

This template is to be used only by programs that have received specific written approval from the Provost's office to proceed with internal proposal development and review. The proposal template should be completed in full and submitted to the University Provost's Office [mailto: curriculumplanning@asu.edu]. It must undergo all internal university review and approval steps including those at the unit, college, and university levels. A program **may not** be implemented until the Provost's Office notifies the academic unit that the program may be offered.

MASTER'S DEGREE PROGRAM

College/School:	Ira A. Fulton Schools of Engineering
<i>Note: Program ownership is coded at the College/School level first and may not be a center, department or division apart from it.</i>	
Department/Division/School:	School of Sustainable Engineering and the Built Environment [CSUSENG]
Proposing faculty group (if applicable):	N/A

Name of proposed degree program:	Master of Science (MS) in Environmental Engineering
Proposed title of major:	Environmental Engineering
Master's degree type:	MS - Master of Science

If Degree Type is "Other", provide degree type and proposed abbreviation:

Is a program fee required?	No, a program fee is not required.
<i>Note: for more information about program fee requests, visit https://provost.asu.edu/curriculum-development/changemaker/form-instructions#fees</i>	

Is the unit willing and able to implement the program if the fee is denied? N/A

Requested effective term and year:	Spring 2021
(The first semester and year for which students may begin applying to the program)	

Delivery method and campus or location options: *select all locations that apply*

Downtown Phoenix
 Polytechnic
 Tempe
 Thunderbird
 West
 Other: _____

Both on-campus and ASU Online* - (check applicable campus(es) from options listed above)

ASU Online only (all courses online and managed by ASU Online)

Note: Once students elect a campus or Online option, students will not be able to move between the on-campus and the ASU Online options. Approval from the Office of the University Provost and Philip Regier (Executive Vice Provost and Dean) is required to offer programs through ASU Online. Please complete the ASU Online Offering form in Curriculum ChangeMaker to begin this request. Prior to completing the online Curriculum ChangeMaker form, please contact EdPlus at asuonline@asu.edu who can provide you with additional information regarding the online request process.

Do Not Fill in this information: Office Use Only	CIP Code:
Plan Code:	

PROPOSAL CONTACT

Name:	Treavor Boyer	Title:	Associate Professor and Program Chair
Phone number:	480-965-7447	Email:	thboyer@asu.edu

DEAN APPROVAL(S)	
This proposal has been approved by all necessary unit and college/school levels of review, and the college/school(s) has the resources to offer this degree program. I recommend implementation of the proposed degree program.	
<i>Note: An electronic signature, an email from the dean or dean's designee, or a PDF of the signed signature page is acceptable.</i>	
College/School/Division Dean name:	James S. Collofello
Signature:	
Date:	3/16/2020

Please note: Proposals for new degrees also require the review and recommendation of approval from the University Graduate Council, Curriculum and Academic Programs Committee (CAPC), the Academic Senate (2 readings), and the Office of the Provost before they can be put into operation.

The final approval notification will come from the Office of the Provost.

1. PURPOSE AND NATURE OF PROGRAM

A. Provide a brief program description:

The MS in Environmental Engineering program provides students who have a background in agricultural, biological, chemical, civil, or environmental engineering or related fields with advanced knowledge that can be applied to address grand challenges facing society including supplying clean water and safe food, designing a future without pollution and recovering valuable resources from waste, and creating healthy and smart cities. The curriculum includes core courses in environmental engineering that span engineering science, process engineering, and quantitative literacy. Elective courses can be structured for depth within one area of environmental engineering or breadth across environmental engineering. Graduates with an MS degree in Environmental Engineering are employed in engineering consulting, private industry, local and federal government, and nongovernmental organizations.

B. Will concentrations be established under this degree program? Yes No

(Please provide additional concentration information in the curricular structure section – number 7.)

2. PROGRAM NEED

Explain why the university should offer this program (include data and discussion of the target audience and market).

The MS degree in Environmental Engineering will complement the new BSE degree in Environmental Engineering that began accepting students in fall 2017. The BSE degree in Environmental Engineering has shown strong enrollment trends with approximately 150 students enrolled in the program as of fall 2019. Undergraduate students in Environmental Engineering have expressed interest in a master's degree based inquiries by students to faculty and the program chair; hence, the proposal for the MS degree in Environmental Engineering. In addition, the MS in Environmental Engineering degree will appeal to students from other engineering majors such as agricultural engineering, biological engineering, chemical engineering, etc. where their engineering background can be applied to environmental problems. Environmental engineers incorporate the principles of chemistry and microbiology with process engineering in order to produce potable water and treat wastewater, remediate contaminated soil and sediment, manage solid and hazardous waste, monitor air quality, and implement air quality control devices. Graduates with a Master's degree in Environmental Engineering pursue careers in engineering consulting including project management, senior environmental engineer within industry, water project manager, and environmental health and safety director.

The U.S. Bureau of Labor Statistics projects an 8% increase in employment of environmental engineers from 53,800 in 2016 to 58,300 in 2026. The U.S. Bureau of Labor Statistics reports that the median salary for environmental engineers was \$86,800 in 2017. Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Environmental Engineers, on the Internet at <https://www.bls.gov/ooh/architecture-and->

engineering/environmental-engineers.htm

3. IMPACT ON OTHER PROGRAMS

Attach any letters of collaboration or support from impacted programs (see checklist sheet). Please submit as a separate document.

See attached for letters of support in Appendix III.

4. PROJECTED ENROLLMENT

How many new students do you anticipate enrolling in this program each year for the next five years?

Note: The Arizona Board of Regents (ABOR) requires that nine master's degrees be awarded every three years. Thus, the projected enrollment numbers must account for this ABOR requirement.

5-YEAR PROJECTED ANNUAL ENROLLMENT					
Please utilize the following tabular format	1st Year	2nd Year (Yr. 1 continuing + new entering)	3rd Year (Yr. 1 & 2 continuing + new entering)	4th Year (Yrs. 1, 2, 3 continuing + new entering)	5th Year (Yrs. 1, 2, 3, 4 continuing + new entering)
Number of Students Majoring (Headcount)	10	20	30	40	50

5. ACCREDITATION OR LICENSING REQUIREMENTS (if applicable)

Provide the names of the external agencies for accreditation, professional licensing, etc. that guide your curriculum for this program, if any. Describe any requirements for accreditation or licensing.

