



Originating Unit:

Type of action: Undergraduate program Graduate program

Online program (hybrid, synchronous, or asynchronous)

Certificate program (if yes, will certificate appear on transcript) Yes No

Licensure

External Accreditation Required (outside of SACCS)? Yes No

Semester and year course/program will take effect:

New program title:

This is a TCU STEM Program Yes No

Proposed four-letter plan abbreviation (ex. GRAD):

Proposed 6-digit CIP Code?

for reference, please visit: <https://nces.ed.gov/ipeds/cipcode/resources.aspx?y=56>

Description of program:

Strategic Plan

Job Market Need:

Student Demand:

Enrollment Projections (provide brief description here and attach a table as Appendix material):

attached files can be seen and managed in Acrobat Pro by clicking on View > Show/Hide > Navigations Panes > Attachments



Five-Year Costs and Funding Sources Summary (please submit *New Program Budget Form*)

Faculty:

Program Staff & Administration:

Graduate Student Support:

Space & Facility Needs:

Equipment Needs:

Library Resources:

Signature Dean, TCU Library

Date

Comments

IT Resources:

**Koehler Center for Instruction,
Innovation, and Engagement Resources:**

Tuition:

Tuition Discount Request:

Student Fees:

Other Funding:

Change in Teaching Load: Yes No

Courses taught via Teaching Overload: Yes No

Will this program affect any other units within the university? Yes No

If yes, submit supporting statement signed by chair of affected unit.



NEW PROGRAM SUBMISSION FORM

Curriculum:

Diversity Equity and Inclusion (DEI) Essential Competency Components:

Candidacy and Dissertation/Thesis (if applicable):

Delivery Modes, Use of Distance Technologies, and Delivery of Instruction:

Program Evaluation:

Administrative Oversight:

Faculty:

Program Faculty Productivity: (Doctoral programs only; Appendix material requested):

**attached files can be seen and managed in Acrobat Pro by clicking on
View > Show/Hide > Navigations Panes > Attachments**

Collaborative Arrangements (if applicable):



NEW PROGRAM SUBMISSION FORM

Program Contact Person (person to contact with questions regarding program or individual completing the form):

Name:

Extension:

Email

REQUIRED SIGNATURES:

Chair of Originating Unit:

Unit:

Endorse Program: Yes No

Name:

Signature:

Date:

College/School Curriculum Committee Review:

Curriculum Committee Review Date:

Endorse Program: Yes No

Curriculum Committee Chair Name:

Signature:

Date:

Dean of Originating Unit:

College/School:

Endorse Program: Yes No

Name:

Signature:

Date:



Required Appendices (if applicable):

attached files can be seen and managed in Acrobat Pro by clicking on View > Show/Hide > Navigations Panes > Attachments

- A. Completed and Signed Permission to Plan Form**
- B. Assessment Plan and Curriculum Map (after approval by the Undergraduate or Graduate Council, the University Assessment Committee will review and approve these documents prior to approval from University Council)**
- C. Course Descriptions and Prescribed Sequence of Courses**
- D. New Program Budget Form**
- E. College or Departmental Policy on Faculty Teaching Load**
If teaching load policy is set at the departmental level, include that information.
- F. Table of Program Full-time and Support Faculty (table template found at <https://gradcouncil.tcu.edu/submission-forms/> or <http://www.ugradcouncil.tcu.edu/>)**
- G. Program Faculty Productivity Tables (table template found at <https://gradcouncil.tcu.edu/submission-forms/>)**
- H. Curricula Vitae for Program Full-time Faculty**
- I. Curricula Vitae for Program Support Faculty**
- J. Articulation Agreements with Partner Institutions**
Include copies of any agreements or Memoranda of Understanding related to the proposed program. These include formal and sustained arrangements with other universities, private businesses, or governmental agencies that contribute directly to the proposed program and student research/residency opportunities.
- K. List of Specific Clinical or In-Service Sites to Support the Proposed Program, if applicable**
- L. Letters of Support**
Letters from regional and national companies who have made commitments to hire graduates from the proposed new program are particularly helpful. Also, include statements of support or commitments to shared research projects from any similar or partner institutions.

New Program Proposal

for a

Combined BS in Environmental Science and MS in Sustainability (4-1) program

prepared by

**Department of Environmental & Sustainability Sciences
College of Science & Engineering
Texas Christian University**

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Description of Program

The Department of Environmental & Sustainability Sciences proposes the creation of an in-person, combined BS in Environmental Science and MS in Sustainability (4-1) program. The combined BS/MS program would provide students interested in environmental issues and sustainability a viable and attractive path to employment and would generate revenue for the university. We anticipate no upfront costs with a potential to generate \$300,000 per academic year following the program's launch. We modeled the program after the Department of Nutrition's combined BS/MS in Dietetics. Students would complete 12 hours of dual undergraduate/graduate credit toward the MS in Sustainability degree during the fourth year of undergraduate study. During the fifth year, students would complete the remaining 18 graduate credit hours. In their final year, students would take two required courses: Environmental Issues and a newly proposed course, Sustainability Reporting. In Environmental Issues, students examine pressing environmental challenges in a seminar format. Sustainability Reporting, an applied course, will teach students about different sustainability-related reporting platforms, including ISO 14001 standards; corporate environmental, social, and governance (ESG) criteria; and governmental sustainability indicators. Students will also have the opportunity to select sustainability-related courses from other CSE departments as well as other university colleges. Finally, we have designed the program to leverage existing departmental courses in a way that will not increase faculty workloads.

Strategic Plan

Sustainability is at the heart of TCU's mission "to educate individuals to think and act as ethical leaders and responsible citizens in the global community." Creating and supporting transitions to a sustainable future requires students to solve the world's environmental challenges in equitable and inclusive ways. Today's college students care more strongly about their impact on the planet. Issues such as climate change, the widespread use of plastics, and pollution from various sources have caught the attention of college-bound students. They find themselves looking for ways to minimize their impact on the Earth – like how to use less and generate less waste – that all have a cumulative effect on the planet. Sustainability science, an evolving academic field, probes interactions between global, social, and human systems and the complex drivers that lead to the degradation of these systems. As responsible citizens in the global community, a core tenet of our mission statement, our students need to be grounded in decision-making that preserves the values of environmental, economic, and social responsibility. TCU has fallen behind other universities' sustainability efforts in the classroom and in its daily operations; however, the College of Science and Engineering's recently renamed Department of Environmental & Sustainability Sciences has been laying the foundation for the last decade to meet the growing demand for sustainability professionals. The department spearheaded the creation of the university's Sustainability Committee. The committee is composed of faculty, staff, and students who work on sustainability initiatives across campus. The department also created several sustainability-focused courses. Its summer field course Sustainable Development in Costa Rica and its upper-level course Environmental Sustainability

are extremely popular among students. In the fall of 2020, the department added a sustainability scientist along with a new course, Introduction to Sustainability Science. This course has proved popular among students in and outside of the department. The department also quietly launched a multidisciplinary sustainability minor in 2016, and without advertisement, the minor currently has ~40 students. Because of this foundation, the department is positioned to capitalize on student interest in sustainability and help meet the growing demand for sustainability professionals while generating revenue for the department, college, and university.

Job Market Need

Sustainability is a rapidly growing field. An estimated 90 percent of Fortune 500 companies participate in sustainability reporting. More than 800 higher education institutions are members of the Association for the Advancement of Sustainability in Higher Education. Federal, state, and local governments are increasingly implementing sustainability goals and tracking their progress through a host of environmental, social, and economic indicators. Ongoing interest in the sustainability field has created a growing need for qualified professionals to support and lead sustainability initiatives across a variety of organizations, and many estimate the demand for sustainability professionals to increase. A recent employment search via Indeed.com returned over 2,200 employment opportunities with “sustainability” in the job titles. A similar search on LinkedIn.com returned over 14,000 sustainability-related employment opportunities in the United States, 1,300 in Texas with over half (~800) in the Dallas-Fort Worth metroplex. Additionally, the most frequently appearing keyword in sustainability job qualifications is “environmental”. Yet, the rapid demand for sustainability professionals coupled with a dearth of university sustainability programs has created a sustainability skills gap. Of Dallas-Fort Worth area universities, only the University of Texas at Arlington has a sustainability-related program – a bachelor’s degree in sustainable urban design – which is not the primary thrust of most career opportunities. A sustainability degree at TCU would be one of the first in the area and would help meet the growing demand for educated sustainability professionals.

Student Demand

Within the Department of Environmental & Sustainability Sciences, there has been an increase in enrollment in both the sustainability minor and the introductory sustainability course. This trend is supported by data showing growth in student interest over the past few years and evidenced by waitlists for the introductory sustainability course. To help alleviate the waitlists for this course, the department started offering the course every semester; however, the waitlist remains. Each semester the waitlist includes at least 5 students.

Additionally, a study by the Association for the Advancement of Sustainability in Higher Education (AASHE) confirms the rising demand for sustainability-focused education. Approximately one in four colleges show strong sustainability commitments, while most institutions engage in sustainability initiatives to varying degrees. This aligns with our

department's efforts to address the increasing demand for environmental science and sustainability education.

Moreover, the AASHE study underscores the role of sustainability in students' perceptions of higher education. Forty-five percent of respondents considered sustainability when choosing a college, while an overwhelming 85% prioritize sustainability in evaluating campus priorities. These findings emphasize the widespread student interest and support for sustainability initiatives, highlighting the need for expanded offerings in environmental science and sustainability education to meet student preferences.

Enrollment Projections

Year 1 = 5 students; Year 2 = 10 students; Year 3 = 15 students; Year 4 = 20 students; Year 5 = 20+ students; Note that we expect 5 students to be added to the program each year - i.e., 20 enrolled by year 4.

Five-year Costs and Funding Sources Summary

No additional funding sources are required for the establishment of the 4-1 program. See attached budget.

Curriculum

The curriculum for the proposed 4-1 degree follows the department's established B.S. in Environmental Science degree with the addition of an extra year of courses focused on developing sustainability knowledge to prepare students for careers in the sustainability field (see attached degree requirements). We note here that all 55000-level dual-credit classes, which already exist at the 50000 level, will be submitted once the 4-1 proposal passes. This will not impact any of the students choosing the 4-1 program as they would not take any of those classes in the first year of the 4-1 schedule.

The department's BS in Environmental Science curriculum provides students with foundational knowledge in the environmental sciences. In this program, students gain a comprehensive understanding of core concepts, theories, and principles in environmental science, including climate systems, ecosystem dynamics, natural resource management, environmental policy, and environmental monitoring techniques. Additionally, the BS in Environmental Science curriculum incorporates experiential learning opportunities, including fieldwork, laboratory exercises, and research projects, to develop practical skills in environmental assessment, data collection, analysis, and interpretation.

The 4-1 program builds on the foundational knowledge gained in the environmental sciences but emphasizes an interdisciplinary approach to environmental and sustainability problem-solving. In addition to integrating knowledge and methodologies from multiple disciplines,

including biology, chemistry, and geosciences, the 4-1 program includes coursework from the social sciences and humanities. Incorporating courses that examine the social, cultural, and economic factors that influence environmental decisions and behaviors will help students propose successful solutions to sustainability problems.

The proposed curriculum includes courses from the social sciences, such as anthropology, sociology, and political science. From these courses, students will gain insights into human behavior, social structures, and governance systems that shape environmental policies and sustainability practices. Courses from the humanities, including history, literature, and philosophy, will provide students with perspectives on ethics, values, and cultural attitudes towards nature. This interdisciplinary approach will not only broaden students' understanding of environmental issues but also equip them with the critical thinking skills and frameworks necessary for addressing complex sustainability challenges.

Furthermore, the 4-1 curriculum builds on the environmental science emphasis on hands-on learning experiences, fieldwork, and research projects to foster practical skills and applied knowledge in the environmental sciences and sustainability. Students will engage in experiential learning opportunities that allow them to apply theoretical concepts to real-world scenarios, develop solutions to sustainability problems, and communicate their findings effectively to diverse audiences. Through internships, collaborative projects, and capstone experiences, students will gain valuable professional skills and build networks within the sustainability field, preparing them for successful careers. In particular, 4-1 students will be required to take a sustainability reporting class. This class will cover sustainability reporting requirements, and students will complete a sustainability plan for a local organization that captures baseline data and proposes solutions to achieve organizational sustainability goals.

Overall, the 4-1 program in Environmental Science and Sustainability offers a comprehensive and interdisciplinary education that will prepare students to address the complex and interconnected challenges facing our planet. By integrating knowledge from multiple disciplines and emphasizing practical skills and applied learning, the curriculum equips students with the tools and expertise needed to make meaningful contributions to the three primary dimensions of sustainability – environmental protection, social equity, and economic stability – in the 21st century.

