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Page 1: Full-Time Faculty Position Form

Q1

Please enter the following:

Department	Earth Science
Position Title	Native & Environmental Science Professor

Q2

1. Which program review goal(s) is this request supporting? Please state how the position will help advance the specific goal(s). Please explain how this position would support historically marginalized groups? (Rubric Criterion 3)(300 words or less)

At Cuyamaca college we are in a unique position to build an Earth & Environmental Science program that teaches students to become leaders for a better future by looking critically and restoratively at the past. Climate change is here and likely to worsen. Fires, floods, record storms, habitat loss, coastal retreat, and other crises are happening. Solutions to these issues require both understanding of our planet and creative problem-solving skills. There is a strong and growing movement to include both western and native science in the understanding of environmental sustainability (see links below). By collaborating with Kumeyaay studies, Biology, and Engineering, we propose to build a program that uses an inclusive curriculum emphasizing a balance of western and native science to educate voters in our community, get students and the community interested in appreciating and sustaining the planet, and gives our students access to the growing field of environmental jobs.

We hope in creating this program we can employ students' interest in environmental issues and the community and cultural wealth of historically marginalized students give our students a voice in the future of our planet.

2. Goal: GIS Courses & Certificates

Currently we only have one adjunct faculty member versed in Geographical Information Science (GIS). This is a critical skill for geography (not to mention engineering, biology, oceanography, geology, anthropology, political science, and many other fields in the modern era) and traditional geography programs (this is what we have) have seen declining enrollments across the country (and world) for more than a decade with GIS essentially making up the difference. (<https://www.aag.org/the-state-of-geography-data-and-trends-in-higher-education/>)

News & Journal Articles

<https://ensia.com/articles/environmental-education-traditional-ecological-knowledge-native-science/>
<https://www.yesmagazine.org/environment/2020/09/18/environmental-science-indigenous-educators>
<https://www.vox.com/down-to-earth/22849782/nature-conservation-indigenous-science-jessica-hernandez>
<https://www.vox.com/22518592/indigenous-people-protect-nature-icca>
<https://e360.yale.edu/features/native-knowledge-what-ecologists-are-learning-from-indigenous-people>
<https://www.kcet.org/shows/tending-nature/five-reasons-why-native-knowledge-is-essential-to-understand-the-environment>
<https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/s13750-019-0181-3>

Academic Programs

<https://www.umt.edu/environmental-studies/graduate/focus-areas/indigenous-knowledge/default.php>
<https://earth.stanford.edu/news/qa-how-does-indigeneity-intersect-geosciences>
<https://arf.berkeley.edu/research-theme/indigenous-environmental-studies>
<https://www.esf.edu/nativepeoples/>
<https://earthpartnership.wisc.edu/indigenous-arts-and-sciences/>

Western/Native Sustainability groups

<http://www.snowchange.org/>
<https://www.nature.org/en-us/newsroom/ny-center-native-peoples-partnership/>

Q3

2. Which strategic priority/priorities is this request supporting? Please state how the position will help advance the specific priority/priorities and the College's mission, vision and values. Note: the more goals addressed the stronger the request (Rubric Criterion 4) Increase equitable access (enrollment) Eliminate equity gaps in course success (passing grade in class) Increase persistence eliminate equity gaps (re-enrolling the subsequent semester or year) Increase completion and eliminate equity gaps (graduating with a degree/certificate, or transferring) Increase hiring and retention of diverse employees to reflect the students and communities we serve (300 words or less)

Increase equitable access (enrollment) –

1. Having a full-time instructor focused on environmental issues with an indigenous lens would also help with outreach in the community.
2. A new instructor could develop degrees, certificates, and general education science courses that are:
 - Well-taught (using professional development techniques already developed for and implemented in the Engineering and Physical Science department)
 - Relevant to our student population by focusing on environmental issues with a local and indigenous lens.

Eliminate equity gaps in course success (passing grade in class)

Number 2 from equitable access plus, wrap around support services like embedded tutoring.

Increase persistence eliminate equity gaps (re-enrolling the subsequent semester or year) & Increase completion and eliminate equity gaps (graduating with a degree/certificate, or transferring)

All mentioned above PLUS further wrap around support services like

- specialized counseling,
- peer mentoring,
- career services (internships, work-based learning)

Increase hiring and retention of diverse employees to reflect the students and communities we serve

See question 5 for hiring plan.

Q4

3. How will this position improve student learning and achievement, and close equity gaps in access and outcomes in your program? What steps are you taking to close equity gaps in access and outcome, for example: (Rubric Criterion 2)- modify curriculum to reflect the college's diverse student population- close equity gaps- ensuring equitable access to courses that have pre-requisites- removing barriers for students, especially those from historically marginalized groups- adopt/create no cost/low cost textbooks and course materials(300 words or less)

1. Modify curriculum to reflect the college's diverse student population

This is the entire goal of our programs redesign. We would like to create earth science curriculum relevant to our community, focused on local issues and locations, environmental sustainability, and related social issues. For instance,

- Geography can address the impacts of redlining, zoning, and relocation of indigenous and minority groups on their long-term economic outcomes.
- Geography can help collect data on sources of pollution using GIS and show how they disproportionately impact certain communities.
- Oceanography and Geology can integrate the environmental sustainability practices of indigenous peoples locally and globally.

