
| --- | --- | --- | --- |
| Methods of Assessment | Grading Mode | Weighting % | Outline Details |
| Assignments / Reports |  | % | Weeks: |
| Attendance |  | % | All weeks |
| Mid-Term Exam |  | % | Week 8: 1 hour |
| Final Exam |  | % | Week 15: 3 hours |

1. **References**

**Course Notes:**

* Course Notes and Training sheets.

**Recommended Books:**

* Probability and Statistics Engineering and Management science
* Probability and statistics with reliability.
* Queuing and computer science application-KISHORS TRIVEDI.
* Miller & Freund’s Probability and Statistics for Engineering, Seventh edition Richard A.Johnson.
* Modern elementary statistics, by Johan. Freund
* Elementary Statistics A step by step Approach, Bluman Fifth Edition, Mc GRAW – Hill International Edition
* Probability and Statistics for Engineers & Scientists, Walpole , Myers ,Ye, Pearson International Edition, Eighth Edition