DEI Essential Components

Incorporating the Diversity, Equity, and Inclusion (DEI) essential competency into the curriculum of the new 4-1 program in Environmental Science and Sustainability at TCU ensures that sustainability education reflects its inherently inclusive nature. By integrating DEI principles into course content, assignments, and discussions, students will explore the intersectionality of environmental issues with social justice, equity, and inclusion. This integration will encourage students to examine how identities, power dynamics, and cultural perspectives influence environmental policies, practices, and outcomes. Additionally, specific measures will be implemented to foster inclusive excellence within the program, including recruitment efforts

targeting underrepresented groups, the establishment of mentorship and support programs, and the creation of a welcoming and supportive environment where all students feel valued and empowered to contribute to sustainability solutions. Through these initiatives, the program will uphold its commitment to preparing students to address complex sustainability challenges with empathy, understanding, and a commitment to social wellbeing for all.

Candidacy and Dissertation/Thesis (Doctoral programs only)

N/A

Delivery Modes, Use of Distance Technology, and Delivery of Instruction

In-person only.

Administrative Oversight

The chair of the Department of Environmental & Sustainability Sciences is responsible for the administrative oversight of the 4-1 program.

Faculty

Given that the proposed 4-1 program builds on the existing BS in Environmental Science and uses current faculty resources, the Department of Environmental & Sustainability Sciences is confident that we can meet the teaching, research, and service needs of students within the program's scope. The faculty within the department possess diverse expertise that aligns with the interdisciplinary nature of the 4-1 program, ensuring coverage of both core and elective courses. Additionally, existing research initiatives and collaborations within the department will provide opportunities for student involvement and mentorship. While elective classes outside of the department may experience increased demand, the department expects that the impact on other programs within the university will be minimal due to the small number of students anticipated to pursue the 4-1 program during its first five years. No additional faculty hires are necessary within the first five years of the program's implementation. The existing faculty is sufficient to support the program's objectives, maintain academic rigor, and foster student success. Please refer to the attached table in the Appendix for detailed information on program full-time and support faculty.

Program Faculty Productivity (Doctoral Programs Only)

N/A

Collaborative Arrangements

N/A

Attachments

A. Completed and signed permission to plan form



NEW PROGRAM PERMISSION TO PLAN FORM

Originating Unit:

Type of action: New program Online program (hybrid, synchronous, or asynchronous)

We encourage consultation with the TCU Office of Institutional Effectiveness and the Koehler Center for Instruction, Innovation, and Engagement Resources (i.e., if an online or distance learning component is proposed for the new program) prior to submission of this form.

Semester and year course/program will take effect:

New program title:

Description of program:

Strategic Plan:

Job Market Need:

Enrollment Projections:

Five-Year Costs and Funding Sources Summary (please submit *New Program Budget Form*)

Faculty:

Program Staff & Administration:

Graduate Student Support:

Space & Facility Needs:

Equipment Needs:

Library Resources:

IT Resources:

Tuition:

Tuition Discount Request:

Student Fees:

Other Funding:

External Accreditation Required? Yes No

Change in Teaching Load: Yes No

Will this program affect any other units within the university? Yes No

If yes, submit supporting statement signed by chair of affected unit.

Program Contact Person (person to contact with questions regarding program or individual completing form):

Name:

Extension:

Email:

REQUIRED SIGNATURES:

Chair of Originating Unit

Unit:

Endorse Program: Yes No

Name:

Signature: 


Date:

Dean of Originating Unit

College/School:

Endorse Program: Yes No

Name:

Signature: 

Date:

REQUIRED SIGNATURES:

Provost and Vice Chancellor of Academic Affairs:

Unit:

Endorse Program: Yes No

Name:

Signature:

Date:

Instructions

Semester and year course/program will take effect

Indicate anticipated start date for program (enrollment of first class or cohort).

New program title:

Tentative program title as it will appear in the program inventory.

Description of program:

Describe the program.

Strategic Plan

Describe how the proposed program fits into the institution's mission, vision, and overall strategic plan. Explain how the proposed program builds on and expands upon TCU's existing recognized strengths.

Job Market Need

Demonstrating the need for additional graduates in the field is vital. Provide your plan for gathering short- and long-term evidence to support the need for graduates in the region, Texas and/or U.S. job markets. Supporting evidence can come from the Bureau of Labor Statistics, Texas Workforce Commission, professional association data, and other documented data sources to create a supply/demand analysis.

Enrollment Projections

Provide an estimate of the cumulative headcount enrollment for the first five years of the proposed program (Year 1, Year 2, etc.). Include summer enrollments, if relevant, in the same year as fall enrollments (Summer, Fall, and Spring). Enrollment projections should be realistic and based on demonstrable student demand. Projections should account for student attrition, graduation rates, and part-time students.

Five-Year Costs and Funding Sources Summary

Provide an overview of new and reallocated costs for the proposed program. Refer to the New Program Budget Form to determine program costs over a five-year period and potential revenue. Include the New

Program Budget Form in your submission of this form. The New Program Budget Form will be considered tentative at this stage of the process and a new form will need to be included in the submission of the complete package if permission to proceed is granted.

Adding a new degree program will result in some start-up cost to the university. Total funding for the proposed program should meet or exceed total costs by the end of the first five years. Sufficient justification should be provided to explain why continual university support of a new program is vital to the mission of the university if a program is not self-sustaining at the end of the first five years.

Faculty salaries include all faculty assigned to the proposed program. If an existing faculty member is reassigned to the program, the salary is reflected as a reallocated cost. New faculty salaries need to be competitive for the discipline, and figures should include start-up costs in proportion to the new faculty member's allotted time in the proposed program. Faculty salaries should also include benefits. If the proposed program will hire new T/TT or NTT faculty (part-time or full-time), it is a new cost.

Reallocation of Existing Resources includes the salary of faculty reassigned who may be partially or wholly reallocated to the new program. Explain how the current teaching obligations of those faculty are reallocated and include any faculty replacement costs as program costs in the budget. If substantial funds are reallocated, explain how existing undergraduate and graduate programs will be affected.

Program staff and administration costs include all institutional costs associated with running the program, including amounts associated with the Dean's office, Chairperson's office, Institutional Research, and other administrative costs. Program staff include specific costs associated with the new program. This includes the additional staff needed to organize applications, prepare for the proposed program, and for general administration of the proposed program. If the enrollments in the proposed program are projected to be large, the associated costs related to clerical/staff may also be more. New staff or purchases of new equipment should be adequate to support the stated goals and enrollments for the proposed program. Other program costs identified in the proposal should be realistic.

Graduate student support costs (graduate assistantship, teaching assistantship, and research assistantship) are identified either as new or reallocated costs, as appropriate. Any reallocation of graduate student support should include an explanation of impact on program having their funds diverted and it should be understood that the funds will not be replaced. Any graduate student support requests for terminal degree programs should be at a competitive rate and include health insurance costs.

Funding sources are typically tuition and fees, endowments, federal funding, and other funding (such as awarded grants). The total projected income of tuition and fees, and private funds will allow the proposed program to become self-sufficient within five years.

Federal Funding (In-hand only) refers to federal monies from grants or other sources currently in hand. Do not include federal funding sought but not secured. If anticipated federal funding is obtained, at that time it can be substituted for funds designated in other funding categories. Make note within the text of the proposal of any anticipated federal funding.

Tuition and Fees includes revenue generated by the institution from student tuition and fees.

Include amount of tuition discount or amount of tuition if a reduction in tuition will be requested. Justification for tuition discount/reduction will need to be provided.

Other Funding category may include auxiliary enterprises, special endowment income, or other extramural funding.

External Accreditation

Indicate if discipline has a national accrediting body or if it is projected that national accreditation will be needed within the next five years.

Change in Teaching Load

Indicate if faculty participation in this program will require a change in their teaching load (increase or decrease).

B. Assessment plan
N/A

- C. Course descriptions and prescribed sequence of courses
Note: see course catalog for course descriptions.

Environmental and Sustainability Sciences
4:1 BS/MS in ENV SCI & SUST

ENVIRON SCIENCE & SUST - BS		
ENSC REQMTS		
FOUNDATIONS (12 hours)		
ENSC	10143	Contemp Environmental Issues (NSC, GA)
GEOL	10113	Understanding the Earth (NSC)
BIOL	10513	The Diversity of Life: Organisms to Ecosystems
BIOL	10523	Introduction to Biological Investigation (NSC)
FUNDAMENTALS (16 hours)		
BIOL	30403	Ecology and the Environment
ENSC	30493	Water Planet
ENSC	30113	Weather & Climate
ENSC	30143	Introduction to Sustainability (CSV)
ENSC	30443	Earth Materials
ENSC	40001	Scientific Presentations
REGULATORY (3 hours)¹		
ENSC	50693	Natural Resource Compl (WEM) OR
ENSC	50703	Env Compl (WEM) OR
ENSC	50713	Phase I & II ESA (WEM) OR
ENSC	50743	Env Impact Statements (WEM)
FIELD CAPSTONE (3 hours)²		
ENSC	55XXX	Sustainable Development in Costa Rica (WEM) OR
ENSC	55XXX	Field Experience OR
ENSC	55XXX	Wildlife Research Project (WEM) OR
ENSC	55XXX	Environmental Internship OR
ENSC	55XXX	Special Problems ³ OR
ENSC	55XXX	SA Biodiversity and Human Development

ASSOC REQ (19 Hours)		
CHEM	10113	Gen Chem I
CHEM	10122	Gen Chem II Lab
CHEM	10123	Gen Chem II
PHYS	10154	Phys I
MATH	10043	Statistics
MATH	10054	Precalc with Trig

ELECTIVES (15 hours)		
Can take up to 6 Hrs outside CSE from the courses listed below		
ENSC	55793	Environmental Sustainability ⁴
ENSC	5XXX3	Elective
		Elective
		Elective
		Elective

Courses outside CSE:

ANTH	30233	Sustainability: Environ., Social & Economic Issues
ANTH	30663	Food Justice
SOCI	30223	Env Justice
FAME	20223	Sustainability Issues in Fashion
HIST	40853	American Environmental History (WEM)
GEOG	30323	Data Analysis and Visualization
GEOG	30313	Introduction to Geographic Information Systems
GEOG	30803	Topics in Environmental Geography
GEOG	30813	Environment and Society
ENGR	30113	Energy in Society
POSC	33123	Globalization
POSC	33113	Globalization and Political Economy
ECON	30523	Resource and Energy Economics*
ECON	30543	Environmental Economics & Policy*

*Requires Micro or Macro as pre-requisite

MS PORTION		
(30 Hours, 12 of which are Dual Credit)		
DUAL CREDIT COMPLETED (12 hours)		
ENSC	XXXXX	Regulatory dual credit
ENSC	XXXXX	Field Capstone dual credit
ENSC	55793	Environmental Sustainability
ENSC	5XXX3	Elective
REQUIRED COURSES (9 hours)		
ENSC	50753	Sustainability Reporting
ENSC	XXXX3	Elective
ENSC	60203	Environmental Issues Seminar
ELECTIVES (9 hours) ⁵		

Notes

1. Purple courses are dual credit
2. These courses already exist at the undergraduate/graduate level; we would submit 55000 versions to curriculum committee
3. These are field-based research courses with students working with individual faculty
4. Although this is listed under Electives, a student will be strongly advised to take this specific class.
5. Electives here could include courses from other departments as listed

Relevant courses outside ENSC:

STCO	50333 Advertising and the Consumer	3
STCO	66723 Social Responsibility	3
INSC	60011 Supply Chain Management Fundamentals*	1
INSC	70680 Sustainable Supply Chain	1.5
NTDT	60453 Nutrition Ecology, Food & Sustainability	3
BUSI	70700 Energy in the 21st Century	1.5
PHYS	60901 Scientific Citizenship**	1
MANA	70620 Energy Legal and Regulatory Issues	1.5
GEOL	50443 Natural Hazards and Disasters	3
GEOL	50523 Introduction to Geographic Information Systems	3
GEOL	50731 Remote Sensing Technology	1
GEOL	50783 Environmental Chemistry	3
GEOL	50873 Environmental Remote Sensing	3
GEOL	50883 Applied GIS	3

* Taught during Summer terms

** Topics rotate each semester

D. New program budget form

New Academic Program Budget Form

Unit Name	Dept of Environmental & Sustainability Sciences								
Program Name	4-1 M.S. in Sustainability	Program Level	Graduate						
College	Science & Engineering								
Prepared by		Start Up Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	TOTALS	NOTES
	Enter Fiscal Year		2024-25	2025-26	2026-27	2027-28	2028-29		

