

## Northern Virginia Community College 2008-2009 Catalog

### GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Career Studies Certificate

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*Purpose:* This program is designed to help students develop both the theoretical knowledge and a practical facility with GIS. Students who already hold baccalaureate or master's degrees will acquire the requisite skills and knowledge to switch careers, or to apply spatial analysis in their present workplaces. Students will be positioned to pursue additional coursework toward an associate degree and/or transfer to a four-year institution for further study in the geospatial, environmental or physical sciences; in civil engineering; in information technology; or in business/marketing at a four-year institution.

*Preparation:* Students are expected to understand fundamental computer applications and concepts before enrolling in GIS courses.

<b>One Year</b>		<b>Credits</b>
<b>1st Semester</b>		
ENG/SPD	Elective	3
GEO	220 World Regional Geography	3
GIS	200 Geographic Information Systems I	<u>4</u>
	<b>Total</b>	<b>10</b>
<b>2nd Semester</b>		
GIS	201 Geographic Information Systems II	4
GIS	295 Topics in GIS – Introduction to Remote Sensing	4
<sup>1</sup> ___	Elective	<u>3</u>
	<b>Total</b>	<b>11</b>
<b>3rd Semester</b>		
GIS	205 Geographic Information Systems 3-Dimensional Analysis	4
GIS	290 Internship	1
<sup>2</sup> ___	Technical Elective	<u>3</u>
	<b>Total</b>	<b>8</b>

**Total credits for the Career Studies Certificate in Geographic Information Systems GIS) = 29**

<sup>1</sup> Elective must be chosen from the following disciplines: BIO, CHM, EGR, ENV, GEO, GOL, HIS, IT, MKT, MTH, and PHY. To be credited toward the certificate, a minimum grade of "C" for each class is required. All first-time students must take a one-credit SDV course prior to enrolling in their 16<sup>th</sup> credit at NOVA.

<sup>2</sup> Technical elective must be chosen from the following: ENV/GIS 230, GIS Applications in Environmental Science; GEO 200, Intro to Physical Geography; GEO 210, Intro to Cultural Geography; GIS 293, Studies in Cartography for GIS; ITD 110, Web Page Design (or higher level ITD); ITN 101, Intro to Network Concepts (or higher ITN); ITP 112, Visual Basic.net (or higher ITP); MTH 163, Precalculus I (or higher); or MTH 241, Statistics I.