None

6. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Attach a PDF copy of the assessment plan printed from the University Office of Evaluation and Educational Effectiveness assessment portal demonstrating UOEEE's approval of your assessment plan for this program. Visit the assessment portal at <https://uoeee.asu.edu/assessment-portal> or contact uoeee@asu.edu with any questions.

(See Appendix II).

7. CURRICULAR STRUCTURE

A. Curriculum Listing

Required Core Courses for the Degree			
Prefix and Number	Course Title	New Course?	Credit Hours
CEE 561	Physical-Chemical Treatment of Water and Waste	No	3
CEE 562	Environmental Biochemistry and Waste Treatment	No	3
CEE 563	Environmental Engineering Chemistry	No	3
CEE 567	Environmental Microbiology	No	3
<i>Section sub-total:</i>			12
Below is a sample list Elective or Research Courses other courses may be used with approval of the academic unit <i>(as deemed necessary by supervisory committee)</i>			
Prefix and Number	Course Title	New Course?	Credit Hours
CEE 506	Life Cycle Assessment for Civil Systems	No	3
CEE 545	Hydrology	No	3
CEE 565	Advanced Environmental Biotechnology	No	3
CEE 566	Water Reuse and Reclamation	No	3
CEE 569	Air Quality Engineering	No	3
CEE 570	Sustainable Environmental Biotechnologies	No	3
CEE 598	Special Topics	No	3
CEE 598	Special Topics: Biotransformations	No	3
CEE 598	Special Topics: Carbon Capture	No	3
CEE 598	Special Topics: Carbon Storage	No	3
CEE 598	Special Topics: Critical Analysis in Environ Engin and Science	No	3
CEE 598	Special Topics: Data Synthesis for Environmental Engineers	No	3
CEE 598	Special Topics: Environmental Nanotechnology	No	3
CEE 598	Special Topics: Environmental Organic Pollutants	No	3
<i>Section sub-total:</i>			6 or 9

Culminating Experience(s)	Credit Hours
<i>E.g. – Capstone course, portfolio, written comprehensive exam, applied project, thesis (must be 6 credit hours with oral defense)</i>	
EVE 593 Applied Project	3
EVE 599 Thesis	6

<i>Section sub-total:</i>	3 or 6
Other Requirements (choose two courses) Other courses may be substituted with approval of the academic unit. <i>E.g. – internships, clinical requirements, field studies, foreign language exam as applicable</i>	Credit Hours
CEE 560 Soil and Groundwater Remediation	3
CEE 564 Contaminant Fate and Transport	3
EVE 568 Environmental Risk Assessment	3
EVE 571 Water Quality Modeling	3
<i>Section sub-total:</i>	6
<i>Total Credit Hours</i>	30

- List all required core courses and total credit hours for the core (required courses other than internships, thesis, capstone course, etc.).
- Omnibus numbered courses cannot be used as core courses.
- Permanent numbers must be requested by submitting a course proposal to Curriculum ChangeMaker for approval.

B. Will concentrations be established under this degree program? Yes No

8. COURSES

A. Course Prefix(es): Provide the following information for the proposed graduate program.

i. Will a new course prefix(es) be required for this degree program?

Yes No

If yes, complete the **Course Prefixes / Subjects Form** for each new prefix and submit it as part of this proposal submission. Form is located under the courses tab.

B. New Courses Required for Proposed Degree Program: Provide course prefix, number, title, credit hours and brief description for any new courses required for this degree program.

EVE 568 Environmental Risk Assessment, 3 credits

Description: Students will learn about established frameworks for analyzing risks in engineering and environmental health applications including microbial, chemical, and engineering failure risks. Students will be presented fundamental probability and statistics concepts needed to complete a risk assessment including curve-fitting, Monte Carlo analysis, sensitivity analysis, and techniques for interpreting both sparse and large datasets. Additionally, principles of toxicology and microbiology will be summarized to inform case study projects. Risk perception, management, and communication approaches will be explored for applications to multiple scenarios including water and wastewater treatment, indoor air quality, and failure analysis.

EVE 571 Water Quality Modeling, 3 credits

Description: This course is focused on identifying point and nonpoint source pollution in urban and agricultural watersheds, modeling the fate and transport of this pollution in watersheds, and evaluating strategies for their mitigation. Additionally, this course will touch on water quality standards and the U.S. regulations governing the pollution sources and control strategies. This course will focus on nutrient and sediment pollution of surface waters, but will also introduce these concepts for other pollutants and groundwater systems.

9. FACULTY, STAFF, AND RESOURCE REQUIREMENTS

A. Faculty

- i. **Current Faculty** – Complete the table below for all current faculty members who will teach in the program. If listing faculty from an academic unit outside of the one proposing the degree, please provide a support statement from that unit.

Name	Rank	Highest Degree	Area of Specialization/Expertise	Estimated Level of Involvement
Morteza Abbaszadegan	Professor	PhD	Public health microbiology	Teach core and elective courses
Treavor Boyer	Associate Professor	PhD	Water quality and treatment	Program Chair
Otakuye Conroy-Ben	Assistant Professor	PhD	Antibiotic resistance, endocrine disruption	Teach core and elective courses
Anca Delgado	Assistant Professor	PhD	Environmental microbiology, biotechnology	Teach core and elective courses
Peter Fox	Professor	PhD	Water reuse	Teach core and elective courses
Matt Fraser	Professor	PhD	Air quality	Teach core and elective courses
Rolf Halden	Professor	PhD	Public health engineering	Teach core and elective courses
Kerry Hamilton	Assistant Professor	PhD	Risk assessment, public health microbiology	Teach core and elective courses
Rosa Krajmalnik-Brown	Professor	PhD	Environmental microbiology, microbial ecology	Teach core and elective courses
Rebecca Muenich	Assistant Professor	PhD	Watershed and environmental modeling	Teach core and elective courses
François Perreault	Assistant Professor	PhD	Chemistry, microbiology, nanotechnology	Teach elective courses
Bruce Rittmann	Professor	PhD	Environmental biotechnology	Teach core and elective courses
Paul Westerhoff	Professor	PhD	Water quality and treatment	Teach core and elective courses

- ii. **New Faculty** - Describe the new faculty hiring needed during the next three years to sustain the program. List the anticipated hiring schedule and financial sources for supporting the addition of these faculty members.

The Environmental Engineering program includes 13 faculty with expertise across the main areas of environmental engineering. Two searches, one on environmental process engineering and the other on public health engineering have been approved, which will add further depth to the environmental engineering faculty.