REVENUES									
Enrollment	Students (Fall, Spring, & Summer enrollment combined)		5	10	15	20	20		
	Students (optional - additional cohorts)								
	total # of students		5	10	15	20	20		
Tuition	Tuition Rate		1,982	2,032	2,082	2,134	2,188		
	Tuition Rate Increase			2.5%	2.5%	2.5%	2.5%		
	Total Per Student Credit Hours (Fall, Spr., & Sum.)		18	18	18	18	18		
	Tuition revenue (Total)		\$178,380	\$365,679	\$562,231	\$768,383	\$787,593		\$2,662,266
Other Source of Revenue									
	Tuition-Based, Endowed Scholarships, Fees, etc.								\$0
TOTAL (100%) PROJECTED REVENUES			\$178,380	\$365,679	\$562,231	\$768,383	\$787,593		\$2,662,266
INCREMENTAL NET TUITION REVENUE			\$178,380	\$365,679	\$562,231	\$768,383	\$787,593		

EXPENSES									
Direct Costs	Personnel								
	Salaries & Wages & Benefits (See Personnel tab)		\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUBTOTAL - PERSONNEL COSTS			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Library Resources									
	Journals, books, recordings, etc.		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operating Costs									
	Tuition Reduction Request (%)		0%	0%	0%	0%	0%		
	Tuition Reduction Discount Request (per credit hour)		\$0	\$0	\$0	\$0	\$0		
	Total Tuition Reduction Request		\$0	\$0	\$0	\$0	\$0		\$0
	Graduate Research/Teaching Assistant Request		\$0	\$0	\$0	\$0	\$0		\$0
	Total Tuition and Stipend		\$0	\$0	\$0	\$0	\$0		\$0
Materials									
	Instructional Materials		\$0	\$0	\$0	\$0	\$0		\$0
	Office/Program Supplies		\$0	\$0	\$0	\$0	\$0		\$0
Equipment									
	Capital Equipment Purchase (if applicable)		\$0	\$0	\$0	\$0	\$0		\$0
	Non-capital equipment Purchase		\$0	\$0	\$0	\$0	\$0		\$0
	Equipment Rental		\$0	\$0	\$0	\$0	\$0		\$0
Space & Facility (including renovation) Needs									
		\$0	\$0	\$0	\$0	\$0	\$0		\$0
Contract Services (if FTE not directly hired)									
	Direct Administrative Support		\$0	\$0	\$0	\$0	\$0		\$0
	Course Design & Program Development		\$0	\$0	\$0	\$0	\$0		\$0
	Marketing		\$0	\$0	\$0	\$0	\$0		\$0
	IT & Tech Support		\$0	\$0	\$0	\$0	\$0		\$0
	Course Preparation & Maintenance		\$0	\$0	\$0	\$0	\$0		\$0
	Student Support Services		\$0	\$0	\$0	\$0	\$0		\$0
	Other								\$0
SUBTOTAL - NON-PERSONNEL COSTS			\$0	\$0	\$0	\$0	\$0		\$0
TOTAL DIRECT EXPENSES			\$0	\$0	\$0	\$0	\$0		\$0

RESIDUAL NET REVENUE/(LOSS) OVER EXPENSES			\$178,380	\$365,679	\$562,231	\$768,383	\$787,593		\$2,662,266
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New Academic Program Budget Form

PERSONNEL COSTS

Unit Name	Dept of Environmental & Sustainability Sciences
Program Name	4-1 M.S. in Sustainability
College	Science & Engineering
Prepared by	0

<i>Projected Merit Increases</i>	<i>2.5%</i>	<i>2.5%</i>	<i>2.5%</i>	<i>2.5%</i>
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Enter Fiscal Year	Start Up Year 0		Year 1		Year 2		Year 3		Year 4		Year 5		TOTAL	
			2024-25		2025-26		2026-27		2027-28		2028-29			
	\$	FTE	\$	FTE	\$	FTE	\$	FTE	\$	FTE	\$	FTE	\$	FTE
Instructional Costs														
Faculty			\$0	1.00	\$0	1.00	\$0	2.00	\$0	1.00	\$0	1.00	\$0	6.00
Staff & Administration			\$0	1.00	\$0	1.00	\$0	1.00	\$0	1.00	\$0	1.00	\$0	5.00
Other			\$0	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$0	0.00
Total Instructional Costs/FTE	\$0	0.00	\$0	2.00	\$0	2.00	\$0	3.00	\$0	2.00	\$0	2.00	\$0	11.00

Benefits Costs			\$0		\$0		\$0		\$0		\$0			
GRAND TOTAL PERSONNEL COSTS	\$0	\$0	\$0	2.00	\$0	2.00	\$0	3.00	\$0	2.00	\$0	2.00	\$0	11.00

Graduate Assistants	
<i>Cost of GA Stipend</i>	\$0
Graduate Research/Teaching Assistant Request	\$0

* Instructional support could include: mentors, clinical, research or other individuals who are paid a stipend for participation

** Please carefully consider both the pre-admission student contacts as well as post-admission student needs

***Instructional costs for full-time faculty include 37% for benefits (see salary calculations for faculty worksheet)

New Academic Program Budget Form

MARKETING

Unit Name	Dept of Environmental & Sustainability Sciences
Program Name	4-1 M.S. in Sustainability
College	Science & Engineering
Prepared by	0

Enter Fiscal Year	Start Up	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
	Year 0	2024-25	2025-26	2026-27	2027-28	2028-29	

Plan Development							\$0
Design		\$1,000					\$1,000
Production		\$1,000					\$1,000
Print							\$0
Direct Mail							\$0
Online/Email							\$0
Broadcast		\$1,000					\$1,000
Display							\$0
Other		\$2,000					\$2,000
TOTAL	\$0	\$5,000	\$0	\$0	\$0	\$0	\$5,000

Marketing costs enumerated above are in addition to marketing staff costs/FTE that are either hired direct by the program or hired on a contract basis to support the program.

E. College or departmental policy on faculty teaching load

College of Science and Engineering Faculty Workload Equity Model

This document clarifies and standardizes workload expectations for College of Science and Engineering (CSE) faculty within the context of the Academic Affairs Faculty Workload Equity Model (<https://provost.tcu.edu/faculty-workload-equity-model/>). The default workload distribution for tenure-stream faculty members (teacher-scholars) on 9-month contracts is typically between 20%-60% teaching, 20%-60% research, and 20% service; the default workload distribution for non-tenure stream faculty on 9-month contracts is 80% teaching and 20% service. Consistent with the Academic Affairs Faculty Workload Equity model, a 3-credit hour course counts as 10% of a faculty member's workload (over the course of a 9-month contract). In addition, academic heads may consider administrative appointments when determining workload assignments. Deviations from the default workload may occur, but in all cases, faculty should be fully engaged; that is the sum of their percentages of teaching, research, service, and administrative responsibility will be 100%. The academic head has the authority to allocate final workload assignments. Reductions in teaching loads must be approved by the Dean. Workload assignments will be determined on a yearly basis, however in the event of an unusual occurrence (e.g., receipt of large, external funding), they may be renegotiated.

Additionally:

- Teaching assignments and course scheduling will be in consultation between the department chair and each individual faculty member and will be centered on the teaching mission and needs of the department. Although every effort will be made to maximize the utilization of expertise and teaching effectiveness of an individual faculty member, it may not always be possible to accommodate individual preferences. The chair has the final authority to determine teaching assignments and course schedules.
- Course releases depend on the programmatic and course scheduling needs of the department. All faculty, regardless of appointed roles, are expected to teach each semester except in exceptional circumstances, subject to the approval of the Chair, Dean, and Provost.
- The total workload assigned for a co-taught course should be equal to the workload for the course if taught by one person, and the workload should be assigned based upon the relative contributions of the faculty. For example, if two people co-teach a standard 3 credit hour course (10% of a single person's total workload), and one person does 70% of the work and the other 30% of the work, then for the course they would have workloads of 7% and 3% assigned to them, respectively.
- Assigned teaching workload does not typically include courses taught for a program outside a faculty member's home academic department. However, at the request of a faculty member, the chair may consider these towards the teaching workload.
- The mentorship of students in research is considered teaching; thus, a faculty member's teaching workload may include research-related, non-didactic courses (e.g., independent research, theses, dissertations, etc.). The extent to which such courses count toward the teaching workload will be evaluated by the chair using departmental procedures approved by the dean.
- For classes that meet for more or fewer hours than the assigned credit hours (typically lab classes), or anomalously high or low enrollments, the chair has the discretion to assign what they consider the appropriate teaching workload to the class. This will also require justification and approval from the dean.
- Faculty wishing to use grant funding for a course buyout must get advance approval from their chair before submitting the grant. Requests for buyouts after class schedules are determined may not be granted due to the difficulty in changing class schedules on short notice.
- Administrative workload cannot exceed 49%
- It is expected that tenured faculty will be engaged in both research and service. Therefore, the minimum workload allocation for each will be 10%, unless approved by the chair and dean.

Approved: 11/3/23

Faculty Workload Worksheet

Faculty may use this worksheet as a tool to help plan for their workload agreement entered into Faculty 180 and/or as preparation for meetings with their supervisor associated with workload assignments.

Name: EXAMPLE			Contract Length: <input type="checkbox"/> 9 month <input type="checkbox"/> 12 month		
Terms of Agreement: August 15, 2023 – May 15, 2024			Department:		
Workload Distribution					
Faculty Title and Category	Assigned Course Load	Teaching %	Research %	Service %	Administration %
List Administrative Role(s) and Associated Release(s) and/or Stipend:					
Justification for Non-Administrative Course Release(s):					
Assigned Workload Plan (Itemize teaching, research, service commitments)					
Teaching Fall	Teaching Spring	Teaching Summer	Research	Service (quantify and include roles/responsibilities)	
Notes					

Other Teaching Activities (directed studies, directed research, overloads)

Semester	Course/Activity	Course Type	Voluntary	Paid Overload
Fall			<input type="checkbox"/>	<input type="checkbox"/>
Comments/Notes:				
Spring			<input type="checkbox"/>	<input type="checkbox"/>
Comments/Notes:				

Unpaid Overload

Semester	Course Activity	Course Type
Fall		
Comments/Notes:		
Spring		
Comments/Notes:		

Signatures

Faculty:	Date:
Chair/Director:	Date:

F. Table of full-time and support faculty

Department of Environmental & Sustainability faculty (i.e., full-time and support faculty) contributing to the 4-1 program. Note: Full-time Faculty are tenured (T), tenured-track (TT), and full-time nontenured-track (NTT) faculty who teach 50 percent or more in the proposed program. Support faculty include adjunct faculty and faculty (T, TT, and/or NTT) faculty who will teach 49% or less in the proposed program.

Name and Rank of Faculty	Highest Degree and Awarding Institution	Courses Assigned in Program	Full-time or Support Faculty	% Time Assigned to Program
Michael C. Slattery Professor	PhD in Geography, University of Oxford	<ul style="list-style-type: none"> • ENSC 55xxx SA Biodiversity and Human Development (Dual Credit Elective) • ENSC 55xxx Sustainable Development in Costa Rica (Dual Credit Elective) 	Full-time	100%
Rhiannon G. Mayne Associate Professor	PhD in Geology, University of Tennessee	<ul style="list-style-type: none"> • ENSC 60203 Environmental Issues (Core) 	Full-time	100%
Victoria J. Bennett Associate Professor	PhD in Ecology, University of Leeds	<ul style="list-style-type: none"> • ENSC 55693 Natural Resource Compliance (Dual Credit Elective) • ENSC 55xxx Wildlife Research Project (Dual Credit Elective) 	Full-time	100%
Gehendra Kharel Assistant Professor	PhD in Earth System Science and Policy, University of North Dakota	<ul style="list-style-type: none"> • ENSC 50593 Environmental Modeling (Elective) • ENSC 50493 Physical Hydrology (Elective) 	Full-time	100%
Brendan L. Lavy Assistant Professor	PhD in Geography, Texas State University	<ul style="list-style-type: none"> • ENSC 55793 Environmental Sustainability (Dual Credit Elective) • ENSC 50743 Environmental Impact Statements (Dual Credit Elective) • ENSC 50753 Sustainability Reporting (Core) 	Full-time	100%
Michele L. Birmingham Assistant Professor of Professional Practice	MS in Environmental Science, TCU	<ul style="list-style-type: none"> • ENSC 50703 Environmental Compliance (Dual Credit Elective) • ENSC 50713 Phase I & II ESA (Dual Credit Elective) • ENSC 55xxx Environmental Internship (Dual Credit Elective) • ENSC 60203 Environmental Issues (Core) 	Full-time	100%

