

Program Outcomes (PROGRAM level)

MCC Career and Technical Education (CTE) Program

Geographic Information Systems

CTE or Occupational Program Outcome *Demonstrate the ability to learn and apply required GIS software to solve problems or analyze geospatial data.*

Program Outcome Performance Indicator	Curriculum or Courses (Strategies)	Assessment Method(s)	Context for Assessment	Time of data collection	Assessment Coordinator	Evaluation of Results
Identify and evaluate local and global data for GIS.	GEOG 120 GEOG 220 GEOG 224 GEOG 230	Final project assessments	GEOG 120-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Use maps, aerial photographs, and GPS for location, data gathering, and the study of spatial relationships.	GEOG 120 GEOG 220 GEOG 224 GEOG 230	Final project assessments	GEOG 224-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Utilize proper data collection, verification, entry, editing, and maintenance procedures.	GEOG 120 GEOG 220 GEOG 224 GEOG 230	Final project assessments	GEOG 220-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Demonstrate querying techniques, searches and spatial analysis.	GEOG 120 GEOG 220 GEOG 224 GEOG 230	Final project assessments	GEOG 224-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer

Results _____ (date):

Actions _____(date):

Second-Cycle Results _____(date):

• **Program Outcomes (PROGRAM level)**

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CTE or Occupational Program Outcome *Demonstrate critical thinking skills and recognize issues related to GIS applications.*

Program Outcome Performance Indicator	Curriculum or Courses (Strategies)	Assessment Method(s)	Context for Assessment	Time of data collection	Assessment Coordinator	Evaluation of Results
Explain the diversity and range of GIS applications.	GEOG 120 GEOG 220 GEOG 224 GEOG 230	Written exams and project assessment	GEOG 224	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty
Demonstrate knowledge of GIS history and information resources.	GEOG 120 GEOG 220 GEOG 224 GEOG 230	Written exams and project assessment	GEOG 224	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty
Demonstrate strategic planning skills.	GEOG 120 GEOG 220 GEOG 224 GEOG 230	Written exams and project assessment	GEOG 224-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Analyze decision-making procedures.	GEOG 120 GEOG 220 GEOG 224 GEOG 228 GEOG 230	Written exams and project assessment	GEOG 224-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer

Results _____ (date):

Actions _____(date):

• **Program Outcomes (PROGRAM level)**

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Geographic Information Systems

CTE or Occupational Program Outcome *Exhibit knowledge of professional ethics, industry practices, and employability issues.*

Program Outcome Performance Indicator	Curriculum or Courses (Strategies)	Assessment Method(s)	Context for Assessment	Time of data collection	Assessment Coordinator	Evaluation of Results
Develop strategies for successful employment in the profession.	GEOG 120 GEOG 228 GEOG 230	Written exam and project assessment	GEOG 228	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Specify legal liability, ownership, GIS information as evidence, and ethical issues for working with GIS.	GEOG 228 GEOG 230	Written exam and project assessment	GEOG 228-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Generalize industry outlook for employment, salary, opportunities, and education.	GEOG 228 GEOG 230	Written exam and project assessment	GEOG 228-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Demonstrate ability to interact in a professional setting.	GEOG 228 GEOG 230	Written exam and project assessment	GEOG 228-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer

Results _____ (date):

Actions _____(date):

• **Program Outcomes (PROGRAM level)**

MCC Career and Technical Education (CTE) Program

Geographic Information Systems

CTE or Occupational Program Outcome *Acquire, modify, organize, and apply geospatial data sets*

Program Outcome Performance Indicator	Curriculum or Courses (Strategies)	Assessment Method(s)	Context for Assessment	Time of data collection	Assessment Coordinator	Evaluation of Results
Develop a geodatabase schema to organize spatial information.	GEOG 220 GEOG 230	Written exams and project assessment	GEOG 220-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Employ appropriate geographic data types and function.	GEOG 120 GEOG 220 GEOG 224 GEOG 230	Written exams and project assessment	GEOG 220-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Apply geographic information structure, indexing, and relational techniques.	GEOG 220 GEOG 230	Written exams and project assessment	GEOG 220-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer
Create and use metadata.	GEOG 220 GEOG 230	Written exams and project assessment	GEOG 220-Intro-level assessment GEOG 230-Master level assessment	Fall, Spring, and Summer semesters	Program Faculty	Program Faculty and internship employer

Results _____ (date):

Actions _____(date):