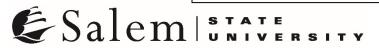
## **Special Application Process Required**

4



Name:
Student ID:
Date Admitted Into Major:

## COMBINED BACHELOR OF SCIENCE CARTOGRAPHY AND

# MASTER OF SCIENCE GEO-INFORMATION SCIENCE **GENERAL EDUCATION REQUIREMENTS**

#### **◆General Education Categories - 34-35 credits ♦FYS** First Year Seminar ♦W-I Written Communication - Level I 3 **+**OC **Oral Communication** 3 **PGR** Personal Growth & Responsibility 3 CEA 3 Creative Expression & Appreciation World Cultures WC 3 ΗP The Human Past 3 CS Contemporary Society 3 # Any SR course Scientific SR Reasoning:

Competencies ☐ ◆ Basic College Math □ ◆ Reading Comprehension

#### Quantitative Reasoning # Written Communication (Level II and Level III) and Diversity, **Power Dynamics and Social Justice**

# SR Lab course

W-II	Written Communication - Level II		
W-III	Written Communication - Level III		
DPDS	Diversity, Power Dynamics and Social Justice		

#### Minor/Free Electives (31 credits total)

Additional free electives beyond the credits listed may be required based on the use of support courses to satisfy the General Education Category requirements.

#### **COURSES IN MAJOR (54 credits)** Major Core Courses (15 credits total)

major dore dourses (10 dreams total)				
GPH	115/115H	Global Climate Change	3	
GPH	105/105H	Introduction to Geography OR	3	
GPH	110	World Regions		
GPH	140	Introduction to Maps & GIS	3	
GPH	301	Introduction to Quantitative	3	
		Geography		
GPH	302	Geographic Research	3	

#### Major Concentration Courses (27 credits)

GPH	245	Cartography	3	
GPH	340	GIS	3	
GPH	344	Remote Sensing	3	
GPH	446	Advanced GIS	3	
GPH GPH	343 444	Air Photos Interpretation OR Digital Image Processing	3	
GPH	903	Geographic Information Systems	3	
GPH	909	Interpretation of Remote Sensing Imagery	3	
GPH	942	Advanced Geographic Quantitative Methods	3	
GPH	945	GIS Project Implantation	3	

#### **Techniques Electives (6 credits)**

GPH	343	Air Photos Interpretation		
		OR	3	
GPH	444	Digital Image Processing		
GPH	346	GIS and Business	3	
GPH	347	GIS Applications	3	
GPH	442	Programming for GIS	3	

#### Geography electives (6 credits)

GPH	Geography Elective	3	
GPH	Geography Elective	3	

### 5<sup>th</sup> Year Courses (19 graduate credits)

Fall				
GPH	GPH 904 GIS for Research and Analysis 3			
GPH	GPH 960 Software Design and Programming in GIS		3	
GPH		Graduate Elective	3	
Spring				
GPH	952	Spatial Database Analysis and Design	3	
GPH	876	Directed Study (thesis) OR	4	
GPH	965	Seminar in GIS	+	
GPH		Graduate Elective	3	

Effective: 9/2022

▼ Students may choose to use support courses to satisfy general education categories but may not be required to do so. Note: If a course is used to satisfy two or more requirements (for example, a support course and Scientific Reasoning requirement), the credits are counted in only one place. Using a course to satisfy more than one requirement does not reduce the credit total required for graduation.

- Courses used to satisfy the general education requirements of the university must be taken from a minimum of six different academic disciplines. First Year Seminar and Level I Written Communications courses are exempt from this restriction. Courses may not be used to fulfill both major discipline and general education requirements.
- These Scientific Reasoning General Education Category courses do not have to be a sequence or be from the same discipline
- Level II, Level III Written Communications and Diversity, Power Dynamics and Social Justice Courses may be used to satisfy requirements anywhere else in a student's program of study where they may apply. The credits are counted only in one area.

♦ COMPETENCIES - TO BE COMPLETED WITHIN THE FIRST 30 CREDITS ♦ GENERAL EDUCATION CATEGORIES - TO BE COMPLETED WITHIN THE FIRST 30 CREDITS Exceptions in the timing of courses will be made for transfer students