G. Program faculty productivity tables (Doctoral programs only)
N/A

H. CVs for full time faculty

Dr. Michael C. Slattery

**Department of Environmental Sciences
Institute for Environmental Studies Texas
Christian University**

P.O. Box 298830, Fort Worth TX, 76129

Tel: +1 817 257-7506; Cell: +1 214 679-3702; E-mail: m.slattery@tcu.edu

Citations: 3,201

h-index: 27

i10-index: 41

PROFESSOR AND CHAIR, DEPARTMENT OF ENVIRONMENTAL AND SUSTAINABILITY SCIENCES; DIRECTOR, INSTITUTE FOR ENVIRONMENTAL STUDIES; FELLOW: RALPH LOWE ENERGY INSTITUTE

EDUCATION

- 1991-1994 **D.Phil.**, St. John's College and School of Geography, University of Oxford, England
- 1989-1990 **M.Sc.**, Department of Geography, University of Toronto, Canada
- 1988 **B.A. (Honours)**, University of the Witwatersrand, Johannesburg, South Africa
(Physical Geography, awarded in the 1st Class with Gold Medal)
- 1985-1987 **B.A.**, University of the Witwatersrand, Johannesburg, South Africa (Double major in
Geography and History of Art, awarded in the 1st Class)

PROFESSIONAL EXPERIENCE

Professorships

- 1998- **Assistant Professor, Associate Professor (2000) and Professor (2006)**
Texas Christian University, Fort Worth, Texas
- 1994-1997 **Assistant Professor**
East Carolina University, Greenville, North Carolina

Administrative positions

- 2018 - **Chair, Department of Environmental and Sustainability Sciences**
Texas Christian University
- 2003 - **Director, Institute for Environmental Studies**
Texas Christian University
- 2003 - 2013 **Director of the MA/MS Program in Environmental Science**
Texas Christian University
- 2007 - 2010 **Chair, Department of Environmental Science**
Texas Christian University
- 1997 **Director of Graduate Studies**
Department of Geography

Pre-doctoral experience

1992 - 1994 **College Lecturer**
Hertford and Keble Colleges, University of Oxford, United Kingdom

Other experience

1995 - 1997 Broadcast Meteorologist (part-time)
WNCT-TV9 (CBS Affiliate), Greenville, North Carolina

Courses taught

Introductory:

Introduction to Physical Geography; Hydrometeorology; Introduction to Statistics; The Physical Environment; Contemporary Environmental Issues

Upper-level and graduate:

Weather and Climate; Landform Analysis; Physical Geography Seminar; Geomorphology; Rivers in the Landscape; Physical Hydrology; Soils; Environmental Stewardship; Environmental Issues; Scientific Presentations; Counting on Sustainability; Renewable Energy

HONOURS, AWARDS, AND SCHOLARSHIPS

2019 The Chancellor's Award for Distinguished Achievement as a Creative Teacher and Scholar, TCU

2018 Texas Sierra Club Special Service Award

2017 College of Science and Engineering Award for Distinguished Achievement as a Creative Teacher and Scholar and Finalist for the Chancellor's Award, TCU
Association of International Educators (NAFSA) Senator Paul Simon Spotlight Award for the TCU Rhino Initiative (Washington, DC)

2016 Earth Day Texas Technology Prize (with Downwindersatrisk)

2007 College of Science and Engineering Dean's Research Award, TCU

1997 College of Arts and Sciences Dean's Research Award, East Carolina University

1991 Overseas Research Scholarship, University of Oxford

1989 Connaught Scholar, University of Toronto

1988 Council for Scientific and Industrial Research Scholarship, South Africa
Frank Bicheno Trust Scholarship for Academic Excellence, University of the Witwatersrand
Faculty of Arts Certificate of Merit for outstanding work during B.A. (Hons) Degree, University of the Witwatersrand
Stanley Jackson Gold Medal for highest marks during B.A. (Hons) Degree, University of the Witwatersrand
Best paper at the 20th Geographical Conference, University of Cape Town

PUBLICATIONS

Books, Monographs, Reports, Guest Editorships, Letters, Op-Eds, etc.

Slattery, M.C. and Bluntzer, A. 2023. "Climate pledge to move away from fossil fuels is huge. There's just one problem | Opinion" Fort Worth Star-Telegram Sunday Editorial.

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McGee, J., Debone, K., Eamma, M. and Slattery, M.C. 2022. "Exercises in Environmental Science, Kendall-Hunt, 105 pp.

Slattery, M.C. 2021. "COP26: Historic achievement or historic failure??" Neeley Business School.

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Slattery, M.C., Argenbright, K., Debone, K. and Donahoo, M. 2020. "Exercises in Environmental Science, Kendall-Hunt, 105 pp.

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Slattery, M.C. and Argenbright, K. 2019. "Exercises in Environmental Science, Kendall-Hunt, 91 pp.

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Beyer, A., Mills, M., Ritter, E., Ziomek, S., Williams, J, and Slattery, M.C. 2014. "Exercises in Environmental Science, Kendall-Hunt, 91 pp.

Slattery, M.C. 2014. "The 'last dinosaur' needs help", *Fort Worth Star-Telegram* Op-ed, 24 September, 2014.

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Sunico, S. and Slattery, M.C. 2012. "Exercises in Environmental Science, Kendall-Hunt, 79 pp.

Slattery, M.C. 2011. (Editor). *Journal of Environmental Management*, Special Issue in honour of Rorke B. Bryan, Guest Editorial, **92**, 257.

Slattery, M.C. 2010. *Contemporary Environmental Issues*, Second Edition. Kendall-Hunt, DuBuque, Iowa, 253 pp.

Slattery, M.C., Richards, B., Schwaller, E., Swofford, J., Thompson, L. And Llado, L. 2009. "The socio-economic impact of wind farms in Nolan and Taylor Counties, Texas", report to Nextera Energy Resources, Juno Beach, Florida, 65 pp.

Slattery, M.C., Householder, E., Eady, S., Newland, L., Swofford, J., Dezendorf, M., Schlipmann, A. And Ruhbenstahl, T. 2009. "*Exercises in Environmental Science*", Kendall- Hunt, 84 pp.

Slattery, M.C., Richards, B.J., Schwaller, E., Swofford, J. and Thompson, L. 2009. "Job and Economic Development Impact Model (JEDI) Validation, Capricorn Ridge and Horse Hollow, Texas", report to Nextera Energy Resources, Juno Beach, Florida, 30 pp.

Slattery, M.C. 2008. "Impacts of wind energy development on birds: Assessment of research from Europe", report to FPL Energy, Juno Beach, Florida, 16 pp.

Slattery, M.C., Richards, B.J., Eady, S.S., Schwaller, E., Swofford, J., Thompson, L. and Warner, S. 2008. "The socio-economic impact of wind farms in Sterling and Coke Counties, Texas", report to FPL Energy, Juno Beach, Florida, 69 pp.

Slattery, M.C. 2008. *Contemporary Environmental Issues*, Kendall-Hunt, DuBuque, Iowa, 220 pp.

Slattery, M.C. and Drenner, R. 2007. "Mercury in Texas: Assessing the Potential Impact of Coal-Fired Power Plants", consultancy report prepared for Susman Godfrey L.L.P. and Texas Cities for Clean Air Coalition, 112 pp.

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Refereed Publications in print or in press:

Slattery, M.C., 2023. "The role of geomorphology in environmental litigation: Insights from an East Texas case, *Geomorphology*, 443 doi.org/10.1016/j.geomorph.2023.108948

Jones, S.J. Slattery, M.C. and Ritter, E.C. 2020. "Near-surface soil moisture dynamics in a prairie hillslope seep/headwater stream system in Texas, USA", *Physical Geography*, DOI: 10.1080/02723646.2020.1838120.

Slattery, M.C. 2020. "Sediment, wind turbines, and rhinos: Ah, the life of a geographer!" in T.P. Burt and D. Thompson (eds), *Curious about Nature: A Passion for Fieldwork*, Cambridge University Press, Chapter 42, 313-316.

Slattery, M.C. 2019. "The environmental impact of unconventional fuels: the trade-offs", in M. Doraj and K. Morgan (eds), *The Global Impact of Unconventional Fuels*, Palgrave MacMillan Publishers, 245-257.

- Llado, L. and Slattery, M.C. 2015. "Fine scale temporal variations of surface moisture in topographically-controlled Muhly seeps", *Ecohydrology*, DOI: 10.1002/eco.1632.
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- Slattery, M.C. 2015. "Barbara A. Kennedy (1972): 'Bankfull' discharge and meander forms", *Progress in Physical Geography*, **39(2)**, 275–278. DOI: 10.1177/0309133314561649
- Lisenby, P.E., Slattery, M.C. and Wasklewicz, T.A. 2014. "Morphological organization of a steep, tropical headwater stream: The importance of channel bifurcation", *Geomorphology*. DOI: 10.1016/j.geomorph.2014.02.009
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Phillips, J.D., Gares, P.A. and Slattery, M.C. 1999. "Agricultural soil redistribution and landscape complexity", *Landscape Ecology*, **14**, 197-211.

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Slattery, M.C., Burt, T.P. and Walden, J. 1995. "The application of mineral magnetic measurements to quantify within-storm variations in suspended sediment source", in *International Association of Hydrological Sciences Publ. no. 229*, 143-151.

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Slattery, M.C. and Bryan, R.B. 1994. "Surface seal development under simulated rainfall on an actively eroding surface", *Catena*, **22**, 17-34.

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Slattery, M.C. 1990. "Barchan migration on the Kuiseb River delta, Namibia", *South African Geographical Journal*, **72**, 5-10.

Non-Refereed Publications in print or in press:

Slattery, M.C. 2008. "Landforms", Visual Atlas of the World, National Geographic.

Slattery, M.C. 2005. "Did global warming cause this year's storms?" *The TCU Magazine*, Winter 2005, 43.

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- Slattery, M.C. 2005. "Runoff generation", *Encyclopaedia of Geomorphology*, Routledge.
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- Slattery, M.C. 2002. "World Landforms", *National Geographic Family Reference Atlas of the World*, **24-27**.
- Lazar, A. and Slattery, M.C. 2002. "Monitoring pollution fluxes during storm events in a Fort Worth Watershed", *New Waves*, **14(1)**, 4.
- Wilkinson, M.J., Lulla, K. and Slattery, M.C. 2001. "Lesotho", *Geography Review*, **14(4)**, **38-39**.
- Wilkinson, M.J., Slattery, M.C. and Lulla, K. 2001. "The Costa Rican climate and the Talamanca Massif", *Geography Review*, **14(3)**, 24-26.
- Slattery, M.C. 2001. "Hawaii: Part II Island diversity", *Geography Review*, **14(3)**, 20-23.
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- Slattery, M.C. 2000. "Hawaii: Part I Volcanism", *Geography Review*, **14(2)**, 10-13.
- Trenchard, M., Lulla, K. and Slattery, M.C. 2000. "Air mass modification", *Geography Review*, **14(1)**, 34-35.
- Willis, K., Lulla, K. and Slattery, M.C. 2000. "Tibetsi Massif and Aorounga Crater, Chad", *Geography Review*, **13(4)**, 7.
- Wilkinson, M.J., Lulla, K. and Slattery, M.C. 1999. "Deforestation in southern Brazil", *Geography Review*, **13(2)**, 24-25.
- Caruana, J., Lulla, K. and Slattery, M.C. 1999. "South Georgia", *Geography Review*, **13(1)**, 10.
- Wilkinson, J., Lulla, K. and Slattery, M.C. 1999. "Parapeti River, fan, southern Bolivia", *Geography Review*, **12(5)**, 26-27.
- Evans, C., Wilkinson, J., Robinson, J., Wood, P., Runco, S., Amsbury, D., Lulla, K. and Slattery, M.C. 1999, "El Nino: Images of floods and drought, Part 2", *Geography Review*, **12(4)**, 16-19.
- Evans, C., Wilkinson, J., Robinson, J., Wood, P., Runco, S., Amsbury, D., Lulla, K. and Slattery, M.C. 1999, "El Nino: Images of floods and drought, Part 1", *Geography Review*, **12(3)**, 6-9.
- White, L.G., Wilkinson, M.J., Lulla, K. and Slattery, M.C. 1999. "Rural ghettos in South Africa", *Geography Review*, **12(2)**, 24-26.
- Wilkinson, J., Lulla, K. and Slattery, M.C. 1998. "Photochemical smog", *Geography Review*, **11(5)**, 34-35.
- Wilkinson, J. and Slattery, M.C. 1998. "Smog event, eastern USA", *Geography Review*, **11(4)**, 40-41.

Wilkinson, J. and Slattery, M.C. 1998. "The tropical Atlantic ozone anomaly", *Geography Review*, **11(3)**, 33-35.

Wilkinson, J. and Slattery, M.C. 1997. "Global sources of dust", *Geography Review*, **11(2)**, 20-21.

Wilkinson, J. and Slattery, M.C. 1997. "Our changing atmosphere", *Geography Review*, **11(1)**, 20-21.

