

LANSING COMMUNITY COLLEGE

Computer, Engineering/Manufacturing Industrial Technologies

Curriculum Code: 0224
(Effective Fall 2018 –
Summer 2023)

Geospatial Science Technician A.A.S. Pathway

Geospatial Science combines computer technology, mapping technologies, aerial photography, and satellite imagery with the most current environmental resource management and environmental analysis software. Geographic Information Systems (GIS) technicians work with computer drafting, design, database management, graphic design, and computer analysis. Environmental technology requirements include a working knowledge of natural systems and related regulations and their assessment, planning, restoration, and management. GIS technicians are employed with engineering and design firms, state and federal agencies, environmental firms, parks and recreation departments, and with municipalities and local government units. Students completing this curriculum may also be eligible to apply for the Certificate of Achievement in Geospatial Science (0834). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

For More Information

Contact the Geospatial Science Program, West Campus Building, Room M103, telephone number (517) 267-6406 or Student Services West Campus, West Campus Building, Room M106, telephone number (517) 267-5452.

Semester I	Course Title	Prerequisites	Credit/Billing Hours
Program of Study Requirements			
<i>Students beginning this pathway in Spring Semester will need to start with the Semester II GRET courses. Semester I GRET and CIVL courses are only offered in Fall Semester.</i>			
CITA 110	Intro to Microsoft Office	Reading Level 4	3 / 3
CITA 133	Microsoft Access Database	Reading Level 4	3 / 3
CIVL 101	Civil Drafting	None	3 / 4
GRET 100	GIS Principles & Applications	None	3 / 4
GRET 210	Global Positioning Systems	None	3 / 4
Credits			15 / 18
Semester II	Course Title	Prerequisites	Credit/Billing Hours
Math Core Area - <i>Select 1</i>			
MATH 115	Technical Math II	(Minimum 2.0 in MATH 114 within 2 years or Math Level 5 within 2 years) and Reading Level 5	4 / 4
Global Perspectives and Diversity Core Area - <i>Select 1</i>			
GEOG 200	World Regional Geography	Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in MATH 105 or minimum 2.0 in MATH 106)	4 / 4

Writing Core Area - <i>Select 1</i>			
ENGL 121	Composition I	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	4 / 4
Program of Study Requirements			
GRET 110	Beginning ArcGIS Desktop	Reading Level 3 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	3 / 5
GRET 240	Cartography in GIS	Minimum 2.0 in (GRET 110 or concurrently) and Reading Level 3 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	3 / 4
Credits			18 / 21
Semester III	Course Title	Prerequisites	Credit/Billing Hours
Science Core Area - <i>Select 1</i>			
GEOL 230	Environmental Geology	Reading Level 5 and Writing Level 6 and Math Level 4	4 / 6
Program of Study Requirements			
CITP 110	Intro to Programming-Python	Reading Level 5 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 4
GRET 120	Advanced ArcGIS	Minimum 2.0 in GRET 110 and Reading Level 3 and Math Level 4	3 / 5
GRET 260	Automating Workflows in GIS	Minimum 2.0 in GRET 110 and Reading Level 3 and Writing Level 2 and Math Level 4	3 / 4
GRET 271	Parcel Mapping	Minimum 2.0 in GRET 110 and Reading Level 3 and Writing Level 2 and Math Level 4	3 / 5

Electives - <i>Select 1</i> <i>Courses may not be duplicated</i>			
CITA 126	Microsoft Excel	Reading Level 5	3 / 3
CITP 190	Intro to Programming in JAVA	Minimum 2.0 in (CITP 110 or CPSC 230) and Reading Level 5 and Math Level 4	4 / 4
GRET 264	Web GIS	Minimum 2.0 in GRET 110 and Reading Level 3 and Writing Level 2 and Math Level 4	3 / 4
GRET 277	Advanced GIS Data Structures	Minimum 2.0 in GRET 110 and Reading Level 3 and Writing Level 2 and Math Level 4	3 / 4
Credits			20-21 / 27-28
Semester IV	Course Title	Prerequisites	Credit/Billing Hours
Communication Core Area - <i>Select 1</i>			
COMM 110	Oral Comm in the Workplace	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	3 / 3
Program of Study Requirements			
GRET 241	Remote Sens/AirPhoto Interpret	Minimum 2.0 in GRET 110 and Reading Level 3 and Math Level 4	3 / 4
GRET 275	GIS Proj Mgmt & Implementation	Department Approval	3 / 4
Electives - <i>Select 2</i> <i>Courses may not be duplicated</i>			
CITA 126	Microsoft Excel	Reading Level 5	3 / 3
CITP 190	Intro to Programming in JAVA	Minimum 2.0 in (CITP 110 or CPSC 230) and Reading Level 5 and Math Level 4	4 / 4
GRET 264	Web GIS	Minimum 2.0 in GRET 110 and Reading Level 3 and Writing Level 2 and Math Level 4	3 / 4
GRET 277	Advanced GIS Data Structures	Minimum 2.0 in GRET 110 and Reading Level 3 and Writing Level 2 and Math Level 4	3 / 4
Credits			15-16 / 19
Total Credits			68-70 / 85-86