- iii. **Administration of the program** - Explain how the program will be administered for the purposes of admissions, advising, course offerings, etc. Discuss the available staff support.

The MS in Environmental Engineering will be administered within the School of Sustainable Engineering and the Built Environment using existing academic and advising staff. Treavor Boyer will serve as Program Chair; he is currently Program Chair for the BSE degree in Environmental Engineering.

- B. Resource requirements needed to launch and sustain the program:** Describe any new resources required for this program's success such as new staff, new facilities, new library resources, new technology resources, etc.

No new resources are needed to launch the program.

**APPENDIX I
OPERATIONAL INFORMATION FOR GRADUATE PROGRAMS**

(This information is used to populate the [Graduate Programs Search](#)/catalog website.)

1. **Proposed title of major:** Environmental Engineering

2. **Marketing description** *(Optional - 50 words maximum. The marketing description should not repeat content found in the program description.)*

Environmental engineers design systems that provide innovative and sustainable solutions to grand challenges facing society, such as safe and reliable drinking water, clean air, sustainable food supply, renewable energy, recycling, and environmental protection. Environmental engineers study nanotechnology, biotechnology, and sustainable engineering.

3. **Provide a brief program description** *(Catalog type (i.e. will appear in Degree Search) – no more than 150 words. Do not include any admission or curriculum information)*

The MS in environmental engineering provides students who have a background in agricultural, biological, chemical, civil, or environmental engineering or related fields with advanced knowledge that can be applied to address grand challenges facing society including supplying clean water and safe food, designing a future without pollution and recovering valuable resources from waste, and creating healthy and smart cities. Graduates with an MS degree in environmental engineering are employed in engineering consulting, private industry, local and federal government, and nongovernmental organizations.

4. **Delivery/Campus Information Options:** On-campus only (ground courses and iCourses)

5. **Campus(es) where program will be offered:**

ASU Online curriculum consists of courses that have no face-to-face content. iCourses are online courses for students in on-campus programs. iCourses may be included in a program, but may not comprise the entirety of a program. On-campus programs must have some face-to-face content.

Note: Office of the Provost approval is needed for ASU Online delivery option.

ASU Online only (all courses online and managed by ASU Online)

All other campus or location options (please select all that apply):

Downtown Phoenix Polytechnic Tempe West Other: _____

Both on-campus **and** ASU Online* - (check applicable campus(es) from options listed above)

Note: Once students elect a campus or Online option, students will not be able to move between the on-campus and the ASU Online options. Approval from the Office of the University Provost and Philip Regier (Executive Vice Provost and Dean) is required to offer programs through ASU Online. Please complete the ASU Online Offering form in Curriculum ChangeMaker to begin this request. Prior to completing the online Curriculum ChangeMaker form, please contact EdPlus at asuonline@asu.edu who can provide you with additional information regarding the online request process.

6. **Admission Requirements:**

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in environmental engineering, chemical engineering, civil engineering, agricultural engineering, biological engineering, or related field, from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants are required to submit:

1. graduate admission application and application fee
2. official transcripts
3. GRE scores
4. three letters of recommendation
5. proof of English proficiency

Additional Application Information

An applicant whose native language is not English must provide proof of English proficiency regardless of current residency.

Those seeking a teaching assistantship must demonstrate proficiency in spoken English with a score of 55 or better on the Speaking Proficiency English Assessment Kit or a score of 26 on the speaking portion of the TOEFL.

The student's credentials for admission are evaluated by the Graduate Program Chair. A student whose undergraduate degree is not in environmental engineering or related field is required to take appropriate undergraduate courses as deficiency courses to establish a base of knowledge in the discipline. Deficiencies for admission to the graduate degree program are specified at the time of admission.

Prospective students should note the following GRE score requirements need to be met for consideration for admission: minimum score in the quantitative section of 155 and minimum combined score for the quantitative and verbal sections of 301.

Applicants are strongly encouraged to submit a professional resume and personal statement.

7. Application Review Terms (if applicable session):

Indicate the first term and year in which applications will be opened for admission. Applications will be accepted on a rolling basis after that time.

Note: It is the academic unit's responsibility to display program deadline dates on their website.

Terms	Years	University Late Fee Deadline
<input checked="" type="checkbox"/> Fall (regular) <input type="checkbox"/> Session B	(year): 2021 (year):	July 1st October 1st
<input checked="" type="checkbox"/> Spring (regular) <input type="checkbox"/> Session B	(year):2021 (year):	December 1st February 8th
<input type="checkbox"/> Summer (regular) <input type="checkbox"/> Summer B	(year): (year):	May 14th May 14th

Note: Session B is only available for approved online programs.

Program admission deadlines website address: <https://ssebe.engineering.asu.edu/graduate/>

8. Curricular Requirements:**Curricular Structure Breakdown for the Academic Catalog:**

(To be completed by the Graduate College)

30 credit hours, a written comprehensive exam and a thesis, or
30 credit hours, a written comprehensive exam, and the required applied project course (EVE 593)

Required Core (12 credit hours)

CEE 561 Physical-Chemical Treatment of Water and Waste (3)
CEE 562 Environmental Biochemistry and Waste Treatment (3)
CEE 563 Environmental Engineering Chemistry (3)
CEE 567 Environmental Microbiology (3)

Electives or Research (6 or 9 credit hours)**Other Requirements (6 credit hours)**

CEE 560 Soil and Groundwater Remediation (3)
CEE 564 Contaminant Fate and Transport (3)
EVE 568 Environmental Risk Assessment (3)
EVE 571 Water Quality Modeling (3)

Culminating Experience (3 or 6 credit hours)

EVE 593 Applied Project (3) or
EVE 599 Thesis (6)

Additional Curriculum Information

Students complete a thesis or applied project as the culminating experience. Regardless of the culminating experience chosen, all students in the program complete six credit hours from the other requirements course list. Other requirement coursework may be substituted with approval of the academic unit.

9. Comprehensive Exams:

Master's Comprehensive Exam (when applicable), please select from the appropriate option.

A written comprehensive exam is required.

10. Allow 400-level courses: Yes No

Note: No more than 6 credit hours of 400-level coursework may be included on a graduate student plan of study.

11. Committee:

Required number of thesis committee members (must be at least 3 including chair or co-chairs): 3

Required number of non-thesis option committee members (must be a minimum of one): 1

12. Keywords: List all keywords that could be used to search for this program. Keywords should be specific to the proposed program – limit 10 keywords.