Slattery, M.C. "Variability in Stream Erosion and Sediment Transport", L.J. Olive, R.J. Loughran and J.A. Kesby (Eds), book review in *Progress in Physical Geography*.

Wilkinson, J. and Slattery, M.C. 1997. "Betsiboka River delta", *Geography Review*, **10(4)**, 41.

Slattery, M.C. and Burt, T.P. 1997. "The 1995 Atlantic hurricane season", *Geography Review*, **10(3)**, 12-17.

Wilkinson, J. and Slattery, M.C. 1996. "Amazon-Negro Confluence, Amazonia, Brazil", *Geography Review*, **9(5)**, 40.

Wilkinson, J. and Slattery, M.C. 1996. "Land-use contrasts across the Angola-Namibia border", *Geography Review*, **9(4)**, 13.

Wilkinson, J. and Slattery, M.C. 1996. "The Eastern Mediterranean", *Geography Review*, **9(3)**, 37.

Wilkinson, J, Lulla, K. and Slattery, M.C. 1995. "Better pictures of Earth", *Geography Review*, **9(2)**, 1.

Slattery, M.C. 1994. "Sediment Problems", R.F. Hadley and T. Mizuyama (Eds), book review in *Progress in Physical Geography*, **19**, 152-153.

Slattery, M.C. 1994. "Tracers in Hydrology", N.E. Peters, E. Hoehn, Ch. Leibundgut and D.E. Walling (Eds), book review in *Progress in Physical Geography*, **19**, 152-153.

Slattery, M.C. 1993. "Overland Flow", A.D. Abrahams and A.J. Parsons (Eds), book review in *European Society for Soil Conservation Newsletter*, **2**, 22-25.

RESEARCH GRANTS FUNDED (Total: \$5,939,640)

- | | |
|-------------|--|
| 2016 | "TCU Visiting Scholars Award" (with Kathy Cavins-Tull), \$7,500

TCU Instructional/equipment grant for Costa Rica weather station (with Dean Williams: \$12,943). |
| 2014 | "TCU Global Innovator Award", \$25,000. |
| 2013 - 2015 | "Integrating wind energy into our ecological communities: Phase II", Nextera Energy Resources, \$1,321,032 (co-PI with Amanda Hale, Victoria Bennett and Becky Johnson). |
| 2011 - 2012 | "Test of a Novel Hypothesis: Why are bats attracted to wind turbines?", Nextera Energy Resources, \$39,075. |

- 2011 - 2012 "Relationship between Black-capped Vireo nesting success and distance to wind turbine", Nextera Energy Resources, \$80,000.
- 2011 - 2013 "Curtailed experiments to reduce bat mortality at Wolf Ridge Wind Facility in North-Central Texas", Nextera Energy Resources, \$197,000.
- 2008 - 2012 "Integrating wind energy into our ecological communities", Nextera Energy Resources, \$3,192 million. Lead Scientist.
- 2007 - 2009 "Collaborative conservation initiatives in Costa Rica: Expanding TCU's global community", TCU Strategic Initiative Fund, \$129,980.
- 2006 - 2008 "Strengthening the relationship between TCU graduate programs and BRIT", TCU Strategic Initiative Fund, \$176,000.
- 2006 - 2008 "The TCU-Oxford sustainable futures initiative", TCU Strategic Initiative Fund, \$139,095.
- 2006 - 2007 "Geomorphic processes, controls, and transition zones in the lower Sabine River", Texas Water Development Board, \$65,000 (co-PI with Jonathan Phillips).
- 2006 - 2007 "Sediment budgeting in the middle Trinity and middle Brazos Rivers, Texas", Texas Water Development Board, \$62,305 (co-PI with Jonathan Phillips).
- 2002 - 2006 "Sediment transport in the Trinity River: A first step to identifying the sediment budget of Galveston Bay", Texas Water Development Board, \$350,000 (co-PI with Jonathan Phillips).
- 2001 "Bridging the gap between modelling and fieldwork in hydrology", Texas Christian University Instructional Development Grant, \$2,414.
- 1999 "Use of mineral magnetic measurements to fingerprint suspended sediment sources: results from a linear mixing model", Texas Christian University Research and Creative Activities Grant, \$1,650.
- 1999 "Portable drilling rig for environmental monitoring wells", Texas Christian University Instructional Development Grant, \$2,239.
- 1997 "Coastal plains environments workshop", Eisenhower Foundation, \$29,999.
- 1996 - 1999 "Quantifying soil erosion and sediment delivery on North Carolina coastal plain croplands", United States Department of Agriculture, \$146,765 (co-PI with Jonathan Phillips and Paul Gares).
- 1996 "Mechanisms of rill formation on some North Carolina soils: results from field and laboratory experiments", East Carolina University Summer Research Grant, \$7,500.

PROFESSIONAL ACTIVITIES

Conference presentations (underlined named indicates presenter)

Slattery, M.C., "Geomorphology and the law", British Society for Geomorphology, Edinburgh, Scotland, 2023.

Slattery, M.C., Blair-Kucera, S. and McKone, P. "Hydrologic connectivity in a prairie hillslope seep system, Texas, USA", International Association of Geomorphology, Coimbra, Portugal, 2022.

Slattery, M.C. and Blair-Kucera, S. "Coupling runoff generation and streamflow response in a prairie hillslope seep system, Texas", Mid-European Geomorphology Meeting: Geomorphology in a changing climate and environment, Munich, Germany, 2021.

Slattery, M.C. and Fowlds, W. "A species on the brink: The rhino crisis in South Africa", American Association of Geographers, Washington DC, 2019.

Slattery, M.C. "The African Rhino Conservation Collaboration (ARCC): An update from the field", American Association of Geographers Annual Meeting, New Orleans, 2018.

Slattery, M.C. "Can we save Africa's rhinos?" Wildhand Conference, Hanoi, 2018.

Slattery, M.C. and Anderson, E. "Quantifying changes in near-surface soil moisture and temperature during prescribed fire under three fuel loads", 9th International Conference on Geomorphology, New Delhi, India, 2017.

Geffert, L., Slattery, M.C. and Klawiter, K. "Community-based conservation models and their application to the rhino crisis in South Africa", American Association of Geographers Annual Meeting, Boston, 2017.

Slattery, M.C. "The African Rhino Conservation Collaboration (ARCC): A strategy to protect rhino in the Eastern Cape of South Africa", American Association of Geographers Annual Meeting, Boston, 2017.

Slattery, M.C. "Utility-scale wind energy projects: Managing public perception and environmental risk", World Future Energy Summit, invited Tech Talk, Abu Dhabi, 2017.

Slattery, M.C. and Fowlds, W. "The African Rhino Conservation Collaboration (ARCC): A strategy to protect rhino in the Eastern Cape of South Africa", 15th International Elephant & Rhino Conservation and Research Symposium, Singapore Zoo, 2016.

Slattery, M.C., Bennett, V., Hale, A. and Johnson, B. "Utility-scale wind energy projects: Managing public perception and environmental risk", 35th International Geological Congress, Cape Town, 2016.

Anderson, E. and Slattery, M.C. "Quantifying changes in near-surface soil moisture and temperature during prescribed fire under three fuel loads", Association of American Geographers Annual Meeting, San Francisco, 2016.

Geffert, L. and Slattery, M.C. "Coaching for conservation: An analysis of local challenges in the rhino poaching crisis in South Africa", Association of American Geographers Annual Meeting, San Francisco, 2016.

Slattery, M.C. "Environmental impacts of unconventional fuels: The trade-offs", Global Impacts of Unconventional Energy Sources, Fort Worth, Texas, 2015.

Jones, S. and Slattery, M.C. "Hydrologic response of hillslope seeps and headwater streams of the Fort Worth Prairie", Association of American Geographers Annual Meeting, Chicago, 2015.

Slattery, M.C. "Social, environmental and economic impacts of large scale wind power – the international experience", WINDABA, Cape Town, 2014.

Slattery, M.C., Johnson, B., Greene, S. and Stadler, S. "The socio-economic impacts of utility scale wind energy projects in Oklahoma", Association of American Geographers Annual Meeting, Tampa, 2014.

Slattery, M.C., Hale, A. and Bennett, V. "Environmental, Social and Economic impacts of utility-scale wind power development", World Future Energy Summit Tech Talk, Abu Dhabi, 2014.

Lisenby, P.E., Wasklewicz, T. and Slattery, M.C. "High-Resolution Characterization of a Tropical Montane Stream: Using Terrestrial Laser Scanning to Relate Channel Morphology to the Distribution of Stream Power and Shear Stress", 8th IAG International Conference on Geomorphology, Paris, France, 2013.

Slattery, M.C. and Melchior, M.M. "The impact of impoundment on sediment transport and channel bar dynamics on the Brazos River, Texas", 8th IAG International Conference on Geomorphology, Paris, France, 2013.

Slattery, M.C. "Key issues facing the development of large-scale wind", Conference on Wind Power and Environmental Impacts", University of Stockholm, Sweden, 2013.

Slattery, M.C. (Invited) "Sediment storage, sea level, and sediment delivery to the ocean by coastal plain rivers: a case study from Texas", American Geophysical Union, San Francisco, 2012.

Lisenby, P.E., Wasklewicz, T. and Slattery, M.C. "A reach-scale characterization of a second- order, tropical, montane stream: using terrestrial laser scanning to relate channel morphology to the distribution of stream power and shear stress", American Geophysical Union, San Francisco, 2012.

Lisenby, P.E., Wasklewicz, T. and Slattery, M.C. "A reach-scale characterization of a second- order, tropical, montane stream: using terrestrial laser scanning to relate channel morphology to the distribution of stream power and shear stress", Geological Society of America, Charlotte, 2012.

Slattery, M.C. "Key issues facing the development of large-scale wind: Results from the TCU-Oxford-Nextera Wind Research Initiative", 34th International Geological Congress, Brisbane, 2012.

Slattery, M.C. (Invited) "A lower carbon economy", five-person panel, 34th International Geological Congress, Brisbane, 2012.

Slattery, M.C., Lantz, E. and Johnson, B. "State and local economic impacts from wind energy projects: Texas case study", American Wind Energy Association Windpower Expo Atlanta, 2012.

Slattery, M.C., Chumchal, M. and Drenner, R. "Mercury (Hg) contamination of fish in Texas and the link to anthropogenic sources: Results from reservoir surveys and atmospheric transport modeling", Planet Under Pressure, London, 2012.

Slattery, M.C. "The ecological impact of not building renewable energy: Hg contamination in TX, LA, OK and AR and regional atmospheric transport pathways", Association of American Geographers Annual Meeting, New York, 2012.

Johnson, B., Slattery, M.C. and Melchior, M.M. "Comparison of perceptions of the wind industry in Texas and Iowa", Association of American Geographers Annual Meeting, New York, 2012.

Slattery, M.C. "Ecological and aesthetic issues facing large scale wind: Key findings from the TCU-Oxford-Nextera wind research initiative", World Future Energy Summit, Abu Dhabi, 2012.

Slattery, M.C. "Mercury deposition and watershed contamination in Texas, Louisiana, Arkansas and Oklahoma: Using NOAA's HYSPLIT (HYbrid Single-Particle Lagrangian Integrated Trajectory) model to construct long-term trajectories and plumes from coal-fired power plants", Association of American Geographers Annual Meeting, Seattle, 2011.

Johnson, B., Slattery, M.C., and Llado, L. "Comparison of Socioeconomic Implications of the Wind Industry in Texas and Iowa: A Case Study", Association of American Geographers Annual Meeting, Seattle, 2011.

Lantz, E., Slattery, M.C. and Johnson, B. "Economic impacts of large-scale wind farm development at the County and State Level: A Texas Case Study", Association of American Geographers Annual Meeting, Seattle, 2011.

Slattery, M.C. (Invited) "Driving carbon minimisation and renewable integration", IQPC Wind Power Development and Implementation Summit, Cairo, Egypt, 2010.

Slattery, M.C. (Invited) "Stream restoration and geomorphology: what are we restoring to?", Riparian Workshop, Restoration and management of streams, wetlands and floodplains", Fort Worth, Texas, 2010 (invited).

Slattery, M.C. "The current state of wind energy in Texas", Faith and Clean Energy Forum, Fort Worth, Texas, 2010.

Slattery, M.C. "The TCU-Oxford-Nextera wind research initiative: results from year 2", Association of American Geographers Annual Meeting, Washington, 2010.

Slattery, M.C. (Invited) "Use of mineral magnetic measurements to fingerprint suspended sediment sources: approaches and techniques for data analysis", Land and Sea Grant National Water Conference, Hilton Head, 2010.

