Module: Statistics 181

Module name:	Statistics 181
Code:	STA181
NQF level:	5
Type:	Core – Bachelor of Computing (all streams)
Contact time:	16 hours
Structured time:	4 hours
Self-directed time:	20 hours
Notional hours:	40 hours
Credits:	4
Prerequisites:	None

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.
- 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 consequences.
- 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 written assignment, formative, and summative test.
- Final assessment through a written examination.

Teaching and Learning

Learning materials

Prescribed Book

Statistics: Introduction – IT Without Frontiers.

Additional Material

- Presentation notes and hand-outs from direct instruction and feedback sessions;
- 🕮 Stroud, K.A. (2007). *Engineering Mathematics*. Palgrave. [ISBN: 9781403942463]
- 🕮 Wegner, T. (2016). *Applied Statistics*. JUTA. [ISBN: 9781485111931]
- 🕮 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. One mandatory assignments must be completed during the course. The experiences and progress on these practical components form the content of class discussions.

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

- Introduction to statistics
- Measures of data distribution
- Probability