

GIS Certificate

For Academic Programs Office Use Only
R. E. _____ Catalog _____ File _____

PROGRAM CHANGE PROPOSAL - Form P-2

COLLEGE [X] CHABSS [] CoBA [] CoEHHS [] CSM

TITLE OF PROGRAM Geospatial Science Certificate

Discipline Geog

Check one: [X] Change to Program [] Program Deletion

TITLE OF DEGREE PROGRAM: Certificate in Applied Geographic Information Systems (heretofore GIS certificate)

This form is the signature sheet for a change to, or deletion of, an existing program. Note that the addition of a new option/concentration/emphasis/track is a new "program," and requires the use of Form P.

For a change to a program,

- 1. Attach a page (or pages) giving a brief summary of the purpose of this proposal, and its connection to the mission and student learning outcomes of the program.
2. Attach catalog copy showing exactly how the program should appear in the catalog if the changes are approved.

For a program deletion, attach a statement explaining the impact on students: how will the program be "taught-out" for declared majors?

Does this proposal impact other disciplines or units? Yes [] No [X] If yes, obtain signature(s).

1. Greg Tor Guthey (Signature) Nov 19 2015 Date
2. Liberal Studies/Jocelyn Ahlers (Signature) 11/23/15 Date
Program/ Department - Director/Chair

APPROVAL PROCESS

3. [Signature] [] 12/10/15 Date
College Curriculum Committee^
4. [Signature] [] 12/10/15 Date
College Dean (or Designee)*

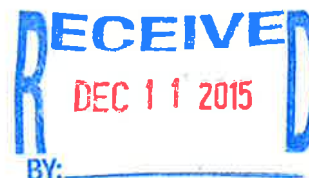
5a. [] Date
University Curriculum Committee^
5b. [] Date
Budget and Long-Range Planning Committee (if applicable)^

6. [] Date
Academic Senate
7. [] Date
Provost (or Designee)

8. [] Date
President
9. [] Date to Chancellor's Office (if applicable)

* Where appropriate, attach a memo on program impact on the unit and the ability of the unit to support it. Check the box next to the signature line to indicate whether a memo has been attached.

^ Where appropriate, attach a memo summarizing the curricular and/or resource deliberations. Check the box next to the signature line to indicate whether a memo has been attached.



Purpose of this Program Change Proposal

The GIS certificate being offered through CSUSM's Extended Learning was about to launch in Spring 2016. However in preparing to launch the program, it became clear that the intent and mission of the program as described in the P Form did not align with the pre-requisites outlined in the P Form.

Specifically, the P form explains how the GIS certificate is intended to be an addition to existing GIS certificates in our region such as Palomar College's Certificate of Proficiency in GIS and other similar certificates. But the prerequisites listed in the P form do not correspond with the courses completed for other institutions' GIS certificates. In fact, the P form requires fewer courses than are required to complete any GIS certificate. On the one hand, this appears to place our certificate in competition with other regional certificates (because it appears that we are trying to take away their students). On the other hand, the discrepancy appears to also allow prospective students who are not adequately prepared to undertake our certificate. Both situations are suboptimal. We are not in competition for students with our partners in the region and we do not want students in the program who are not appropriately trained. Combined together, incorrect perceptions of competition with regional partners and admission of improperly trained students reduce program integrity and limit the market for the GIS Certificate.

The GIS certificate fits in a very specific niche in our region. In essence, it is intended to provide students who are completely trained in the techniques of GIS (as demonstrated through completion of a GIS certificate or an equivalent combination of training and experience) with a series of courses that will provide them with applied experience and training. In other words, the current prerequisites provide inadequate lower division preparation for a certificate that is intended to be an upper division sequence of courses. This program change proposal fixes this problem by specifying the proper amount of prerequisite courses (and equivalents) for entry into the program, and thus aligns the prerequisites with the stated mission and student learning outcomes of the original P form.

Evidence from the P Form

The P Form states that students be able to demonstrate minimum proficiency in GIS for entry into the program. That proficiency is demonstrated through completion of the Palomar GIS certificate or similar training. Examples of such training include in the P form are on-the-job training, ESRI online education, and/or self-instruction. It is reasonable to include as other examples of proficiency similar certificates to Palomar's certificate (formally called the Certificate of Proficiency in GIS).

However, the catalog copy for the certificate explains the following:

“In order to be eligible for this Certificate Program, students are required to show sufficient competency in GIS as evidenced by:

- Transcripts showing satisfactory completion of a minimum of 9 units undergraduate GIS coursework to include Introduction to GIS, GIS Database Management, and Intermediate ArcGIS or equivalents; OR
- Submission of a real-world project displaying their ability in GIS; OR
- Satisfactory completion of a competency assignment”

These prerequisites do not correspond with Palomar's certificate, which requires a sequence of five courses in GIS. These courses are:

- GEOG 120 Introduction to GIS and GIS Software
- GEOG 132 Database Management and Acquisition
- GEOG 134 GIS Applications and Programming
- GEOG 136 Intermediate ArcGIS: GIS Analysis
- GEOG 138 GIS Internship or GEOG 139: GIS Specialist Internship