Slattery, M.C., Todd, Lee A., Breyer, John and Phillips, Jonathan D. "Fluvial sediment delivery and human impact in a large coastal plain river: The case of the Trinity River, Texas", International Association of Geomorphologists, Melbourne, Australia, 2009.

Slattery, M.C. "TCU-Oxford-FPL wind research initiative", paper presented at BLOWIN' IN THE WIND: The Future of Wind Turbine Farms, Texas Tech University, Lubbock, Texas, 2009 (invited).

Slattery, M.C., Todd, L., Phillips, J.D. and Breyer, J. (Invited) "Fluvial sediment delivery and human impact in a large coastal plain river: The case of the Trinity River, Texas", European Geophysical Union, Vienna, 2009.

Slattery, M.C. "The TCU-Oxford-FPL wind research initiative", Association of American Geographers Annual Meeting, Las Vegas, 2009.

Todd, L., Slattery, M.C. and Phillips, J.D. "Quantifying sedimentation rates in the Trinity River Delta, Texas", Geological Society of America Annual Meeting, Houston, 2008.

Slattery, M.C. "Constructing sediment budgets in the Trinity and Brazos basins, TX: An assessment of methods and challenges of scale", Association of American Geographers Annual Meeting, Boston, 2008.

Slattery, M.C. "Forensic fluvial geomorphology: Lessons learned from being an expert witness in geomorphic litigation", Association of American Geographers Annual Meeting, San Francisco, 2007.

Slattery, M.C. "Use of mineral magnetic measurements to fingerprint suspended sediment sources: approaches and techniques for data analysis", Invited speaker, Sediment Source Identification Workshop, USDA ARS, Tucson, Arizona, 2006.

Slattery, M.C., Walden, J. and Phillips, J.D. "Environmental magnetic analysis of sediment samples from the lower Trinity River, Texas, USA", Association of American Geographers Annual Meeting, Denver, 2006.

Slattery, M.C. and Phillips, J.D. "Sediment delivery to the ocean by coastal plain rivers", 6th International Conference on Geomorphology, Zaragoza, Spain, 2005.

Slattery, M.C., Phillips, J.D. and Walden, J. "Sediment delivery to the ocean by coastal plain rivers: a case study of the lower Trinity River, Texas", Association of American Geographers Annual Meeting, Denver, 2005.

Slattery, M.C., Phillips, J.D. and Musselman, Z. "Dam-to-delta sediment inputs and delivery in the lower Trinity River, Texas", 32nd International Geological Congress, Florence, Italy, 2004.

Slattery, M.C., Phillips, J.D. and Musselman, Z. "Dam-to-delta sediment inputs and storage in the lower Trinity River, Texas", Association of American Geographers Annual Meeting, Philadelphia, 2004.

Slattery, M.C., Wellmeyer, J.L. and Phillips, J.D. "Quantifying the impact of dam construction on flow regime, sediment delivery, and channel change", British Geomorphological Research Group Annual Meeting, Oxford, 2003.

Wellmeyer, J.L. and Slattery, M.C. "Quantifying downstream impacts of impoundment on flow regime and channel activity, Lower Trinity River, Texas", Association of American Geographers Annual Meeting, New Orleans, 2003.

Donovan, R.N., Slattery, M.C., Donaldson, S.E., Drummond, N., Chisholm, I., Adamas, L. and Abarca, L. "Environmental stewardship and the genius loci concept", Geological Society of America Annual Meeting, Denver, 2002.

Slattery, M.C. and Lazar, A. "Runoff and sediment delivery in a headwater basin of the Trinity River watershed, Fort Worth, Texas", Association of American Geographers Annual Meeting, Los Angeles, 2002.

Slattery, M.C. and Lazar, A. "Complex runoff response and pollutant flux in a headwater basin of the Trinity River watershed, Fort Worth, Texas", Geological Society of America Annual Meeting, Boston, 2001.

Musselman, Z.A. and Slattery, M.C. "Geomorphology of the Rosillos Mountains, Brewster County, Texas", Geological Society of America Annual Meeting, Boston, 2001.

Slattery, M.C., Morgan, K.M. and Busbey, A.B. "Paleohydraulic reconstruction on ancient alluvial fans, Big bend National Park, Texas", Association of American Geographers Annual Meeting, New York, 2001.

Slattery, M.C., Gares, P.A. and Phillips, J.D. "Linking the field to the river: runoff and sediment delivery in a North Carolina coastal plain drainage basin", International Symposium on Soil Erosion Research for the 21st Century, American Society of Agricultural Engineers, Honolulu, 2001.

Musselman, Z.A., Slattery, M.C. and Busbey, A.B. "Morphometric and aeral properties of Star Creek fan, Rosillos Mountains, Brewster County, Texas", Geological Society of America Annual Meeting, Reno, 2000.

Slattery, M.C., Gares, P.A., and Phillips, J.D. "Scale linkage in fluvial systems", Invited paper, European Commission's COST action working group *Soil erosion and global change*, Almeria, Spain, 2000.

Slattery, M.C., Gares, P.A., and Phillips, J.D. "Linking the Field to the River: Runoff and Sediment Delivery in two Coastal Plain Drainage Basins, North Carolina", Association of American Geographers Annual Meeting, Pittsburgh, 2000.

Cappiella, K. and Slattery, M.C. "Nitrogen, Phosphorus, and sediment exports from headwater streams in a coastal plain agricultural catchment, North Carolina", Association of American Geographers Annual Meeting, Honolulu, 1999.

Slattery, M.C. and Walden, J. "Fingerprinting suspended sediment sources using mineral magnetic measurements: a quantitative approach", Association of American Geographers Annual Meeting, Honolulu, 1999.

Walden, J., Slattery, M.C. and Burt, T.P. "Fingerprinting suspended sediment sources using mineral magnetic measurements: a quantitative approach, Tracers in Geomorphology, British Geomorphological Research Group, Coventry, 1998.

Gares, P.A., Slattery, M.C. and Phillips, J.D. "Aeolian sediment transport off coastal plain cropland", Fourth International Conference on Aeolian Research, University of Oxford, 1998.

Slattery, M.C., Gares, P.A. and Phillips, J.D. "Soil erosion and sediment delivery in a coastal plain drainage basin, North Carolina", Association of American Geographers Annual Meeting, Boston, 1998.

Slattery, M.C. and Gares, P.A. "Runoff and sediment production in a small coastal plain watershed during tropical rainfall", Fourth International Conference of Geomorphology, Bologna University, Italy, 1997.

Slattery, M.C. and Gares, P.A. "Runoff and sediment production in a small coastal plain watershed during tropical rainfall: some preliminary results", Association of American Geographers Annual Meeting, Fort Worth, 1997.

Burt, T.P. and Slattery, M.C. "Time-dependent changes in soil physical properties and surface runoff generation", Advances in Hillslope Processes, British Geomorphological Research Group, Bristol, 1996.

Slattery, M.C., and Burt, T.P. "On the complexity of sediment delivery in fluvial systems", Advances in Hillslope Processes, British Geomorphological Research Group, Bristol, 1996. Slattery, M.C. "Particle size characteristics of suspended sediment in hillslope runoff and stream flow", Association of American Geographers Annual Meeting, Charlotte, 1996.

Slattery, M.C., Burt, T.P. and Walden, J. "The application of mineral magnetic measurements to quantify within-storm variations in suspended sediment sources", XXI General Assembly of IUGG (IAHS), Boulder, Colorado, 1995.

Slattery, M.C. "South Africa and the five themes of geography", North Carolina Geographic Alliance Workshop, East Carolina University, Greenville, 1995 (invited).

Slattery, M.C. and Burt, T.P. "On the complexity of sediment delivery in fluvial systems", Association of American Geographers Annual Meeting, Chicago, 1995.

Slattery, M.C., Burt, T.P. and Walden, J. "Use of magnetic measurements to fingerprint suspended sediment sources", Association of American Geographers Annual Meeting, San Francisco, 1994.

Slattery, M.C. and Burt, T.P. "Contemporary sediment dynamics and sediment delivery in a small agricultural catchment, North Oxfordshire: research design and preliminary results", Third International Conference of Geomorphology, McMaster University, Hamilton, Ontario, 1993

Slattery, M.C. and Burt, T.P. "Size characteristics of sediment eroded from agricultural soil: dispersed versus non-dispersed, ultimate versus effective", Third International Conference of Geomorphology, McMaster University, Hamilton, Ontario, 1993.

Walden, J. and Slattery, M.C. "Verification of a simple gravity technique for separation of particle size fractions suitable for mineral magnetic analysis", poster, European Geophysical Association General Assembly, Wiesbaden, Germany, 1993.

Walden, J., White, K., Burt, T.P., MacMillan, B., Slattery, M.C. and Parker, A. "A comparison of qualitative, statistical and mathematical approaches for the identification of natural magnetic mineral assemblages within sediment samples", poster, European Geophysical Association General Assembly, Wiesbaden, Germany, 1993.

Slattery, M.C. and Burt, T.P. "Contemporary sediment dynamics in a small agricultural catchment, North Oxfordshire", Tectonics and Geomorphology Discussion Meeting: Sediment Flux at Different Scales, University of Oxford, 1993.

Slattery, M.C. and Bryan, R.B. "Contemporary sediment dynamics in a small agricultural catchment, North Oxfordshire, UK: research design and preliminary results", poster, Methods of Hydrologic Basin Comparison Conference, University of Oxford, 1992.

Slattery, M.C. and Bryan, R.B. "Hydraulic conditions for rill incision under spray simulated rainfall", poster, Methods of Hydrologic Basin Comparison Conference, University of Oxford, 1992.

Slattery, M.C. "Barchan migration on the Kuiseb River delta, South West Africa/Namibia", 20th Students Geographical Conference, University of Cape Town, 1988 (Best Paper).

Slattery, M.C. "Dune dynamics at Walvis Bay and Conception Bay, South West Africa/Namibia", 19th Students Geographical Conference, Rand Afrikaans University, Johannesburg, 1987.

Films, invited lectures, seminars, congressional testimony, and other creative activity

2023 CBS11 TV: "When exactly does fall begin this year?"

<https://www.cbsnews.com/texas/news/when-does-fall-begin-this-year/>

Dallas Morning News: "2023 Texas summer was the second-hottest on record. Is this the new normal? Interviewed for story on 5 November 2023

<https://www.dallasnews.com/news/2023/11/05/2023-texas-summer-was-the-second-hottest-on-record-is-this-the-new-normal/>

Texas Master Naturalists, "*The weather and climate of Texas*"

2022 Eton College, London, "Can we afford to save Africa's rhinos."

University of Oxford, "Can we afford to save Africa's rhinos"

Ask the Expert: How will invasion of Ukraine impact our wallets? NEWSRADIO 1080 KRLD

<https://www.audacy.com/krlD/news/national/ate-how-will-invasion-of-ukraine-impact-our-wallets>

EarthX TV: "Wild Wonders with Brooke" 23-minute documentary on Costa Rica's rainforest

EarthX TV: "Wild Wonders with Brooke" 23-minute documentary on sloths

Texas Master Naturalists, "*The weather and climate of Texas*"

2021 EarthX TV: "Kids in Conservation" 23-minute documentary on the rhino crisis

Texas Master Naturalists, "*The weather and climate of Texas*"

2019 University of Oxford, "*Are Africa's rhinos black or white?*"

University of Leiden, "*The rhino crisis: A species on the brink.*"

EarthX, panelist: "*Wildlife Recovery*" (<https://youtu.be/gB353TOK6DE>)

EarthX, EdTx speaker: "*Can we save the world's rhinos?*" (<https://youtu.be/L8p11yyAx7g>)

Panelist at EarthX film premier – KIFARU

Podcast for Conservation Connection: "Costa Rican cloud forests and South African Rhinos" (<https://www.lastchanceendeavors.com/podcast/episode/247282f2/dr-mike-slattery-environmental-scientist-at-tcu-or-costa-rican-cloud-forests-and-south-african-rhinos-or-episode-012>)

TCU Alumni Lunch-&-Learn, "The TCU Rhino Initiative"

South Carroll Senior High School (three presentations), *Can we save Africa's rhinos?*"

Fort Worth Sierra Club, "A walk in the cloud forest: travels through Costa Rica"

University of Manchester, UK, "Can we save Africa's rhinos?"

Texas Master Naturalists, "The weather and climate of Texas"

2018 March for Elephants and Rhinos – ATX: "Can we save Africa's rhinos?"

UCLA, "The rhino crisis in South Africa"

EarthX, panelist: "Saving our wildlife"

Texas Master Naturalists, "The weather and climate of Texas"

Trinity Valley School, "Can we save South Africa's rhinos?"

Texas Master Naturalists, "A constructive conversation about climate change."

North Texas Women in the Environment, "A constructive conversation about climate change."

