Module Code: STU12502
Module Name: Introduction to Statistics II
ECTS Weighting: 5 ECTS
Semester taught: Semester 2
Module Coordinator: Athanasios G. Georgiadis

Module Learning Outcomes:
On successful completion of this module, students will be able to:

- **LO1.** Strongly grasp of the fundamental statistical ideas of significance tests and confidence intervals, which underpin statistical analysis;
- **LO2.** Apply simple statistical methods to practical problems involving two groups or contingency tables;
- **LO3.** Apply simple statistical methods to practical problems involving multiple groups or explanatory variables;
- **LO4.** Explain why statistical methods are so widely applied in both the natural and social sciences, engineering and business;
- **LO5.** Develop their knowledge of more advanced statistical ideas and methods.

Module Content:
To introduce students to the elementary ideas of statistical inference and the use of simple statistical methods in practical situations. Topics include:

- statistical variation;
- parameter estimation;
- statistical tests and their properties;
- design and analysis of simple comparative studies for both binary and continuous variables;
- introduction to Analysis of Variance (ANOVA), regression and contingency tables.

Teaching and Learning Methods:
Two lectures and one tutorial per week.

Assessment Details:
The final mark is the weighted average of the assessment and the 2hour examination mark.

<table>
<thead>
<tr>
<th>Assessment Component</th>
<th>Brief Description</th>
<th>Learning Outcomes Addressed</th>
<th>% of total</th>
<th>Week set</th>
<th>Week due</th>
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</thead>
<tbody>
<tr>
<td>Examination</td>
<td>2 hour examination</td>
<td>LO1, ..., LO5</td>
<td>80%</td>
<td>n/a</td>
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<tr>
<td>Assessment</td>
<td></td>
<td></td>
<td>20%</td>
<td>24</td>
<td>29 March 9th</td>
</tr>
</tbody>
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1. TEP Glossary
2. TEP Guidelines on Workload and Assessment
Reassessment Details

Examination (2 hours, 80%), homework assessments 20%

Contact Hours and Indicative Student Workload

<table>
<thead>
<tr>
<th>Contact Hours (scheduled hours per student over full module), broken down by:</th>
<th>33 hours</th>
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<tbody>
<tr>
<td>lecture</td>
<td>22 hours</td>
</tr>
<tr>
<td>tutorial</td>
<td>11 hours</td>
</tr>
<tr>
<td>other</td>
<td>0 hours</td>
</tr>
<tr>
<td>Independent study (outside scheduled contact hours)</td>
<td>72 hours</td>
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<td>Total Hours</td>
<td>116 hours</td>
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Recommended Reading List

Extensive manuscripts sufficient for the course purposes will be provided. The following book is one of the best.


Module Pre-requisites

Prerequisite modules: STU12501

Other/alternative non-module prerequisites: knowledge of elementary probability, especially the normal distribution, expectation and variance.

Module Co-requisites

None

Module Website

Last Update

16/01/2020 by Athanasios G. Georgiadis