Environmental health engineering

Water

Resources

Agricultural

Biological
Chemical

13. Area(s) of Interest

A. Select **one (1)** primary area of interest from the list below that applies to this program.

- | | |
|--|---|
| <input type="checkbox"/> Architecture & Construction | <input type="checkbox"/> Interdisciplinary Studies |
| <input type="checkbox"/> Arts | <input type="checkbox"/> Law & Justice |
| <input type="checkbox"/> Business | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Communication & Media | <input type="checkbox"/> Psychology |
| <input type="checkbox"/> Education & Teaching | <input type="checkbox"/> STEM |
| <input checked="" type="checkbox"/> Engineering & Technology | <input type="checkbox"/> Science |
| <input type="checkbox"/> Entrepreneurship | <input type="checkbox"/> Social and Behavioral Sciences |
| <input type="checkbox"/> Health & Wellness | <input type="checkbox"/> Sustainability |
| <input type="checkbox"/> Humanities | |

B. Select **one (1)** secondary area of interest from the list below that applies to this program.

- | | |
|--|---|
| <input type="checkbox"/> Architecture & Construction | <input type="checkbox"/> Interdisciplinary Studies |
| <input type="checkbox"/> Arts | <input type="checkbox"/> Law & Justice |
| <input type="checkbox"/> Business | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Communications & Media | <input type="checkbox"/> Psychology |
| <input type="checkbox"/> Education & Teaching | <input type="checkbox"/> STEM |
| <input type="checkbox"/> Engineering & Technology | <input type="checkbox"/> Science |
| <input type="checkbox"/> Entrepreneurship | <input type="checkbox"/> Social and Behavioral Sciences |
| <input type="checkbox"/> Health & Wellness | <input checked="" type="checkbox"/> Sustainability |
| <input type="checkbox"/> Humanities | |

14. Contact and Support Information:

Office Location - Building Code & Room: <i>(Search ASU map)</i>	CAVC 437
Campus Telephone Number: <i>(may not be an individual's number)</i>	480-965-0595
Program Email Address: <i>(may not be an individual's email)</i>	sebe.advising@asu.edu
Program Website Address: <i>(if one is not yet created, use unit website until one can be established)</i>	https://ssebe.engineering.asu.edu/graduate/
Program Director (Name):	Treavor Boyer
Program Director (ASURITE):	thboyer
Program Support Staff (Name):	Mike Sever
Program Support Staff (ASURITE):	msever
Admissions Contact (Name):	Melanie Ford Bishop
Admissions Contact (ASURITE):	mcford2

15. Application and iPOS Recommendations: List the Faculty and Staff who will input admission/POS recommendations to Gportal **and** indicate their approval for Admissions and/or POS:

NAME	ASURITE	ADMSN	POS
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Mike Sever	msever	x	x
Melanie Ford Bishop	mcford2	x	x

APPENDIX II

Assessment Plan

University Office of Evaluation and Educational Effectiveness 03-05-2020
 Academic Program Assessment Plan

MS in Environmental Engineering

Status: UOEEE Provisional Approval

Comments: UOEEE provisionally approved.

Element Outcome Measure Description

AP_2Goal 0

Outcome	1	0	Graduates of the MS Environmental Engineering program will be able to demonstrate understanding of complex environmental problems
Plan_2Concepts	1		Students will demonstrate understanding of fundamental concepts related to physical, chemical, and biological processes
Plan_3Competencies	1		Environmental chemistry, environmental microbiology, and quantitative literacy including data analysis.
AP_1Process	1	1	Use of course exam and comprehensive program exam (or Applied Project report or Master's thesis) to demonstrate understanding of fundamental concepts related to physical, chemical, and biological processes.
Measure	1	1	Written comprehensive examination for program, Applied Project report, or Master's thesis to occur in the terminal semester that demonstrates understanding of fundamental concepts related to physical, chemical, and biological processes.
PC	1	1	70% of students will perform at satisfactory or better on Measure 1.1; scored using rubric developed for concepts and competencies in Outcome 1.
Measure	1	2	Course exam in CEE 560, CEE 561, or CEE 562 that tests understanding of fundamental concepts related to physical, chemical, and biological processes.
PC	1	2	70% of students will perform at satisfactory or better on Measure 1.2; scored using rubric developed for concepts and competencies in Outcome 1.

Outcome	2	0	Graduates of the MS Environmental Engineering program will be able to effectively communicate environmental problems and engineering solutions to technical and non-technical audiences.
Plan_2Concepts	2		Students will demonstrate the ability to communicate environmental engineering concepts that are technically correct and appropriate for the audience.
Plan_3Competencies	2		Technical writing, oral communication, and visualizing information and data.
AP_1Process	2	1	Use or course presentation and course technical paper (or Applied Project report or master's thesis) to demonstrate ability to communicate concepts that are technically correct.
Measure	2	1	Presentation in CEE 560, CEE 561, CEE 562, Applied Project report, or Master's thesis that demonstrates effective oral communication and data visualization.
PC	2	1	70% of students will perform at satisfactory or better on Measure 2.1; scored using rubric developed for concepts and competencies in Outcome 2.
Measure	2	2	Technical paper in CEE 560, CEE 561, CEE 562, Applied Project report, or Master's thesis that demonstrates effective technical writing and data visualization.
PC	2	2	70% of students will perform at satisfactory or better on Measure 2.2; scored using rubric developed for concepts and competencies in Outcome 2.

Outcome	3	0	Graduates of the MS Environmental Engineering program will be employed in Civil, Environmental, or Sustainable Engineering field
Plan_2Concepts	3		Students will demonstrate the ability to communicate on a professional and personal level to secure desired position in environmental engineering or related field
Plan_3Competencies	3		Breadth of technical knowledge in environmental engineering, ability to propose engineering solutions to environmental problems, and ability to communicate ideas and solutions
AP_1Process	3	1	Use of questionnaires to track student interaction with industry and potential employers, and alumni job placement.
Measure	3	1	Employment questionnaire in terminal semester as part of comprehensive examination for program, Applied Project, or Thesis to track student interactions with industry and potential employers
PC	3	1	70% of students will have interacted with industry and potential employers through conferences, interviews, and other industry events in Environmental Engineering or related fields.
Measure	3	2	Employment questionnaire to alumni from the program 3 to 5 years after graduation.
PC	3	2	70% of students that graduate will have secured positions in Environmental Engineering or related fields.

