UFS FORM 5: SHORT LEARNING PROGRAMME

SECTION A: CATALOGUE

CODE: HEQC/H06/EMS/GISDPR (Credit bearing SLP)

TITLE: Geographical Information Systems (GIS) for Development Practitioners

NQF **L**EVEL: NQF 5

CREDITS: 6 **N**OTIONAL **L**EARNING **H**OURS: 60

FORMAL **C**ONTACT **T**IME: 40 hours (lectures)

LEARNING **A**SSUMED TO BE **I**N **P**LACE:

A grade 12 certificate.

LEARNING **O**UTCOMES:

Learners will be able to:

- Demonstrate an understanding of GIS in development planning
- Demonstrate an understanding of spatial data modeling by means of GIS software within development planning context
- Conduct spatial analysis related to development planning means of GIS software
- Demonstrate and understanding of and apply cartographic principles to GIS and development planning
- Develop GIS management systems for development planning

BRIEF **D**ESCRIPTION OF **C**ONTENT:

1.
- Introduction (Software, GIS)
- Screen layout
- User interface
- Documents
- View
- Theme
- Table

2.
- Spatial data
- Co-ordinates and projections
- Data models
- Raster and Ventor models
- Projections
- Transformations

3.
- Data sources
- SA data
- Internet
- GPS
- Transformation
- Editing

- Point, line, polygon
- Geo-coding
- Geo-referencing
- Spatial analysis
- Queries
- Measurement
- Classification
- Buffers

4.

- Overlays
- Map calculator
- Density
- Interpolation
- Geo-statistics
- Statistical surfaces

5.

- Cartography
- Principles
- Developing a map

6.

- GIS management for development planning

CRITICAL **O**UTCOMES **S**UPPORTED BY **S**HORT **L**EARNING **P**ROGRAMME:

- Identify and solve problems using critical and creative thinking with regard Geographical Information Systems in development practice (i.e. problem solving skills)
- Work effectively with other members of a team, group, an organisation and a community to implement GIS tool and methods to enhance development planning (i.e. cooperative skills)
- Organise and manage themselves and their activities responsibly and effectively (i.e. self responsibility skills)
- Collect, analyse, organise and critically evaluate information which inform certain tools and approaches for development by means of GIS (i.e. research skills)
- Communicate effectively using visual, symbolic and/or language skills in various modes (i.e. communication skills)
- Use science and technology effectively and show responsibility towards the environment and the health of others through the utilisation of GIS tools and approaches towards development (i.e. technological and environmental literacy/skills)
- Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation in respect of various tools and methods to improve development (i.e. develop a strategic vision)
- Reflect on and explore a variety of strategies to learn more effectively (i.e. learning skills); and
- Be culturally and aesthetically sensitive across a range of social contexts and development planning tools and approaches (i.e. cultural and aesthetical skills)

METHODS OF **A**SSESSMENT: **M**ETHODS OF **A**SSESSMENT:

Information about internal and/or external mechanisms for the moderation of learner achievements to ensure comparability with the achievements of learners who attend similar courses

Formative assessment
Self-, peer, group and or facilitator assessment of individual/group/class assignments.

Portfolio assessment

Portfolio assessment (development planning tools and approaches to be used in the learners working environment)

ASSESSMENT **C**RITERIA:

This refers to assessment criteria in respect of the specific learning outcome of the course that has been described. These statements set the guidelines for developing particular assessment tasks.

- A GIS needs analysis
- Data modeling
- Development planning spatial analysis
- GIS management system

The assessment process must also satisfy the following criteria:

- The assessment purpose and the competences to be assessed will be clearly articulated in terms of the relevant learning outcomes and assessment criteria
- The assessment strategy and activities selected, designed and implemented are constructively aligned with the assessment purpose, competences, context, knowledge, skills, attitudes, learning outcomes, assessment criteria, the nature and level if students, the level, context and content of the programmes and the learning facilitation being offered.
- The assessment of learning is implemented in accordance with the chosen assessment strategy, the applicable assessment policy/ policies and the contemporary principles of good assessment
- Different kinds of evidence of learning are collected

ORGANISING **F**IELD: **7**

(1 = Agriculture and Nature Conservation)
(2 = Culture and Arts)
(3 = Business, Commerce and Management Studies)
(4 = Communication Studies and Language)
(5 = Education, Training and Development)
(6 = Manufacturing, Engineering and Technology)
(7 = Human and Social Studies)
(8 = Law, Military Science and Security)
(9 = Health Sciences and Social Services)
(10 = Physical, Mathematical, Computer and Life Sciences)
(11 = Services)
(12 = Physical Planning and Construction)

APPROVAL **D**ATE: March 2006 (previously approved at the Faculty Board Meeting of 11 February 2002)

REVIEW **D**ATE: 2008

DEPARTMENTAL OR **P**ROGRAMME "HOME":

Centre for Development Support

DEVELOPER/**C**OORDINATOR:

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