Set of Minutes
GIS Certificate Advisory Committee Meeting
Oct 17, 2023

The meeting was called to order by David Chambers at 2:00 PM, Oct 17, 2023, in the adjunct office of Raj Khalon Agriculture Building

Advisory Committee members include Robert Geyer, Jason Geyer, and Bryan Tassey.

Jason Geyer discussed his experience working in the agriculture industry. He discussed a few specific companies and the need for GIS in those companies. The companies had various needs for GIS including thermal/spectral imagery, Satellite imagery, transpiration imagery, mapping of nitrogen and potassium in leaves, and construction of forecasting models

Robert Geyer discussed his years of experience use of airplane imagery for mapping agricultural operations. Drone technology was later used for various purposes such as insect and pest detection. He states that using GPS is necessary but some older growers are having a harder time adjusting to this reality compared to younger growers now operating. He thinks a certificate in GIS will help to train people to use these important technologies.

Jason Geyer suggests that the GIS program proposal might add some more courses on database management, programming, and geospatial statistics

Bob seconds the idea of also adding specializations in database management.
Bob is confident that offering a GIS program is going to attract more students than we currently expect. He is confident that people who are already working in the industry are going to come back and do this program as well.

Jason made a formal statement that "I recommend that Merced College offer a GIS certificate"
Robert also made a formal statement "Regarding the GIS Certificate Program, I strongly endorse acceptance. This is something Merced College needs to enhance the learning environment and student participation. Not only will it advance what we now offer, but help build a platform for future courses."

The program narrative and outline of courses is included below.

**GeoSpatial Technology and Applications Certificate
Program Narrative**

Program Goals and Objectives
The GeoSpatial Technology and Applications certificate is a CTE program intended to offer students opportunities to gains skills and knowledge in the area of geospatial technology and

experience in the various applications of that technology. GeoSpatial technologies such as Geographic Information Systems (GIS), Remote Sensing (RS), and Global Positioning Systems (GPS) have wide application to many fields. Labor Market data from our region and elsewhere support the assumption that having skills in this field gives students supplementary skills to their major that increase their employment marketability and potential salary significantly. Opportunities to apply GeoSpatial technology skills exist in Business, IT, Social Science, Criminology, Environment and Earth Sciences, Agriculture, etc.

Contribution to Merced College Master Plan
This certificate fits into the mission of Merced College in that it is CTE and workforce training. It helps to build strategic partnerships with industry and point students into promising fields of employment. Furthermore

Program Requirements
The following shows program requirements and sequencing of the degree in its three possible tracks:

GeoSpatial Applications: Social Science
Core (Take both courses) GEOG-20 Introduction to Geographic Information Systems and Techniques with lab)2) GEOG-25 Map Interpretation and Remote Sensing (2)
Specialization GEOG-12 Human Geography (3) *And two electives* POSC-05 Introduction to Political Science Research Methods (3) AGRI-10 Agriculture, Environment and Society (3) SOC-02 Contemporary Social Problems (3) SOC-06 Introduction to Crime (3) SOC-05 Race, Ethnicity, and Inequality (3) CRIM-01 Criminology (3)
Technical Applications (Take both) DRON-01 Introduction to Drones (2) DRON-02 Federal Aviation Admin. drone pilot test preparation (1)
Credit total 15

GeoSpatial Applications: Environmental and Earth Sciences
Certificate Core

GEOG-20 Introduction to Geographic Information Systems and Techniques with lab (2) GEOG-25 Map Interpretation and Remote Sensing (2)
Specialization GEOG-01 Physical Geography (3) GEOG-01L Physical Geography Lab (1) *and two Electives* AGPS-05 Soil Science (3) BIOL-06 Environmental Science (3) GEOL-01 Physical Geology (4) GEOL-02 Historical Geology (4) GEOL-03 Earth Science (4)
Technical applications (take both courses) DRON-01 Introduction to Drones (2) DRON-02 Federal Aviation Admin. drone pilot test preparation (1)
Credit total 16

GeoSpatial Applications: Agriculture
Certificate Core GEOG-20 Introduction to Geographic Information Systems and Techniques with lab (2) GEOG-25 Map Interpretation and Remote Sensing (2)
Specialization GEOG-15 Weather and Climate (3) *and two electives* AGPS-03 Economic Entomology (3) AGPS-01 Elements of Plant Science (3) AGPS-05 Soil Science (3) AGPS-06 Fertilizers and Soil Amendments (3) AGPS-13 Fruit Tree Maintenance (3) AGPS-14 Vineyard Production and Management (3)
Technical Applications (take both courses) DRON-01 Introduction to Drones (2) DRON-02 Federal Aviation Admin. drone pilot test preparation (1)
Credit total 16

The meeting adjourned at 3:00 PM by David Chambers

Respectfully Submitted,

Dr. David Chambers