

# MAJOR IN GEOGRAPHY & LAND SURVEYING

Most students electing to major in Geography and Land Surveying will complete the A.A.S. degree in Engineering Technology with a concentration in Land Surveying at CCBC-Catonsville prior to enrollment at Towson University. The details of this 64-unit program can be found on CCBC's website. All surveying courses will transfer units. However, Towson University will only accept a maximum of 64 total transfer units. Any Core Curriculum requirements not completed prior to enrollment will be completed at Towson University. Current Towson University Geography majors interested in this program should see the department chair.

The program of study follows the guidelines for a major in Geography and Environmental Planning with the exception of the requirement to fulfill the methods requirement with GEOG 375. A total of 39 units are required. (GEOG 101 is part of the A.A.S. degree.) The preferred course for fulfilling the regional requirement is GEOG 423. Elective units (a minimum of 21) should be selected in consultation with the adviser, to complement surveying skills. GEOG 491 is strongly recommended for those with little or no work experience. Students may not substitute past work experience, nor use concurrent work to meet internship requirements, without permission of the department.

For further information on this program, contact the chair of the Department of Geography and Environmental Planning at Towson University (410-704-2966).

## Requirements

Students in the Geography and Land Surveying major complete the Associate of Applied Science in Engineering Technologies with a concentration in Land Surveying at the Community College of Baltimore County (CCBC) before transferring to Towson University in their junior year to complete the Geography and Land Surveying program. It is also possible to fulfill some core and program requirements at Towson University before transferring to CCBC for the land surveying and engineering courses, then return to Towson to complete degree requirements.

Code	Title	Units
<b>Foundation Courses</b>		
GEOG 101	PHYSICAL GEOGRAPHY	3
GEOG 109	INTRODUCTION TO HUMAN GEOGRAPHY	3
GEOG 221	INTRODUCTION TO GEOSPATIAL TECHNOLOGY	3
GEOG 375	QUANTITATIVE METHODS IN GEOGRAPHY	3
GEOG 401	GROWTH OF GEOGRAPHIC THOUGHT	3
<b>Regional Course</b>		
Select one from the following:		3
GEOG 420	GEOGRAPHY OF THE UNITED STATES AND CANADA	
GEOG 423	GEOGRAPHY OF MARYLAND <sup>1</sup>	
GEOG 431	GEOGRAPHY OF AFRICA	
GEOG 443	GEOGRAPHY OF EAST ASIA	
GEOG 444	GEOGRAPHY OF SOUTH ASIA	
GEOG 445	GEOGRAPHY OF SOUTHEAST ASIA	

GEOG 447	GEOGRAPHY OF THE MIDDLE EAST
GEOG 451	GEOGRAPHY OF EUROPE
GEOG 453	GEOGRAPHY OF RUSSIA
GEOG 454	RETHINKING BRAZIL
GEOG 461	GEOGRAPHY OF LATIN AMERICA
GEOG 462	THE TWO DOWN-UNDERS: GEOGRAPHIES OF AUSTRALIA AND AOTEAROA-NEW ZEALAND
GEOG 463	THE SILK ROAD: THE GEOGRAPHIES OF CENTRAL EURASIA
<b>Electives</b>	
Select seven Geography (GEOG) courses (maximum two level-level courses). After satisfying the regional course requirement, regional courses satisfy the elective requirement as well. <sup>2</sup>	
GEOG 102	WORLD REGIONAL GEOGRAPHY
GEOG 105	GEOGRAPHY OF INTERNATIONAL AFFAIRS
GEOG 201	ENVIRONMENT AND SOCIETY
GEOG 251	INTRODUCTION TO URBAN PLANNING
GEOG 315	GEOMORPHOLOGY
GEOG 319	SOILS AND VEGETATION
GEOG 321	INTRODUCTION TO REMOTE SENSING AND PHOTOGRAMMETRY
GEOG 322	INTRO TO GEOGRAPHIC INFORMATION SCIENCE
GEOG 323	CARTOGRAPHY AND GRAPHICS I
GEOG 329	GEOGRAPHIES OF HEALTH
GEOG 350	GEOGRAPHY OF THE BLUES
GEOG 355	HISTORICAL GEOGRAPHY OF URBANIZATION
GEOG 357	CULTURAL GEOGRAPHY
GEOG 358	FEMINIST GEOGRAPHIES
GEOG 359	ECONOMIC GEOGRAPHY
GEOG 360	GEOGRAPHY OF HUMAN MIGRATION
GEOG 373	CLIMATOLOGY
GEOG 376	QUALITATIVE METHODS IN GEOGRAPHY
GEOG 377	METEOROLOGY
GEOG 381	POLITICAL GEOGRAPHY
GEOG 383	NATURAL RESOURCES AND SOCIETY: A GEOGRAPHIC PERSPECTIVE
GEOG 385	POPULATION GEOGRAPHY
GEOG 391	URBAN SYSTEMS
GEOG 393	TRANSPORTATION AND INFRASTRUCTURE PLANNING
GEOG 403	URBAN HOUSING JUSTICE
GEOG 404	SECURITIZING THE CITY
GEOG 405	COMPREHENSIVE PLANNING
GEOG 406	PLANNING FOR URBAN CLIMATE CHANGE
GEOG 408	APPLICATION OF GIS IN EMERGENCY MANAGEMENT
GEOG 409	APPLIED CLIMATOLOGY
GEOG 410	ENVIRONMENTAL GEOGRAPHY
GEOG 411	STUDIES IN NATURAL HAZARDS
GEOG 412	GEOGRAPHIES OF CONSUMPTION AND WASTE

