

## 11) COMPONENTS OF THE PROGRAMME:

### 11.1. Graduation Requirement

Students enrolled in the programme would be required to earn the following minimum credits in order to graduate:

Coursework	30-36 Credits
Seminar/ Research Method	3 Credits
Long Essay	6 Credits
<b>Total</b>	<b>39-45 Credits</b>

### 11.2. First Semester Courses

<b>Core (15 credit is required)</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
GEOS 601	Spatial Statistics	3
GEOS 603	Fundamentals of GIS	3
GEOS 605	Fundamentals of Remote Sensing	3
GEOS 607	Managing GIS	3
GEOS 609	GIS Programming	3

<b>First Semester: Electives (3 Credits are required)</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
GEOS 611	GIS for Land Administration	3
GEOS 613	GIS for Urban and Land Use Planning	3
GEOS 615	GIS for Water Resource Management	3
GEOS 617	GIS for Environment	3
GEOS 619	GIS and Remote Sensing for Disaster Risk Management	3
GEOS 621	Transportation GIS	3
GEOS 623	GIS for Land Use/Land Cover Change (LULC) modeling	3
GEOS 625	Hyperspectral Imaging Principles	3
GEOS 627	Principles of Cartography	3
GEOS 629	Geospatial Intelligence	3
<b>Core (9 credits Required)</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
GEOS 604	Distributed and Web GIS	3
GEOS 606	Digital Image Processing Algorithms	3
GEOS 608	Geodatabase Management Systems	3
<b>Total</b>		<b>9</b>

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**Electives (3 Credits are required)**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
GEOS 610	Advance Spatial Statistics	3
GEOS 612	GIS for Crime Intelligence	3
GEOG 614	GIS for Business Intelligence	3
GEOS 616	GIS for Health and Sanitation	3
GEOS 618	Advanced Remote Sensing	3
GEOS 620	Hydrological Process Modeling with GIS	3
GEOS 622	Advanced Cartography	3
GEOS 624	Hyperspectral Image Processing	3
GEOS 626	GIS for Human and Landscape Ecology	3
GEOS 628	Spatial Modeling of Urban Land Use	3
GEOS 630	GIS and Remote Sensing for Disaster Planning and Mitigation	3
GEOS 632	GIS for Transportation Management	3
GEOS 634	GIS for Land Information Management	3

#### 11.4. Additional Required Courses/Credits

<b>Long Essay (9 Credits Required)</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
GEOS 600	Long Essay	6
GEOS 602	Research Method/Seminar	
	TOTAL	9