If you have questions, please e-mail assessment@asu.edu or call UOEEE at (480) 727-1731.

APPENDIX III

Statements of Collaboration and Impact

Ira A. Fulton Schools of Engineering – Official Submission

From: [Sergio Quiros](#)
To: [Curriculum Planning](#)
Cc: [Michael Sever](#); [Jeremy Helm](#); [Treavor Boyer](#)
Subject: IFSE Establishment -MS in Environmental Engineering
Date: Tuesday, March 17, 2020 4:16:02 PM
Attachments: [IFSE - MS in Environmental Engineering.pdf](#)
[proposal-establish-new-masters-degree - revised 11-6-17 EVE 102819.doc](#)

Hello,

Attached is the proposal to establish the following:

Ira A. Fulton Schools of Engineering
School of Sustainable Engineering and the Built Environment
Proposal to establish a graduate program
[MS in Environmental Engineering](#)

Best,

Sergio G. Quiros

Specialist Senior, Academic, and Student Affairs
Ira A. Fulton Schools of Engineering
Arizona State University
Tempe, AZ 85287-8109
Phone: 480/727-5770
Email: Sergio.Quiros@asu.edu

Graduate Programs, School of Sustainable Engineering and the Built Environment, Ira A. Fulton Schools of
Engineering



P.O. BOX 875306
TEMPE, AZ 85287-5306
PHONE (480) 727-7605
FAX (480) 965-0557
email: Peter.Fox@asu.edu

October 2, 2019

Re: MS degree Program in Environmental Engineering (EVE)

As Graduate Program Chair of the School of Sustainable Engineering and Built Environment, I am in complete support of creating a new Master of Science degree program in Environmental Engineering. This has been a mature program at Arizona State University as evidenced by its top 20 ranking by USNW. Having a separate degree program will allow us to advertise and recruit more effectively which should further enhance our rankings and stature.

Sincerely,

Peter Fox

Peter Fox, Ph.D.

- Professor and Graduate Program Chair -

Environmental Resource Management program, Ira A. Fulton Schools of Engineering**Treavor Boyer**

From: Larry Olson
Sent: Wednesday, October 2, 2019 4:37 PM
To: Treavor Boyer
Subject: RE: Request 1

Hi Treavor:

I have read your proposal for a new M.S. in Environmental Engineering and am in complete support of it. The degree will be a valuable opportunity for students with an undergraduate degree in environmental engineering, but also for students from other disciplines that wish to focus on environmental problems.

The M.S. in Environmental Engineering complements, but is not duplicative of the M.S. in Environmental & Resource Management degree, which has a stronger focus on legal and policy issues.

I look forward to working with you in any way I can to help you implement this degree.

Best regards,
Larry

Larry Olson, Ph.D.
Associate Professor
Program Chair, Environmental & Resource Management
Senior Sustainability Scientist
The Polytechnic School
Ira A. Fulton Schools of Engineering
Arizona State University
480-727-1499
Larry.Olson@asu.edu

From: Treavor Boyer <thboyer@asu.edu>
Sent: Tuesday, October 01, 2019 1:40 PM
To: Larry Olson <larry.olson@asu.edu>
Subject: Request 1

Hi Larry,

I am emailing you 2 requests in separate emails.

In this email I am requesting your support for new MS degree in Environmental Engineering. The new program application is attached. Please let me know if you would like to discuss.

Thank you,
Treavor

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Treavor H. Boyer, Ph.D.
Associate Professor of Environmental Engineering
Program Chair, Environmental Engineering
School of Sustainable Engineering and the Built Environment
Arizona State University
Office: ISTB4, Room 361
Phone: 480-965-7447
Email: thboyer@asu.edu
Mailing: PO Box 873005, Tempe, AZ 85287-3005
Google Scholar: http://scholar.google.com/citations?user=vhn_98oAAAAJ
Twitter: @BoyerLabASU

Herberger Institute for Design and the Arts

From: [Kathryn Maxwell](#)
To: [Sergio Quiros](#)
Cc: [James Collofello](#); [Jeremy Helm](#)
Subject: Re: IFSE Establishment - MS in Environmental Engineering (GC Review)
Date: Wednesday, April 8, 2020 4:12:20 PM

Hello,



The Herberger Institute of Design and the Arts has no reservation in supporting the proposed MS in Environmental Engineering.

Good luck with the new degree and stay healthy.

Regards,

Kathryn

Kathryn Maxwell
Associate Dean for Student Success
Professor of Printmaking

ASU Herberger Institute for Design and the Arts
Dixie Gammage Hall, Rm. 132
PO Box 872102
Tempe, AZ 85287-2102
p: 480.965.0050
f: 480.727.6529

From: Sergio Quiros <Sergio.Quiros@asu.edu>
Date: Friday, April 3, 2020 at 8:54 AM
To: kathrynm <K.Maxwell@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>, Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: IFSE Establishment - MS in Environmental Engineering (GC Review)

Sent on behalf of Dr. James S. Collofello

Hello,

J

I am writing to request an impact/support letter (email will suffice) for our proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello
Vice Dean for Academic and Student Affairs

The College of Liberal Arts and Sciences

From: [Fabio Milner](#)
To: [James Collofello](#)
Cc: [Sergio Quiros](#); [Jeremy Helm](#); [Fabio Milner](#)
Subject: Re: IFSE Establishment - MS in Environmental Engineering
Date: Friday, April 17, 2020 1:09:55 PM
Attachments: [image001.png](#)

Dear Jim,

The College does not see any impact on our programs and courses.

The one comment I'd like to make is that there is no mention of electives outside of ENG that would suit training for this program. For instance, we think that graduates in environmental engineering would greatly benefit from GIS that are available in SGSUP.