To rectify the discrepancy regarding the intent and purpose of the GIS certificate, and the prerequisite courses, we propose to amend the catalog copy by replacing the above description of the prerequisite training for entry into the GIS certificate with the following:

“In order to be eligible for this Certificate Program, students are required to show sufficient competency in GIS as evidenced by:

- Transcripts showing satisfactory completion of 14 units undergraduate GIS coursework to include Introduction to GIS and GIS Software, GIS Database Management and Acquisition, GIS Applications and Programming, Intermediate ArcGIS: GIS Analysis, and GIS Internship; or equivalents; OR
- Submission of a real-world project displaying their ability in GIS”

These changes should clarify for advisors, students and our partners the purpose and intent of the program and allow for the advisors to properly evaluate and discuss students’ preparation for the program.

The next page includes the complete, revised catalog copy.

Revised Catalog Copy:

CERTIFICATE IN APPLIED GEOGRAPHIC INFORMATION SYSTEMS*

Geographic Information Systems (GIS) are digital tools for analyzing and mapping spatial data in a whole range of fields from local planning to marketing and international aid. This certificate in Applied GIS provides professionals, students, and job-seekers with an opportunity to acquire and document higher level analytical skills required for applying geospatial tools toward problem solving. The certificate combines skills and knowledge in four domains: i) substantive geography and geospatial analytical techniques; ii) advanced GIS coursework; iii) ethics and decision making, and ; iv) synthesizing GIS learning through completion of a real-world project.

In order to be eligible for this Certificate Program, students are required to show sufficient competency in GIS as evidenced by:

- Transcripts showing satisfactory completion of 14 units undergraduate GIS coursework to include Introduction to GIS and GIS Software, GIS Database Management and Acquisition, GIS Applications and Programming, Intermediate ArcGIS: GIS Analysis, and GIS Internship; or equivalents; OR
- Submission of a real-world project displaying their ability in GIS

The 12-unit program requires completion of four 3-unit courses:

GEOG 320
GEOG 330
GEOG 430
GEOG 435

**The Certificate in Applied GIS is offered through Extended Learning.*

COLLEGE OF HUMANITIES, ARTS, BEHAVIORAL AND SOCIAL SCIENCES

OLD CATALOG COPY

New Program:

CERTIFICATE IN APPLIED GEOGRAPHIC INFORMATION SYSTEMS*

Geographic Information Systems (GIS) are digital tools for analyzing and mapping spatial data in a whole range of fields from local planning to marketing and international aid. This certificate in Applied GIS provides professionals, students and job-seekers with an opportunity to acquire and document higher level analytical skills required for applying geospatial tools toward problem solving. This certificate combines skills and knowledge of four domains: i) substantive geography and basic geospatial analytical techniques; ii) GIS skills obtained through advanced GIS coursework; iii) ethics and decision making, and; iv) synthesizing GIS learning through completion of a real-world project.

" In order to be eligible for this Certificate Program, students are required to show sufficient competency in GIS as evidenced by:

- Transcripts showing satisfactory completion of a minimum of 9 units undergraduate GIS coursework to include Introduction to GIS, GIS Database Management and Intermediate ArcGIS OR equivalents;
- OR
- Submission of a real-world project displaying their ability in GIS;
- OR
- Satisfactory completion of a competency assignment "

Course Requirements:

GEOG 320	3
GEOG 330	3
GEOG 430	3
GEOG 435	3
Total units	12

REPLACE EVERYTHING IN THIS BOX WITH THE TEXT ATTACHED TO THIS PAGE AS NOTED.

*The Certificate of Applied GIS is offered through Extended Learning.

Revised Catalog Copy:

CERTIFICATE IN APPLIED GEOGRAPHIC INFORMATION SYSTEMS*

Geographic Information Systems (GIS) are digital tools for analyzing and mapping spatial data in a whole range of fields from local planning to marketing and international aid. This certificate in Applied GIS provides professionals, students, and job-seekers with an opportunity to acquire and document higher level analytical skills required for applying geospatial tools toward problem solving. The certificate combines skills and knowledge in four domains: i) substantive geography and geospatial analytical techniques; ii) advanced GIS coursework; iii) ethics and decision making, and ; iv) synthesizing GIS learning through completion of a real-world project.

In order to be eligible for this Certificate Program, students are required to show sufficient competency in GIS as evidenced by:

- Transcripts showing satisfactory completion of 14 units undergraduate GIS coursework to include Introduction to GIS and GIS Software, GIS Database Management and Acquisition, GIS Applications and Programming, Intermediate ArcGIS: GIS Analysis, and GIS Internship; or equivalents; OR
- Submission of a real-world project displaying their ability in GIS

The 12-unit program requires completion of four 3-unit courses:

GEOG 320
GEOG 330
GEOG 430
GEOG 435

**The Certificate in Applied GIS is offered through Extended Learning.*

INSERT THE TEXT IN
THIS BOX IN PLACE OF
THE TEXT NOTED ON
THE PREVIOUS PAGE.