

Program Structure

Course Title	Cre
Semester 1	
Arabic Language I	2
English Language I	2
Environmental Studies I	3
Religious Studies I	2
Sudanese Studies	2
Calculus & Analytic Geometry I	2
Physics I	3
Semester 2	
Introduction to Computer II "ICDL 2"	3
Cartography/Map Reading & Survey I (Cartographic principles and map projections, AutoCAD Lab)	3
Arabic Language II	2
English Language II	2
Religious Studies II	2

Course Title	Cre
Environmental Studies II	3
Semester 3	
Cartography/ Map Reading & Survey II (Map reading & interpretation, AutoCAD Lab)	3
Geographical Information System I (ArcView & ArcGIS Lab)	3
Remote Sensing I (Erdas Imagine & Envi Lab)	3
Discrete Mathematics	3
Arabic Language III	2
English Language III	2
Religious Studies III	2
Semester 4	
Linear Algebra	2
Cartography /Map Reading and Survey III (Principles of Surveying and techniques, AutoCad Lab)	3
Geographical Information System II (ArcView & ArcGIS Lab)	3
Remote Sensing II (Erdas Imagine & Envi Lab)	3
Semester 5	
Spatial Analysis and Modeling i (Advanced GiS) (Spatial Analyst, ArcView and ArcGIS Lab I) MapInfo	3
GiS Data Structure	3

Course Title	Cre
GPS and LIDAR Technology (Navigation systems, Field and Lab Work)	3
Ethical Legislation Issues in Spatial Information Technology	2
Digital image processing and Analysis i (Advanced rS)	3
Semester 6	
remote Sensing Satellite Systems and Data types	3
Digital image processing and Analysis ii (Erdas Imagine & Envi Lab II)	3
Spatial Analysis and Modeling ii (Advance GiS)	3
Mobile GiS	3
Programming of Applications in GiS	3
Field Data Collection (field work)	3
Semester 7	
research preparation Course in Geoinformatics	3
Applications in GiS (Case study)	3
Location Based Services & technology	3
network Analysis & Modeling (Advanced GiS)	3
Semester 8	
Computer Graphics	3

Course Title	Credit
Software Engineering	3
DEM/DtMD Analysis & Modeling (Advanced GiS)	3
Applications in remote sensing (Case study)	3
Senior project	3
Semester 9	
project Management in Spatial information technology	3
Internet GIS	3
Open Standard and open Sources Web GIS	3
Final Project I	3
Collaboration Spatial Decision Support System	3
Semester 10	
GiS for Environment Monitoring and hazard Management	3
Spatial Data integration and infrastructure	3
final project II	3
Internship/ Industrial Work	3
Total Credit Hour 146	