Best,
Fabio

Fabio Augusto Milner, PhD
Associate Dean of Graduate Initiatives
Assistant Director, Simon Levin Center
[The College of Liberal Arts and Sciences](#)
Director of Mathematics for STEM Education
[School of Mathematical and Statistical Sciences](#)
[Arizona State University](#)



Armstrong Hall, Office 214
P: 480/965-5877 | F: 480/965-2110
milner@asu.edu
URL: <https://thecollege.asu.edu/content/fabio-milner>

From: Sergio Quiros <Sergio.Quiros@asu.edu>
Date: Friday, April 3, 2020 at 08:55
To: Fabio Milner <milner@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>, Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: IFSE Establishment - MS in Environmental Engineering
Resent-From: <milner@asu.edu>

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our

proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello

Vice Dean for Academic and Student Affairs

Professor of Computer Science and Engineering

School of Computing Informatics and Decision Systems Engineering

Ira A. Fulton Schools of Engineering

Arizona State University

From: Sergio Quiros

Sent: Tuesday, March 17, 2020 4:16 PM

To: Curriculum Planning <CurriculumPlanning@exchange.asu.edu>

Cc: Michael Sever <Mike.Sever@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>; Treavor Boyer <thboyer@asu.edu>

Subject: IFSE Establishment -MS in Environmental Engineering

Hello,

Attached is the proposal to establish the following:

Ira A. Fulton Schools of Engineering

School of Sustainable Engineering and the Built Environment

Proposal to establish a graduate program

[MS in Environmental Engineering](#)

Best,

Sergio J. Quiros

Specialist Senior, Academic, and Student Affairs

Ira A. Fulton Schools of Engineering

Arizona State University

Tempe, AZ 85287-8109

Phone: 480/727-5770

Email: Sergio.Quiros@asu.edu

School of Sustainability

From: [Christopher Boone](#)
To: [Sergio Quiros](#)
Subject: RE: IFSE Establishment - MS in Environmental Engineering
Date: Monday, April 20, 2020 11:06:50 AM

Dear Sergio,

SOS is happy to support the proposal for the new MS in Environmental Engineering.

Christopher Boone
Dean and Professor



P.O. Box 875502 | Tempe, Arizona | 85287-5502
PH: 480-965-2236 | Main: 480-965-2975
Executive Assistant: Lorraine.Protocollo@asu.edu

SchoolOfSustainability.asu.edu

The School of Sustainability embraces ASU's mission as being a comprehensive public research university, measured not by whom it excludes, but rather by whom it includes and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural and overall health of the communities it serves. We support and foster a culture of inclusiveness, tolerance, and respect that promotes equal opportunity and diversity among SOS faculty, staff, and students and through our engagement with diverse communities within and beyond the University.

From: Sergio Quiros <Sergio.Quiros@asu.edu>
Sent: Friday, April 17, 2020 11:19 AM
To: Christopher Boone <Christopher.G.Boone@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: RE: IFSE Establishment - MS in Environmental Engineering

Hello,

The Graduate College has requested that we provide your feedback/support regarding our proposed [MS in Environmental Engineering](#) before the proposal can move forward in the university's approval and review process. Let us know if you have any questions or concerns.

Thank you,

Sergio Quiros

Specialist Senior, Academic, and Student Affairs
Ira A. Fulton Schools of Engineering
Arizona State University
Tempe, AZ 85287-8109
Phone: 480/727-5770
Email: Sergio.Quiros@asu.edu

From: Sergio Quiros
Sent: Friday, April 3, 2020 8:55 AM
To: Christopher Boone <Christopher.G.Boone@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: FW: IFSE Establishment - MS in Environmental Engineering

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello

Vice Dean for Academic and Student Affairs

Professor of Computer Science and Engineering

School of Computing Informatics and Decision Systems Engineering

Ira A. Fulton Schools of Engineering

Arizona State University

From: Sergio Quiros

Sent: Tuesday, March 17, 2020 4:16 PM

To: Curriculum Planning <CurriculumPlanning@exchange.asu.edu>

Cc: Michael Sever <Mike.Sever@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>; Treavor Boyer <tboyer@asu.edu>

Subject: IFSE Establishment -MS in Environmental Engineering

Hello,

Attached is the proposal to establish the following:

Ira A. Fulton Schools of Engineering

School of Sustainable Engineering and the Built Environment

Proposal to establish a graduate program

[MS in Environmental Engineering](#)

Best,

Sergio Quiros

Specialist Senior, Academic, and Student Affairs

Ira A. Fulton Schools of Engineering

Arizona State University

Tempe, AZ 85287-8109

Phone: 480/727-5770

Email: Sergio.Quiros@asu.edu

New College of Interdisciplinary Arts and Sciences

From: Stacey Kimbell <kimbell@asu.edu>
Sent: Tuesday, April 28, 2020 9:31 AM
To: Sergio Quiros <Sergio.Quiros@asu.edu>
Subject: FW: IFSE Establishment - MS in Environmental Engineering

Hi Sergio,

New College is pleased to support the MS in Environmental Engineering. Please see the statement of support below from New College Associate Dean Lara Ferry.

Sincerely,
Stacey

Stacey Kimbell
Executive Administrative Support Specialist and Curriculum Coordinator
New College | Arizona State University
P.O. Box 37100, M/C 1251
Phoenix, AZ 85069-7100

Students: Please include your 10-digit ASU ID number in all email communications.

Confidentiality Notice: This e-mail message, including attachments, is for the sole use of the intended recipients and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message.

From: Lara Ferry
Sent: Tuesday, April 28, 2020 9:19 AM
To: Stacey Kimbell <kimbell@asu.edu>
Subject: Re: IFSE Establishment - MS in Environmental Engineering

Hi Stacey,

MNS is happy to support the degree.

Dr. Lara Ferry (PhD)
Pronouns: she/her/hers
President's Professor
Interim Director, School of Mathematical and Natural Sciences
Associate Dean for Research and Strategic Initiatives, New College of Interdisciplinary Arts and Sciences
Arizona State University

Shipping Address (packages): 4701 W. Thunderbird Rd • FAB 3rd floor • Glendale, AZ 85306-4908
Mailing Address (letters): PO Box 37100, MC 1251 • Phoenix, AZ 85069-7100

p: [802-543-2817](tel:802-543-2817)
email: lara_ferry@asu.edu
web: morphology.asu.edu
twitter: laraferry

Come see what's New in [New College](#)

From: Stacey Kimbell <kimbell@asu.edu>
Date: Tuesday, April 28, 2020 at 9:16 AM
To: Lara Ferry <Lara.Ferry@asu.edu>
Subject: FW: IFSE Establishment - MS in Environmental Engineering

Good morning Lara,

Please see the request for a statement of support for Fulton's MS in Environmental Engineering. Please advise.

