

To: Faculty Senate
 From: Faculty Senate Curriculum Committee: Turgay Korkmaz (Chair), Pepe Chang, Brian Davies, Liang Tang, Langston Clark, Bill Ramos,
 Re: Review of proposal for the **GIS Certificate Program** for undergraduate students in the Department of Geological Sciences
 Date: March 21, 2019

University College: Dean’s Council has reviewed and supported the proposal along with the Dean of COS.

Faculty senate curriculum committee reviewed the proposal for the *Aerospace Engineering Certificate* from the University College. **Based on our evaluation, we recommend the proposal to be approved by the faculty senate.** Yes: **3**, No: **0**, Abstain: **1**, No response: **2**. Please see below for the summary of our evaluation.

- The **objectives** of the program is to train the undergraduate students from any discipline of UTSA to be expert in using GIS tools for creating, operating, and managing geospatial data, making professional maps, and analyzing data for various science and technique applications.
- This is an interdisciplinary program, although it will be administrated through the Geological Science department, similar as the GIS Graduate Certificate program and the Geoinformatics MS degree program.
- Courses currently offered through different departments (Geological Sciences, Environmental Science and Ecology, Civil and Environmental Engineering, Political Science and Geography) can be used for the certificate program. New courses developed in other departments will be identified and will be added into the list.

The requirements for the *GIS Certificate Program for undergraduate students* include:

<p>Any undergraduate student from UTSA can apply the <i>GIS Certificate Program</i> and get the certificate. Students pursuing GIS Certificate must complete 15 semester credit hours (5 courses) as follows:</p> <p>One of three: GEO 2113. Fundamentals of GIS ES 2113. Fundamentals of Geographic Information Systems (GIS) CE 4293. Geographic Information Systems (GIS).</p> <p>One of two: GEO 3343. Introduction to Geospatial Technologies GES 3323. Spatial Analysis.</p> <p>One of two: GEO 4093. Principles of Remote Sensing GES 3363. GIS Cartography</p> <p>Required two: GEO 4xx3. Applied Statistics and Programming for GIS (<u>new course</u>) GEO 4xx3. Web GIS (<u>new course</u>)</p>	15
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Reason for Request

- GIS has become all-pervasive, driving major disruptions across sectors including government, transportation, energy, and many others.
- The Department of Geological Sciences (GEO) has already a GIS Graduate Certificate program since 2004. Very often, many undergraduate students in UTSA showed interest in getting this certificate.

Relationship to Existing Programs

- There is no similar (undergraduate) program in UTSA except the similar graduate certificate program.
- This new certificate program will build onto the existing courses at UTSA and add two new courses (explained below under resource section).

Expected Enrollment

YEAR	1	2	3	4	5
Headcount	10	20	40	50	60
FTSE	8	16	32	40	48

Resources

- Three of the five courses are already regularly taught in the Department of Geological Sciences and other departments (Environmental Science and Ecology, Civil and Environmental Engineering, Political Science and Geography).
- The fourth course will be a new course and is currently taught in graduate level. It will be trimmed to an undergraduate level course. Actually, it is just listed for the Fall 2019 and will be added into the new undergraduate catalog (Fall 2020).
- The fifth course will be a new course and is already cross-listed for graduate and undergraduate students in Fall 2019, and will be added into the new undergraduate catalog (Fall 2020).
- Currently, majority of these courses are satisfactorily taught by NTT faculty.
- For long term sustainability of the geospatial and GIS programs in the department, we need at least 2 TT faculty to meet the minimum requirements for research, teaching, and development of the programs.

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From By Laws at https://www.utsa.edu/senate/bylaws/Article_VIII.html

University Curriculum Committee (members shall include at least one tenured, one tenure-track, and one lecturer)

The University Curriculum Committee shall be responsible for:

- Reviewing proposals for new and modified academic programs and submitting recommendations on such programs to the Senate, except in the area of graduate education.
- Conducting reviews of general academic policy, monitoring the implementation of academic policies and procedures, and making recommendations to the Senate regarding such policies and procedures.
- Reviewing requirements of admission, graduation, honors, and degrees and making recommendations to the Senate, except in the area of graduate education.