GEOG 413	SEVERE AND HAZARDOUS WEATHER	
GEOG 414	GIS APPLICATIONS	
GEOG 416	ADVANCED REMOTE SENSING: DIGITAL IMAGE PROCESSING AND ANALYSIS	
GEOG 417	OUTDOOR RECREATION AND PLANNING MANAGEMENT	
GEOG 419	CLIMATE CHANGE: SCIENCE TO POLICY	
GEOG 426	GIS DATABASE DESIGN	
GEOG 427	THE GLOBAL ECONOMY	
GEOG 428	PYTHON SCRIPTING FOR ARCGIS	
GEOG 465	ADVANCED TECHNIQUES IN GIS	
GEOG 467	ENVIRONMENTAL HYDROLOGY	
GEOG 468	FLUVIAL GEOMORPHOLOGY	
GEOG 470	SPECIAL TOPICS IN GEOGRAPHY	
GEOG 471	GEOSPATIAL TECHNOLOGIES SPECIAL TOPICS	
GEOG 472	SPECIAL TOPICS IN SPACE AND SOCIETY	
GEOG 473	SPECIAL TOPICS IN ENVIRONMENTAL SYSTEMS AND SUSTAINABILITY	
GEOG 481	ENVIRONMENTAL IMPACT ANALYSIS	
GEOG 484	LAND USE PLANNING	
GEOG 491	GEOGRAPHY/ENVIRONMENTAL PLANNING INTERNSHIP	
GEOG 494	TRAVEL AND STUDY	
GEOG 495	DIRECTED READNGS IN GEOGRAPHY	
GEOG 496	INDEPENDENT STUDY IN GEOGRAPHY	
GEOG 498	HONORS DIRECTED READINGS	
GEOG 499	HONORS THESIS IN GEOGRAPHY	
<b>Total Units</b>		<b>39</b>

<sup>1</sup> GEOG 423 is recommended to fulfill the Regional Course requirement.

<sup>2</sup> GEOG 491 is recommended as an elective for students with little/no work experience. In addition to the required Geography (GEOG) electives, students are urged to take calculus at Towson University: MATH 273, MATH 274, and/or MATH 275.

## Departmental Honors Program

The Department of Geography and Environmental Planning offers a departmental honors program for students who demonstrate exemplary abilities in geography. Students who earn a degree in geography with honors graduate with a sense of tremendous accomplishment while also increasing their marketability to employers and graduate schools. The departmental honors program is academically rigorous. Students complete an intensive research project in their area of interest and gain a firm grounding in research for graduate school and the job market.

Geography majors who are interested in pursuing the program must meet first with the department chair. Applicants must complete 75 units with a cumulative GPA of 3.30 and at least 18 units of geography with a GPA of 3.50 in the major. Applicants admitted to the departmental honors program must complete minimum 6 units of Honors Directed Readings (GEOG 498) and Honors Thesis in Geography (GEOG 499), which may also serve to satisfy upper-level elective units needed for the major. Successful departmental honors students will complete a twenty page paper presenting substantial research in geography and defend their

thesis before a faculty audience. Departmental honors are designated on the successful graduate's transcript.

Code	Title	Units
<b>Required Coursework for Departmental Honors in Geography</b>		
GEOG 498	HONORS DIRECTED READINGS	3
GEOG 499	HONORS THESIS IN GEOGRAPHY	3

## Four-Year Plan of Study

### Suggested Four-Year Plan

Based on course availability and student needs and preferences, the selected sequences will probably vary from those presented below. Students should consult with their adviser to make the most appropriate elective choices.

Earn an AAS in Surveying from CCBC-Catonsville. For details of this program, go to CCBC's website. It is recommended that students take the equivalent of the following courses at CCBC: GEOG 101, GEOG 102 and MATH 273.

#### Junior

Term 1	Units	Term 2	Units
GEOG 221	3	GEOG 322	4
GEOG Any Upper-Level Regional course	3	GEOG Elective 2	3
GEOG 375	3	GEOG Elective 3	3
GEOG Elective 1	3	Core 14	3
Core 11	3	Elective	2-3
<b>15</b>		<b>15-16</b>	

#### Senior

Term 1	Units	Term 2	Units
GEOG Elective 4	3	GEOG Elective 5	3
GEOG 401 (Core 9)	3	GEOG Elective 6	3
Elective	3	Elective	3
Elective	3	Elective	3
Elective	3		
<b>15</b>		<b>12</b>	

**Total Units 57-58**

## Learning Outcomes

1. Students will have a comprehensive grasp of where things are in the world and why.
2. Students will know and comprehend basic terminology, principles and models in human and physical geography, and be able to apply them to real world circumstances.
3. Students will be able to use maps, tables, graphs, statistics and text to acquire information about the Earth's spatial patterns and processes.
4. Students will be able to create effect maps, tables, graphs, statistics and text to describe and analyze the Earth's spatial patterns and processes.