

Module: Statistics 161

Module name:	Statistics 161
Code:	STA161
NQF level:	5
Type:	Core – Diploma in Information Technology (all stream)
Contact time:	24 hours
Structured time:	4 hours
Self-directed time:	12 hours
Notional hours:	40 hours
Credits:	4
Prerequisites:	EUC161

Purpose

The overall purpose of the program is to produce graduates that can think clearly and critically and apply the knowledge of Business Statistics in decision making when solving business problems and build a culture of informed decision making using statistical models.

Outcomes

Upon successful completion of this module, the student will be able to:

- Demonstrate an informed understanding of the core areas of statistics, and an informed understanding of the key terms, concepts, facts, general principles, rules and theories of statistics.
- Demonstrate an awareness of how knowledge or a knowledge system develops and evolves within statistics.
- Visualise information using various tools.
- Select and apply standard methods, procedures, or techniques within mathematics, and to plan and manage an implementation process within a well-defined, familiar and supported environment.
- Identify, evaluate, and solve defined, routine and new problems within a familiar context, and to apply solutions based on relevant evidence and procedures or other forms of explanation appropriate to statistics, demonstrating an understanding of the consequence
- Gather information from a range of sources, including oral, written, or symbolic texts, to select information appropriate to the task, and to apply basic processes of analysis, synthesis and evaluation on that information.

Assessment

Assessment is performed using a variety of instruments:

- Continuous evaluation of theoretical work through a written assignment and a summative test.
- Final assessment through a written examination.
- The assignments or projects collectively will count 20% of your class mark.
- All tests will collectively account for 80% of your class mark.

- Your class mark contributes 30% towards your final mark for the subject, while the final assessment accounts for 70% of your final mark.

Teaching and Learning

Learning materials

Presentation notes and hand-outs from direct instruction and feedback sessions.

Prescribed books (EBSCO)

 **Wegner, T. (2016). *Applied Statistics*. JUTA. [ISBN: 9781485111931]**

Additional Material

 **Stroud, K.A. (2007). *Engineering Mathematics*. Palgrave. [ISBN: 9781403942463]**

 **Rumsey, D. (2009). *Statistics II for Dummies*. Wiley. [ISBN: 9780470466469]**

Learning activities

The teaching and learning activities consist of a combination of formal lectures on theoretical concepts, exercises and discussions. The experiences and progress on these practical components form the content of class discussions. This will be achieved through a combination between presentation of theoretical concepts, guided exercises, group work and discussions together with one mandatory assignment to be completed during the module.

Notional learning hours

Activity	Units	Contact Time	Structured Time	Self-Directed Time
Lecture		14.0		6.0
Formative feedback		2.0		
Project				
Assignment	1			3.0
Test	1		2.0	5.0
Exam	1		2.0	6.0
		16.0	4.0	20.0

Syllabus

- The importance of data in statistical analysis and terminologies
- Representation on Data
- Summary tables and Visualisations,
 - Charts and plots
- Descriptive statistics - Measures of central location
- Variability of Data.