Thanks!
Stacey

From: Sergio Quiros
Sent: Friday, April 17, 2020 11:20 AM
To: Patricia Friedrich <Patricia.Friedrich@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: RE: IFSE Establishment - MS in Environmental Engineering

Hello,

The Graduate College has requested that we provide your feedback/support regarding our proposed [MS in Environmental Engineering](#) before the proposal can move forward in the university's approval and review process. Let us know if you have any questions or concerns.

Thank you,

Sergio Q. Quiros

Specialist Senior, Academic, and Student Affairs
Ira A. Fulton Schools of Engineering
Arizona State University
Tempe, AZ 85287-8109
Phone: 480/727-5770
Email: Sergio.Quiros@asu.edu

From: Sergio Quiros
Sent: Friday, April 3, 2020 8:55 AM
To: Patricia Friedrich <Patricia.Friedrich@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: IFSE Establishment - MS in Environmental Engineering

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University

From: Sergio Quiros
Sent: Tuesday, March 17, 2020 4:16 PM
To: Curriculum Planning <CurriculumPlanning@exchange.asu.edu>
Cc: Michael Sever <Mike.Sever@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>; Treavor Boyer <thboyer@asu.edu>
Subject: IFSE Establishment -MS in Environmental Engineering

Hello,

Attached is the proposal to establish the following:

Ira A. Fulton Schools of Engineering
School of Sustainable Engineering and the Built Environment
Proposal to establish a graduate program
[MS in Environmental Engineering](#)

Best,

Sergio S. Quiros

Specialist Senior, Academic, and Student Affairs
Ira A. Fulton Schools of Engineering
Arizona State University
Tempe, AZ 85287-8109
Phone: 480/727-5770
Email: Sergio.Quiros@asu.edu

College of Integrative Sciences and Arts

From: [Duane Roen \(Dean\)](#)
To: [Sergio Quiros](#); [James Collofello](#); [Jeremy Helm](#)
Cc: [Kelli Haren](#); [Asao Inoue](#); [Kelly Steele](#)
Subject: RE: IFSE Establishment - MS in Environmental Engineering
Date: Friday, April 3, 2020 2:06:09 PM

Sergio, Jim, and Jeremy,

CISA is happy to support Fulton's proposal for an MS in Environmental Engineering. It will have no discernable impact on any master's degree in CISA.

Please let me know if CISA can provide other forms of support when you launch the degree.

Be safe.

Duane

Duane Roen
Vice Provost, Polytechnic campus
Dean, College of Integrative Sciences and Arts
Arizona State University
Mail Code: 2780
7271 E Sonoran Arroyo Mall
Mesa, AZ 85212-6415
P: 480-727-1415

From: Sergio Quiros
Sent: Friday, April 3, 2020 8:55 AM
To: Duane Roen (Dean) <Duane.Roen@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: FW: IFSE Establishment - MS in Environmental Engineering

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University

College of Health Solutions

From: [Julie Liss](#)
To: [Sergio Quiros](#)
Cc: [James Collofello](#); [Jeremy Helm](#)
Subject: Re: IFSE Establishment - MS in Environmental Engineering
Date: Friday, April 17, 2020 2:51:55 PM

Dear Sergio,

Thank you for sending these documents for our consideration and feedback.

The College of Health Solutions has reviewed the proposal to establish an MS in Environmental Engineering, and we see no overlap or negative impact on our degree programs.

You have our support to offer the proposed program.

Best wishes,
Julie

From: Sergio Quiros <Sergio.Quiros@asu.edu>
Date: Friday, April 17, 2020 at 11:20 AM
To: Julie Liss <JULIE.LISS@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>, Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: RE: IFSE Establishment - MS in Environmental Engineering

Hello,

The Graduate College has requested that we provide your feedback/support regarding our proposed [MS in Environmental Engineering](#) before the proposal can move forward in the university's approval and review process. Let us know if you have any questions or concerns.

Thank you,

Sergio S. Quiros

Specialist Senior, Academic, and Student Affairs
Ira A. Fulton Schools of Engineering
Arizona State University
Tempe, AZ 85287-8109
Phone: 480/727-5770
Email: Sergio.Quiros@asu.edu

From: Sergio Quiros
Sent: Friday, April 3, 2020 8:55 AM
To: Julie Liss <JULIE.LISS@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: IFSE Establishment - MS in Environmental Engineering

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello

Vice Dean for Academic and Student Affairs

Professor of Computer Science and Engineering

School of Computing Informatics and Decision Systems Engineering

Ira A. Fulton Schools of Engineering

Arizona State University

From: Sergio Quiros

Sent: Tuesday, March 17, 2020 4:16 PM

To: Curriculum Planning <CurriculumPlanning@exchange.asu.edu>

Cc: Michael Sever <Mike.Sever@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>; Treavor Boyer <tboyer@asu.edu>

Subject: IFSE Establishment -MS in Environmental Engineering

Hello,

Attached is the proposal to establish the following:

Ira A. Fulton Schools of Engineering

School of Sustainable Engineering and the Built Environment

Proposal to establish a graduate program

[MS in Environmental Engineering](#)

Best,

Sergio S. Quiros

Specialist Senior, Academic, and Student Affairs

Ira A. Fulton Schools of Engineering

Arizona State University

Tempe, AZ 85287-8109

Phone: 480/727-5770

Email: Sergio.Quiros@asu.edu

School for the Future of Innovation in Society

From: [David Guston](#)
To: [Sergio Quiros](#)
Cc: [James Collofello](#); [Jeremy Helm](#); [Jameson Wetmore](#)
Subject: Re: IFSE Establishment - MS in Environmental Engineering
Date: Friday, April 17, 2020 12:56:38 PM

Apologies for the delay. While I have no objections to the degree program in terms of any overlap or conflict with SFIS programs, it seems a shame that the curriculum does not include the opportunity for students to engage in the study of policy, regulation and risk management and communication.

I cc: my associate director for academic programs Jamey Wetmore in case you might want to explore such topics in collaboration with SFIS and our master's curriculum in Science and Technology Policy (face to face) and Public Interest Technology (online).

David H. Guston
Foundation Professor
Director, School for the Future of Innovation in Society
Arizona State University

From: Sergio Quiros <Sergio.Quiros@asu.edu>
Date: Friday, April 17, 2020 at 11:21 AM
To: David Guston <David.Guston@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>, Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: RE: IFSE Establishment - MS in Environmental Engineering

Hello,

The Graduate College has requested that we provide your feedback/support regarding our proposed [MS in Environmental Engineering](#) before the proposal can move forward in the university's approval and review process. Let us know if you have any questions or concerns.

