



Request for Substantial Changes to an Existing Program

I. Program Details

- a) Name (and Degree Type) of Academic Program: Undergraduate Certificate in Geographic Information Science
 - i) Emphases (if applicable): NA
- b) Academic Unit(s)/College(s): School of Natural Resources and the Environment/CALES

II. Primary Contact and Email: Katie Hughes khughes@arizona.edu

III. Planned start term for changes: Fall 2024

IV. Describe the proposed changes to the program as well as the rationale for making the specific changes and include any relevant supporting data.

We are adding an additional line/requirement for students to choose from three introductory courses. This will bring the unit total for the certificate to 13 units, up from 10. The courses are GIST 214, GIST 316, and ENVS 360. The lower divisions courses will create a bridge from introductory courses to more advanced courses and allow us to open a direct application to the program.

V. Comparison Chart –

UNDERGRADUATE

Only list modifications to requirements, if there is no change, leave blank.

	Existing Major Requirements	Requirements For Modified Major
Total units required to complete the degree* (Note: this is for the entire degree, not just the major)	10	13
Upper division units required to complete the degree		7
Total CC transfer units that may apply to this degree*	<i>No transfer credits will be accepted from other institutions.</i>	7
Foundation courses		

Minimum # of units required in the major (units counting towards major units and major GPA)	10	13
Minimum # of upper-division units required in the major (upper division units counting towards major GPA)		7
<u>Minimum # of residency units to be completed in the major</u>		6
Major requirements.	<p>Required: _____ RNR/GEOG 417 Geographic Information Systems for Natural and Social Sciences (3 units) <i>fall, spring, summer</i></p> <p>AND _____ RNR 494 Practicum (1 unit) <i>fall, spring, summer</i></p> <p>Electives: select 2 courses from the following list _____ GEOG 330 Introduction to Remote Sensing (3 units) <i>fall, spring, summer</i> _____ RNR/GEOG 403 Applications of Geographic Information Systems (3 units) <i>fall, spring,</i></p>	<p>Required: 3 NEW: GIST 214 Introduction to Map Science OR GIST 314 Cartographic Design and Production OR ENVS 360 Geospatial Analysis for Environmental Scientists</p> <p>AND _____ RNR/GEOG 417 Geographic Information Systems for Natural and Social Sciences (3 units) <i>fall, spring, summer</i></p> <p>AND _____ RNR 494 Practicum (1 unit) <i>fall, spring, summer</i></p> <p>Electives: select 2 courses from the following list _____ GEOG 330 Introduction to Remote Sensing (3 units) <i>fall, spring, summer</i></p>

	<p>____ RNR/GEOG 416A Computer Cartography (3 units) fall, spring</p> <p>____ RNR/GEOG 419* Cartographic Modeling for Natural Resources (3 units) spring</p> <p>____ RNR/GEOG 420* Advanced Geographic Information Systems (3 units) spring</p> <p>____ RNR/GEOG 422* Resource Mapping Using Unmanned Aircraft Systems (3 units) fall</p> <p>____ RNR/GEOG 473* Spatial Analysis and Modeling (3 units) spring</p> <p><i>* RNR/GEOG 417 is a prerequisite</i></p>	<p>____ RNR/GEOG 403 Applications of Geographic Information Systems (3 units) fall, spring,</p> <p>____ RNR/GEOG 416A Computer Cartography (3 units) fall, spring</p> <p>____ RNR/GEOG 419* Cartographic Modeling for Natural Resources (3 units) spring</p> <p>____ RNR/GEOG 420* Advanced Geographic Information Systems (3 units) spring</p> <p>____ RNR/GEOG 422* Resource Mapping Using Unmanned Aircraft Systems (3 units) fall</p> <p>____ RNR/GEOG 473* Spatial Analysis and Modeling (3 units) spring</p> <p><i>* RNR/GEOG 417 is a prerequisite</i></p>
Internship, practicum, applied course requirements. (Yes/No). If yes, provide description.	No	No
Senior thesis or senior project required (Yes/No). If yes, provide description.	No	No
Additional requirements (provide description)	Concurrent enrollment in a UA degree program is required unless the student already possesses an undergraduate degree.	No

VI. Faculty impact – will new faculty hires be required to deliver the new, proposed curriculum?

No need faculty are needed at this time. All courses are currently offered regularly by current faculty.

VII. Budgetary impact – indicate new resources needed and source of funding to implement proposed changes. If reallocating resources, indicate where resources will be taken from and the impact this will have on students/faculty/program/unit.

No new resources will be needed, the infrastructure is in place.

VIII. Transfer Student Consideration – Please explain how you have planned and evaluated the changes you requested in the context of:

- Mitigating the complexity of the transfer pathway/curriculum
- Supporting transfer student success
- Ensuring transferability of course work from Arizona community colleges

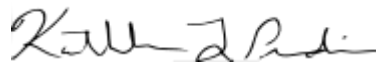
We can approve transfer credit on a case-by-case basis and can accept up to 7 units from another institution. When possible, we will work with Transfer and Articulation on direct equivalencies.

IX. Required signatures

Program Director/Main Proposer (print name and title):

Kathleen L. Prudic, PhD
Assistant Professor and Associate Director of the School of Natural Resources and the Environment

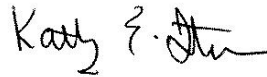
Program Director/Main Proposer signature:



Date: April 12, 2024

Department Head (print name and title):

Department Head's signature:



Date: April 12, 2024

Associate/Assistant Dean (print name): Michael Staten
Associate/Assistant Dean's signature:



Date: April 12, 2024

Dean (print name): Shane Burgess

Dean's signature:



Date: April 12, 2024

Graduate: For use by Curricular Affairs (for majors):

Committee	Approval date
GPERC	
Graduate Council	
College Academic Administrators Council	
Arizona Board of Regents (if applicable)	

For minors and certificates:

Committee	Approval date
GPERC	

UG: For use by Curricular Affairs (for majors):

Committee	Approval date
APC	
Undergraduate Council	
U-CAAC	

For minors and certificates:

Committee	Approval date
APS	
Undergraduate Council	