

Engineering Statistics

Module Code:	ENM5002-A
Academic Year:	2018-19
Credit Rating:	10
School:	Department of Mechanical and Energy Systems Engineering
Subject Area:	Engineering Mathematics
FHEQ Level:	FHEQ Level 5
Module Leader:	Professor Felician Campean

Additional Tutors:

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	16
Tutorials	12
Laboratory	8
Directed Study	62
Examinations DO NOT USE	2

Availability Periods

Occurrence	Location/Period
IPA	INTI International College, Penang / Semester 1 (Sep - Jan)
IPA	INTI International College, Penang / Semester 2 (Feb - May)
IPA	INTI International College, Penang / Semester 3 (June - Oct)
IIA	INTI International University / Semester 2 (Feb - May)
INA	INTI International University, Nilai / Semester 1 (Sep - Jan)
INA	INTI International University, Nilai / Semester 2 (Feb - May)
INA	INTI International University, Nilai / Semester 3 (June - Oct)

Module Aims

To develop critical skills in statistical engineering data collection, analysis and presentation, empirical model building and validation in engineering.

Outline Syllabus

The engineering method and statistical thinking; data collection and presentation; modelling random behaviour; estimation and testing; building empirical models through linear regression analysis; design of engineering experiments; introduction to response surface methodology; application to statistical quality control and life data analysis.

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 1 On successful completion of this module you will be able to achieve an understanding of variability underpinning any engineering experiment, will have the knowledge required to plan & design engineering experiments to collect data, to carryout a variety of statistical tests and types of analysis on the data and interpret the results, and to develop and validate empirical models of engineering processes;
- 2 On successful completion of the module you will be able to apply a range of statistical tests to engineering data, use statistical modelling techniques to derive empirical models for engineering systems, apply statistical models to process control, and utilise a specialised software package;
- 3 have advanced transferable skills in statistical data presentation and interpretation.

Learning, Teaching and Assessment Strategy

Knowledge is disseminated in large lectures, and practiced in tutorial sessions, with skills being taught, practiced and assessed in computer laboratory sessions. Oral feedback is given during labs and tutorials. The final exam will assess the wider learning outcomes expressed in the descriptor

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Examination - closed book	Examination - closed book	2 hours	70%	Yes
Referral	Examination - closed book	Supplementary Assessment -	2 hours	100%	No

		Closed Book Examination			
Summative	Coursework	500 word case study based report	0-500 words	30%	No

Legacy Code (if applicable)

ENG2030M

Reading List

To view Reading List, please go to [rebus:list](#).