Thank you,

Sergio Quiros
Specialist Senior, Academic, and Student Affairs
Ira A. Fulton Schools of Engineering
Arizona State University
Tempe, AZ 85287-8109
Phone: 480/727-5770
Email: Sergio.Quiros@asu.edu

From: Sergio Quiros
Sent: Friday, April 3, 2020 8:55 AM
To: David Guston <David.Guston@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: IFSE Establishment - MS in Environmental Engineering

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello

Vice Dean for Academic and Student Affairs

Professor of Computer Science and Engineering

School of Computing Informatics and Decision Systems Engineering

Ira A. Fulton Schools of Engineering

Arizona State University

From: Sergio Quiros

Sent: Tuesday, March 17, 2020 4:16 PM

To: Curriculum Planning <CurriculumPlanning@exchange.asu.edu>

Cc: Michael Sever <Mike.Sever@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>; Treavor Boyer <thboyer@asu.edu>

Subject: IFSE Establishment -MS in Environmental Engineering

Hello,

Attached is the proposal to establish the following:

Ira A. Fulton Schools of Engineering

School of Sustainable Engineering and the Built Environment

Proposal to establish a graduate program

[MS in Environmental Engineering](#)

Best,

Sergio Q. Quiros

Specialist Senior, Academic, and Student Affairs

Ira A. Fulton Schools of Engineering

Arizona State University

Tempe, AZ 85287-8109

Phone: 480/727-5770

Email: Sergio.Quiros@asu.edu

Sandra Day O'Connor College of Law

From: [Adam Chodorow](#)
To: [Sergio Quiros](#)
Cc: [James Collofello](#); [Jeremy Helm](#)
Subject: RE: IFSE Establishment - MS in Environmental Engineering
Date: Sunday, April 5, 2020 8:41:21 AM

The law school supports this proposal.

From: Sergio Quiros <Sergio.Quiros@asu.edu>
Sent: Friday, April 3, 2020 8:55 AM
To: Adam Chodorow <Adam.Chodorow@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: FW: IFSE Establishment - MS in Environmental Engineering

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University

W. P. Carey School of Business

From: Amy Hillman (DEAN) <AMY.HILLMAN@asu.edu>
Sent: Friday, April 3, 2020 9:57 AM
To: Sergio Quiros <Sergio.Quiros@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>; Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: Re: IFSE Establishment - MS in Environmental Engineering

Hello Jim,

The W. P. Carey School of Business has no objection to FSE's creation of a MS in Environmental Engineering.

Amy

Amy Hillman, PhD
Dean
Charles J. Robel Dean's Chair
W. P. Carey School of Business
amy.hillman@asu.edu | Ph: 480.965.3402



Where Business is Personal®

From: Sergio Quiros <Sergio.Quiros@asu.edu>
Date: Friday, April 3, 2020 at 8:54 AM
To: Amy Hillman <AMY.HILLMAN@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>, Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: IFSE Establishment - MS in Environmental Engineering

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering

Watts College of Public Service and Community Solutions

From: [William Terrill](#)
To: [Sergio Quiros](#)
Cc: [William Terrill](#); [James Collofello](#); [Jeremy Helm](#)
Subject: Re: FW: IFSE Establishment - MS in Environmental Engineering
Date: Tuesday, April 7, 2020 9:04:47 AM

Good Morning,

The Watts College of Public Service and Community Solutions is supportive of your proposed MS in Environmental Engineering.

If there is anything else I can assist with please do not hesitate to let me know.

Best regards,

Bill

William Terrill, PhD

Arizona State University

Interim Associate Dean, Watts College of Public Service and Community Solutions

Professor, School of Criminology & Criminal Justice

Co-Editor, *Policing: A Journal of Policy & Practice*

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed [MS in Environmental Engineering](#). This degree program is offered by the School of Sustainable Engineering and the Built Environment. Please let me know if you have any questions or concerns.

jim

James S. Collofello
Vice Dean for Academic and Student Affairs

(NEW GRADUATE INITIATIVES)**PROPOSAL PROCEDURES CHECKLIST**

Academic units should adhere to the following procedures when requesting new curricular initiatives (degrees, concentrations or certificates).

- Obtain the required approval from the Office of the Provost to move the initiative forward for internal ASU governance reviews/approvals. Please see the academic strategic plan website at: <https://provost.asu.edu/curriculum-development>.**
- Submit any new courses that will be required for the new curricular program to the Curriculum ChangeMaker online course approval system for review and approval.**
 - Additional information can be found at the Provost's Office Curriculum Development website: [Courses link](#)
 - For questions regarding proposing new courses, send an email to: courses@asu.edu
- Prepare the applicable proposal template and operational appendix for the proposed initiative.**
- Obtain letters or memos of support or collaboration (if applicable).**
 - when resources (faculty or courses) from another academic unit will be utilized
 - when other academic units or degree programs may be impacted by the proposed request
 - if the program will have an online delivery option support will be required from the Provost's office and ASU Online. *(Please complete the ASU Online Offering form in Curriculum ChangeMaker to begin this request.)*
- Obtain the internal reviews/approvals of the academic unit.**
 - internal faculty governance review committee(s)
 - academic unit head (e.g. Department Chair or School Director)
 - academic unit Dean or their designee (will submit approved proposal to the curriculumplanning@asu.edu email account for further ASU internal governance reviews (as applicable, University Graduate Council, CAPC and Senate)

Additional Recommendations

All new graduate programs require specific processes and procedures to maintain a successful degree program. Below are items that the Graduate College strongly recommends that academic units establish after the program is approved for implementation.

- Establish satisfactory academic progress policies, processes and guidelines** – Check within the proposing academic unit and/or college to see if there are existing academic progress policies and processes in place. If none have been established, please go to http://graduate.asu.edu/faculty_staff/policies and scroll down to the **academic progress review and remediation processes** (for faculty and staff) section to locate the reference tool and samples for establishing these procedures.
- Establish a Graduate Student Handbook for the new degree program** – Students need to know the specific requirements and milestones they must meet throughout their degree program. A Graduate Student Handbook, provided to students when they are admitted to the degree program and published on the website for the new degree, gives students this information. To be included in the handbook are the unit/college satisfactory academic progress policies, current degree program requirements (outlined in the approved proposal) and a link to the Graduate Policies and Procedures website: http://graduate.asu.edu/faculty_staff/policies.