Women's Energy Network, "Large-scale wind farms: A viable way forward?"

2017 Fort Worth Sierra Club, "The rhino's last stand"

Fort Worth Museum of Science and History, "Can we save Africa's rhinos?"

Texas Master Naturalists, "The weather and climate of Texas"

2016 Visiting Scholar, Durham University, UK (two talks presented):

1. The rhino poaching crisis in South Africa (presented to Hatfield College)

2. Utility-scale wind energy projects: Managing public perception and environmental risk (presented to the Durham Energy Institute).

Sierra Club (invited speaker), "The rhino poaching crisis in South Africa"

2015 Earth Day Texas (invited speaker), "Why are we poles apart on climate change?"

Fort Worth Sierra Club, "Why are we poles apart on climate change?"

2014 University of Texas at Arlington, "The value of interdisciplinary research"

Fort Worth Humanists, "Anthropogenic climate change".

- Texas Water Foundation, State Capitol, Austin, "*Dams and river regulation*".
- 2012 Panelist, National Youth Summit on the Dust Bowl, Fort Worth Museum of Science and History, in association with The Smithsonian and PBS
- 2011 Riparian Workshop, Texas Christian University, "*Stream restoration: What are we restoring to?*"
- 2010 The Great Global Warming Debate, Chancellor's Advisory Council.
- 2010 Millsaps College, "*The environmental impact of large wind farms in Texas*".
- 2010 East Carolina University, "*The environmental impact of large wind farms in Texas*".
- 2008 Testimony before the U.S. Congress Subcommittee and Water Resources and the Environment
- East Carolina University, "*The geographer as expert witness*".
- 2006 Tarrant County College, "*The science behind global warming*".
- Society of Texas Environmental Professionals, "*The TCU Graduate Program*".
- Texas Water Development Board, "*One day workshop on sediment budgeting in Texas rivers*".
- 2005 University of Dallas, Department of Geology, "*The Trinity River basin, Texas: sediment dynamics and human impact*".
- 2005 University of Texas at Arlington, Department of Geology, "*Sediment delivery to the ocean by coastal plain rivers*".
- 2001 Baylor University, Department of Geology, "*Research questions in small basin research*".
- 1999 University of Texas, Dallas, "*On the complexity of sediment delivery in small drainage basins*".
- 1999 University of South Carolina, "*On the complexity of sediment delivery in small drainage basins*".
- 1995 University of North Carolina-Chapel Hill, "*Linking the field to the river: sediment delivery on agricultural land*".
- 1995 East Carolina University, Geography Awareness Week Lecture, "*South Africa: A personal perspective*".
- 1994 Applied Hydrology Seminar Series, School of Geography, University of Oxford, "*Mechanisms of rill formation*".
- 1992 Research Seminar, School of Geography, University of Oxford, "*Sediment delivery in agricultural catchments: problems and prospects*".

- 1991 Sherborne Boys School, United Kingdom, "Soil erosion in the UK - is there a problem?".
- 1991 Applied Hydrology Seminar Series, School of Geography, University of Oxford, "Overland flow and erosion".

Professional Societies: American Geophysical Union, Association of American Geographers, Geological Society of America, British Geomorphological Research Group, British Hydrological Society, British Society of Soil Science, International Association of Geomorphologists

Professional Assignments/consulting

- 2020 - Expert Witness, Civil Action No. 3:20-cv-00223 In the United States District Court for the Southern District of Texas, Galveston Division
- 2020 - Expert Witness, CAUSE NO. 2019-57694, 165th Judicial District Court, Texas
- 2015 – 2016 Panelist, NSF Geography and Spatial Sciences panel
- 2014 - Editorial Board, *AIMS Energy*.
- 2010 - 2012 Member of Sustainable Energy Roundtable in association with the Fort Worth Museum of Science and History.
- 2010 - Editorial Board, *Annals of the Association of American Geographers*.
- 2009 - 2012 Executive Research Board, Texas Institute and Botanical Research Institute of Texas
- 2005 - 2009 Head of Publications and Executive Committee, International Association of Geomorphologists
- 2007 Expert Witness, case 2004-887-A in the 188th Judicial District Court, Texas
- 2005 - 2006 Chair, Geomorphology Specialty Group, Association of American Geographers.
- 2001 - 2004 Member and then Chair, Geomorphology Specialty Group Awards Committee, Association of American geographers.
- 2001 US representative, The Gordon Cook Conversations, Douneside, Scotland.
- 2000 National Vice-President, Sigma Gamma Epsilon.
- 1998 Judge, 1998 Intel International Science and Engineering Fair, Fort Worth, Texas.
Judge, 1998 Texas Geography Bee.
- 1995 Member of disaster response team examining the effects of Hurricane Opal, Pensacola Beach, Florida.
- 1988 Member of research team monitoring winds in the Namib Desert, University of the Witwatersrand, Johannesburg.

Journal reviewer for: *Journal of Arid Environments, Soil Use and Management, Earth Surface Processes and Landforms, Catena, Journal of Soil Science, Geomorphology, Journal of Soils and Sediments, Energy Policy, AIMS Energy*

External examiner and T&P review: Louisiana State University, University of North Carolina, Greensboro, Millsaps College, Mississippi, Texas A&M University.

Proposal reviewer for: US Department of Agriculture CSREES Grants, NASA Research and Education Review Panel (Water Storage)

University Committees

2020	College of Science and Engineering Dean's Search Committee
2019 - 2021	CSE Diversity, Equity, and Inclusion Committee <i>Genius Loci</i> Committee
2018 - 2020	Sustainability Committee
2017 - 2018	TCU Committee on the Environment (Chair)
2006	TCU Strategic Initiative Fund Evaluation Committee (TCU)
2004	College of Science and Engineering Advisory Committee (TCU) Graduate Education Strategy Committee (TCU)
2002	Graduate Review Committee, College of Science and Engineering (TCU)
2001	Core Curriculum Implementation Committee (TCU)
2000	Core Curriculum Outcomes Committee (TCU)
1999 - 2000	Commission on the Future of TCU (Global Positioning task Force)
1999 - 2003	Curriculum Committee (Texas Christian)
1995 - 1997	Search Committee (East Carolina)
1994 - 1997	Code Committee (East Carolina)
1994 - 1995	Faculty Development Committee (East Carolina)
1992 - 1993	Graduate Representative on the Joint Consultative and Sub-Faculty Committee (Oxford)
1989 - 1990	Graduate Representative on the Graduate Affairs Committee (Toronto)
1988	Chairman, Students Geographical Society (Witwatersrand)

GRADUATE PROGRAM

MS Thesis Directed/Co-Directed:

C. Dixon. "An evaluation of water and sediment quality in a mine-impacted watershed: Case study of Elm Creek, Picher, Oklahoma."

S. Blair-Kucera. "The links between soil moisture dynamics, runoff generation, and stream flow response: A case for a prairie hillslope seep system."

Greene, J. "Impacts of megaherbivores on the vegetation in a size restricted game reserve."

E. Anderson, 2016. "Quantifying physical changes in near-surface soil during prescribed fire."

J. Williams, 2014 (co-directed). "Remediating Nutrient and Bacterial Contaminated Stormwater via Bioretention: A Comparative Analysis of Three Filter Designs."

Dizayee, R, 2014 (co-directed). "Groundwater Degradation and Sustainability of the Erbil Basin, Erbil, Kurdistan Region, Iraq."

P. Lisenby, 2013. "A Reach-Scale Characterization of a Second-Order, Tropical, Montane Stream: Using Terrestrial Laser Scanning to Relate Channel Morphology to the Distribution of Stream Power and Shear Stress".

S. Jones, 2013. "Hydrologic response of hillslope seeps and headwater streams in the Fort Worth Prairie."

M. Melchior, 2012. "Assessing sediment dynamics and channel bar response in the Brazos River near Glen Rose, Texas".

L. Llado, 2011. "Soil moisture dynamics of Muhly seeps in a hillslope hollow during low flow and storm conditions".

K. Ozenick, 2010. "Identifying priority areas for conservation: Methods using GPS and GIS tools to represent biodiversity in Costa Rica".

B. Tower, 2010. "Spatial and temporal variability of soil properties under multiple land use, Costa Rica".

X. Zhang, 2010. "Quantifying soil moisture dynamics on green roof media in response to rainfall".

J. Swofford, 2009. "Social perceptions of wind energy in Texas: Proximity and NIMBY explored".

A. Schlipmann, 2009. "Base-line hydrology for a long-term stream monitoring program: A first step toward sustainable water management at the Texas Christian University tropical research station".

M. Dezendorf, 2009. "Sustainable tourism as a working model of new conservation in the Monteverde zone, Costa Rica".

D. Williams, 2008. "Appropriate design elements and soil selection for green roofs in North Central Texas".

L. Black, 2008. "Quantifying in-stream sediment transport in the upper Brazos Basin, Texas".

- L. Todd, 2008. "Use of GPR to constrain sedimentation in the Trinity River Delta, Texas".
- R. Garnett, 2008. "Sediment budgeting along the middle Trinity River, TX".
- S. Eady (co-supervised), 2007. "Effects of Herbivory on Competition Between Avicennia and Spartina Along the Marsh Gradient".
- S. Hagos, 2007. "Groundwater flow dynamics and possible contaminants studies for La Grave Field wells, Fort Worth, Texas".
- S. Smith, 2007. "The impact of impoundment and flood control on channel morphology and dynamic river processes at the Brazos River, Paluxy River, Squaw Creek confluence, Glenrose TX".
- T. Moss, 2007. "Baseline study of nutrient and sediment flux from an urbanising basin, Parker County, Texas".
- D. Dollar, 2005. "Land use, slope, and soil type and their control on sediment flux from two lower coastal plain basins, Trinity River, Texas".
- L. Dakshinamurthy, 2004. "Quantifying the impact of impoundment on sediment transport in the lower Trinity River, Texas", 72p.
- L. Johnson, 2003. "Spatial and temporal variability in soil moisture content as a control on runoff generation in a hillslope hollow in Parker County, Texas", 172p.
- J. Wellmeyer, 2003. "Historic planform change of the Trinity River channel below Livingston Dam, Liberty County, Texas", 152p.
- M. Donovan, 2003. "Grain size control on Landsat TM imagery of alluvial fans surrounding the Rosillos Mountains in southwest Texas, 187p.
- Z. Musselman, 2001. "Morphometric and areal properties of Star Creek fan, Rosillos Mountains, Brewster County, Texas", 131p.
- A. Lazar, 1999. "Storm based monitoring of pollutant fluxes on Upper Sycamore Creek, Fort Worth, Texas", 210p.
- H. Golden, 1998. "Spatial and temporal variability of historic alluvial sedimentation on the lower coastal plain, North Carolina", 98p.
- K. Capiella, 1995. "Nitrogen, phosphorus, and sediment exports from headwater streams in a coastal plain agricultural basin, North Carolina", 155p.

Rhiannon G Mayne

Work Experience

Start Year: 2009

Position: Research Associate

Organization: Smithsonian Institution

Description:

Research Associates are senior experts in their field who maintain a formal scholarly affiliation with the Smithsonian. Their appointments last for three years but can be renewed. Research Associates are given access to Smithsonian collections and facilities. In exchange, they bring their own outside expertise and knowledge to the Smithsonian for the increase and diffusion of knowledge to all. My appointment has been renewed 3 times.

City: Washington

State or Province: District of Columbia

Start Year: 2009

End Year: 2009

Position: Postdoctoral Research Fellow

Organization: Smithsonian Institution

Description:

Postdoctoral research. This position was funded by the Smithsonian as a result of a successful research grant proposal on which I was the Principal Investigator.

Title: Is the metal in eucrites and mesosiderites related? Implications for the differentiation and impact history of 4 Vesta - target of the Dawn Mission (**\$44,000**)

City: Washington

State or Province: District of Columbia

Start Year: 2008

End Year: 2009

Position: Visiting Postdoctoral Research Fellow

Organization: Smithsonian Institution

Description:

Postdoctoral research. Visiting fellows are funded by a member of the Smithsonian's research staff.