2. Close equity gaps

(see question 3)

3. Ensuring equitable access to courses that have pre-requisites

Currently we have no pre-requisites.

4. Removing barriers for students, especially those from historically marginalized groups

We hope to make the earth sciences highly relevant to students from historically marginalized groups by focusing our curriculum on environmental and social issues.

5. Adopt/create no cost/low cost textbooks and course materials

We will likely have to create many of our own materials because our courses will be fairly unique in higher education. We will emphasized the importance of this in the hiring process.

Q5

4. Has there been or is there evidence to demonstrate that there will be an increase in student demand for your programs and/or services? How are students being adversely impacted without this position? Please discuss supporting data from recent semesters. For example, enrollment trends, waitlist pressures, or wait time for appointments and support services, students served, etc. as they apply to this position. (Rubric Criterion 2)(300 words or less)

Careers data

Environmental jobs related to our program are a significant part of the San Diego economy and slated to grow over the next five years (see attachment). Additionally, there are 83 job listings in San Diego County alone for GIS positions with a median salary of \$67k/year (https://www.glassdoor.com/Salaries/san-diego-gis-analyst-salary-SRCH_IL.0,9_IM758_KO10,21.htm). With a full-time instructor, we could easily coordinate degree, transfer, and certificate programs for students in this area.

Enrollment data

Even without a full-time instructor we have grown enrollment over the past five years (see enrollment data for OCEA, GEOL, GEOG), however, a larger program would likely not be sustainable without a full time person. We would like to grow and shift some offerings online but we care that we have high quality courses. Having done this work in Physics and Engineering we are aware of the huge commitment this takes from multiple full time instructors. We are currently heavily reliant on part time instructor's curriculum knowledge that spans 3-4 disciplines. This is difficult to coordinate especially since there is not a simple way to pay them for this work. A full time person would be paid to coordinate and work on curriculum.

Q6

5. What are the racial and gender demographics of the faculty within your program? What steps will your program take to ensure this position will promote faculty diversity to reflect the students the college serves, for example: (Rubric Criterion 1)- Participating in professional development related to equity and diversity in hiring- Participating in professional development related to equal employment opportunity (EEO)- Completing EEO Representative Training- Employing strategies to recruit diverse applicants(300 words or less)

Current program is mostly women, 67% white 33% Hispanic.

The students in this program, however, have the best match with the demographics of the college in all the sciences. The Earth Sciences generally have better diversity than other fields of STEM in terms of race and gender. 10% of GIS specialists in industry in the US are African American (<https://www.zipppia.com/gis-analyst-jobs/demographics/>) for instance.

The department overseeing this program is dedicated to both diversity and equity. The current program faculty have all participated in some combination of both EMTLI and our department's EMTLI-based community of practice (SEED). The chairs of this department have participated in EMTLI (one as a participant and the other as an instructor), one has EEO Representative Training and has served as an EEO representative on multiple hiring committees and the other is a recent SSEC coordinator and co-chair.

We full plan to recruit diverse faculty both by the nature of the position (changing the program focus to earth science with an environmental lens and indigenous emphasis) and by proactively advertising in spaces beyond the standard postings done by the district, including, but not limited to, the following list:

- American Indian Science and Engineering Society (AISES) <https://careers.aises.org/>
- Society of Latinxs/Hispanics in Earth and Space Science <https://ciresdiversity.colorado.edu/soless>
- National Association of Black Geoscientists <http://www.nabg-us.org/job-postings>

Q7

6. Describe why this position is essential to your program and/or service area. How has the lack of this position impacted your program and/or service area? What will be the impact to the program and/or service area if this position is not filled? (Rubric Criterion 1, 3)(300 words or less)

This program provides a unique opportunity to evolve from a general education science factory to a fully realized program incorporating indigenous science and culture with a socially and environmentally conscious curriculum. It could engage and propel future environmental leaders from our community of students previously poorly represented in STEM.

Alternatively, we currently have only a handful of disconnected courses, and we are missing some modern skills like GIS (Geographical Information Systems Mapping) which could support other programs like Biology and Engineering, as well as providing good certificate programs for students looking to boost their tech marketability on their resumes or change careers. Although we have wonderful part time instructors, we do not currently have the resources to support much more than change within the classroom. Without a full-time instructor, building a fundamentally different program is out of the question. Work of that nature takes more than money; it requires investment in an institution.

Q8

7. Is this a new position, replacement for a retirement/upcoming retirement or replacement for internal promotion (faculty to administrator), or replacement for other circumstances? Please explain. (Rubric Criterion 3)(100 words or less)

This is a replacement for a resignation. Had there not been a resignation, there was also a high probability of tenure failure.

Q9

8. Please confirm that you have discussed this faculty position request with the Division Dean and that you understand that Division Deans will be providing feedback to help inform the prioritization process. Note: The Division Dean will be providing feedback to help inform the prioritization process

Yes, I have discussed this position request with the Chair of the Department

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Yes, I have discussed this position request with the Division Dean

Q10

If you would like to attach data to support your request in light of the rubric criteria, please upload a PDF, Word, or image file using the button below.

Earth%20Science%20Attachment.pdf (429.3KB)