City: Washington

State or Province: District of Columbia

Research and Creative Activities

1. Mayne, Rhiannon G. "A Curator's Perspective on the Role and Importance of Curated Meteorite Samples in Planetary Science." 2023.
2. Mayne, Rhiannon G. "The Oscar E. Monnick Meteorite Collection at Texas Christian University." 2023.
3. Mayne, Rhiannon G., Emily J. Gackstatter, Juliane Gross, Justin Filiberto, Vinciane Debaille, Steven Singletary, and Philip Mani. "Sample Scale Variability in NWA 14904: Implications for Mars Sample Return." 2023.
4. Mayne, Rhiannon G., Lindsay Caves, Tim J. McCoy, Richard D. Ash, and William F. McDonough. "Metal In Mesosiderites: Evidence for Redox and Fractional Crystallization" *Meteoritics and Planetary Science* 58 (2023): 1211–28. doi: 10.1111/maps.14031 .
5. Gackstatter, E J., R G. Mayne, J Filiberto, and S Singletary. "CLASSIFICATION AND CHARACTERIZATION OF NEW POIKILITIC SHERGOTTITE, NORTHWEST AFRICA 14904.," Vol. 57, 2022.
6. Gower, E R., and R G. Mayne. "REEXAMINING MESOSIDERITE CLASSIFICATION SCHEMES," Vol. 57, 2022.
7. Vander, Kaaden, K-E, E.-G. Rivera Valentin, B. Bell, K Gardner Vandy, J. Jones, R. Mayne, and C. Shupla. "The Lunar and Planetary Institute's Independent Inclusion, Diversity, Equity, and Accessibility Advisory Committee," Vol. 2679, 2022.

8. Haenecour, P., K.-A. Lehnert, C.-A. Bennett, J.-J. Barnes, H.-C. Connolly, K. Crombie, J. Davidson, et al. "Vision and Strategy for the Implementation of NASA Science Information Policy Document (SPD)-41 for Astromaterials Sample Science," Vol. 2684, 2022.
9. "Improving Accessibility at the Monnig Meteorite Gallery: The Impact of Free-Choice Learning in Planetary Science." 2022.
10. Caves, L., R.-G. Mayne, T.-J. Mccoy, R.-D. Ash, and W.-F. Mcdonough. "'Redox and Fractional Crystallization of Mesosiderite Metal'," Vol. 84, 2021.
11. Mayne, Rhiannon G., Catherine M. Corrigan, Timothy J. Mccoy, James M D Day, and Timothy R. Rose. "Qarabawi's Camel Charm: Tracing the Meteoritic Origins of a Cultural Artifact." *Meteoritics and Planetary Science*, 2019.
12. Caves, Lindsay R., Rhiannon G. Mayne, Timothy J. Mccoy, William F. Mcdonough, and Richard D. Ash. "Understanding Metal-Silicate Mixing in Mesosiderites." 2019.
13. Mayne, Rhiannon G., Rebecca L. Funderburg, and Nicole G. Lunning. "Reevaluating the Unbrecciated Eucrites for Evidence of Metasomatism." 2019.
14. Mayne, Rhiannon G., Catherine M. Corrigan, Timothy J. Mccoy, James M D Day, and Timothy R. Rose. "From a Camel to the Smithsonian: Tracing the Origin of Qarabawi's Charm." 2019.
15. Mayne, Rhiannon G. "The Oscar E. Monnig Meteorite Collection: An Overview of the Last Decade." 2018.
16. Crossley, S. D., N. G. Lunning, R. G. Mayne, T. J. Mccoy, S. Yang, M. Humayun, R. D. Ash, J. M. Sunshine, R. C. Greenwood, and I. A. Franchi. "Experimental Insights into Stannern-Trend Eucrite Petrogenesis." *Meteoritics & Planetary Science* 53 (2018): 2122–37.
17. Funderburg, Rebecca L., Rhiannon G. Mayne, Nicole G. Lunning, and Steven Singletary. "Metasomatic Features in Eucrites." 2018.
18. Balta, J. Brian, Matthew E. Sanborn, Rhiannon G. Mayne, Meenakshi Wadhwa, Harry Y. Mcsween, and Samuel D. Crossley. "Northwest Africa 5790: A Previously Unsampled Portion of the Upper Part of the Nakhlite Pile." *Meteoritics & Planetary Science* 52 (2017): 36–59.
19. Crossley, S. D., R. W. Nicklas, R. D. Ash, and R. G. Mayne. "A New Angrite Oxybarometer: Olivine-Melt Vanadium Distribution in D'Orbigny." 2017.
20. Leith, Thomas B., Nicholas A. Moskovitz, Rhiannon G. Mayne, Francesca E. Demeo, Driss Takir, Brian J. Burt, Richard P. Binzel, and Dimitra Pefkou. "The Compositional Diversity of Non-Vesta Basaltic Asteroids." *Icarus* 295 (2017): 61–73.
21. Mayne, Rhiannon G., Timothy J. Mccoy, and Catherine M. Corrigan. "Are the HEDs and the IIIABs Keeping It All in the Family?" 2016.
22. Mayne, Rhiannon G. "QARABAWI'S CHARM: LOOKING BEYOND THE SCIENCE." *ELEMENTS* 12 (2016): 73–74.
23. Mayne, Rhiannon G., Samantha E. Smith, and C. M. Corrigan. "Hiding in the Howardites: Unequilibrated Eucrite Clasts as a Guide to the Formation of Vesta's Crust." *Meteoritics & Planetary Science* 51 (2016): 2387–2402.
24. Crossley, S. D., R. G. Mayne, N. G. Lunning, T. J. Mccoy, R. C. Greenwood, and I. A. Franchi. "Stannern-Trend Eucrite Petrogenesis: An Assessment of Partial Melt Contamination Models via Experimental Petrology." 2016.
25. Gregory, Julia D., Rhiannon G. Mayne, Joseph S. Boesenberg, Munir Humayun, A P. Silver, Richard C. Greenwood, and Ian A. Franchi. "Choteau Makes Three: A Characterization of the Third Member of the Vermillion Subgroup." 2016.
26. Mayne, Rhiannon G. "Qarabawi's Charm: Looking Beyond the Science," 2016.
27. Mayne, Rhiannon G., Timothy J. Mccoy, Richard C. Greenwood, Ian A. Franchi, and Catherine M. Corrigan. "Enon and Puente Del Zacate: A Duo of Primitive-Silicate Bearing Magmatic Irons." 2016.
28. Crossley, Samuel D., Rhiannon G. Mayne, Nicole L. Lunning, Timothy J. Mccoy, Richard A. Ash, and Jessica M. Sunshine. "Experimental Insights into Stannern-Group Eucrite Petrogenesis." 2016.
29. Beck, Andrew W., Timothy J. Mccoy, Jessica M. Sunshine, Christina E. Viviano, Catherine M. Corrigan, Takahiro Hiroi, and Rhiannon G. Mayne. "Challenges in Detecting Olivine on the Surface of 4 Vesta." *METEORITICS & PLANETARY SCIENCE* 48 (2013): 2155–65.
30. Mcsween Jr., Harry Y, David W. Mittlefehldt, Andrew W. Beck, Rhiannon G. Mayne, and Timothy J. Mccoy. "HED Meteorites and Their Relationship to the Geology of Vesta and the Dawn Mission." *SPACE SCIENCE REVIEWS* 163

(2011): 141–74.

31. Mayne, Rhiannon G., Jessica M. Sunshine, Harry Y. Mccween, Timothy J. Mccoy, Catherine M. Corrigan, and Allison Gale. "Petrologic Insights from the Spectra of the Unbrecciated Eucrites: Implications for Vesta and Basaltic Asteroids." *METEORITICS & PLANETARY SCIENCE* 45 (2010): 1074–92.

Service: Institutional Committee Assignments

Committee Name: Uncontrolled

Uncontrolled Name: Hiring Committee for New Instructor

Start Term: 2023/01

Responsibility: 15030

Committee ID: 90

Committee Name: Uncontrolled

Uncontrolled Name: Hiring Committee for New Tenure Track Faculty Member

Start Term: 2023/01

Responsibility: 15031

Committee ID: 73

Committee Name: Uncontrolled

Uncontrolled Name: Curriculum Committee

Start Term: 2020/01

Responsibility: 7983

Committee ID: 90

Committee Name: Uncontrolled

Uncontrolled Name: Department Advisory Committee

Start Term: 2018/03

Responsibility: 6225

Committee ID: 90

Committee Name: Uncontrolled

Uncontrolled Name: Biology Ecology Tenure-Track Faculty Member Search Committee

Start Term: 2022/01

End Term: 2022/01

Responsibility: 12484

Committee ID: 67

Committee Name: Uncontrolled

Uncontrolled Name: Hiring Committee for New Tenure Track Faculty Member

Start Term: 2022/01

End Term: 2022/01

Responsibility: 15034

Committee ID: 67

Committee Name: Uncontrolled

Uncontrolled Name: Chair of Hiring Committee for PPP Position

Start Term: 2021/03

End Term: 2022/01

Responsibility: 15033

Committee ID: 90

Committee Name: Uncontrolled

Uncontrolled Name: Women and Gender Studies Advisory Board

Start Term: 2019/01

End Term: 2021/03

Responsibility: 6193

Committee ID: 16

Committee Name: Uncontrolled

Uncontrolled Name: ENSC PPP Search Committee

Start Term: 2021/03
End Term: 2021/02
Responsibility: 10598
Committee ID: 90

Committee Name: Uncontrolled
Uncontrolled Name: SIS Taskforce
Start Term: 2020/01
End Term: 2020/03
Responsibility: 7970
Committee ID: 16

Committee Name: Uncontrolled
Uncontrolled Name: WGST Chair Search Committee
Start Term: 2020/01
End Term: 2020/03
Responsibility: 10599
Committee ID: 80

Committee Name: Uncontrolled
Uncontrolled Name: Master Leader Cohort Selection Committee
Start Term: 2019/03
End Term: 2019/03
Responsibility: 7971
Committee ID: 6

Committee Name: Uncontrolled
Uncontrolled Name: Faculty Search Committee (Sustainability hire)
Start Term: 2019/01
End Term: 2019/03
Responsibility: 6226
Committee ID: 90

Committee Name: Uncontrolled
Uncontrolled Name: Diversity, Equity, and Inclusion Committee
Start Term: 2018/01
End Term: 2019/03
Responsibility: 4694
Committee ID: 15

Committee Name: Uncontrolled
Uncontrolled Name: Genius Loci Committee
Start Term: 2018/01
End Term: 2018/03
Responsibility: 4692
Committee ID: 6

Committee Name: Uncontrolled
Uncontrolled Name: Tenure and Promotion Committee
Start Term: 2018/01
End Term: 2018/03
Responsibility: 4698
Committee ID: 90

Committee Name: Faculty Senate
Start Term: 2016/01
End Term: 2018/03
Responsibility: 4690
Committee ID: 99

Committee Name: Faculty Senate: Educational Evaluation Committee

Start Term: 2016/01
End Term: 2018/03
Responsibility: 4691
Committee ID: 103

Committee Name: Uncontrolled
Uncontrolled Name: Radiation Safety Committee
Start Term: 2012/01
End Term: 2015/03
Responsibility: 4693
Committee ID: 6

Contact Information

Building: Sid Richardson Building
Room: M16
Street 1: 2950 West Bowie Street
City: Fort Worth
State or Province: Texas
Zip / Postal Code: 76109
Email Address: r.g.mayne@tcu.edu
Secondary Email: rhiannon.mayne@gmail.com
Work Phone: (817)257-4172
Cell Phone: (817)266-2779
Department Phone: (817)257-7270
Personal Street 1: 3301 W. Biddison Street
Personal City: Fort Worth
Personal State: Texas
Personal Zip: 76109
Website: <https://ensc.tcu.edu/staff/rhiannon-mayne-ph-d/>

Current Position

Position Title: Curator, Monnig Meteorite Collection and Gallery

Start Date: 2009-08-24

Position Title: Oscar and Juanita Monnig Endowed Chair of Meteoritics and Planetary Science

Teaching: Courses Taught

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2023/03	ENSC	30123	REG	060	History of Women in Science			17	0	17
2023/03	ENSC	30123	REG	160	History of Women in Science			17	0	17
2023/01	ENSC	10143	REG	5	Contemporary Environmental Issues			70	51	19

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2023/01	ENSC	10143	REG	105	Contemporary Environmental Issues			23	16	7
2023/01	ENSC	10143	REG	106	Contemporary Environmental Issues			23	18	5
2023/01	ENSC	10143	REG	107	Contemporary Environmental Issues			24	17	7
2022/04	ENSC	10143	MAY	10	Contemporary Environmental Issues			8	2	6
2022/04	ENSC	10143	MAY	110	Contemporary Environmental Issues			8	2	6
2022/03	ENSC	30123	REG	060	History of Women in Science			16	0	16
2022/03	ENSC	30123	REG	160	History of Women in Science			16	0	16
2022/03	ENSC	60203	REG	080	Environmental Issues			7	0	0
2022/03	PHYS	50970	REG	713	Special Problems in Physics: Undergrad Res in Planetary Sci			1	0	1
2022/01	ENSC	10143	REG	005	Contemporary Environmental Issues			70	60	10
2022/01	ENSC	10143	REG	105	Contemporary Environmental Issues			24	16	8

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2022/01	ENSC	10143	REG	106	Contemporary Environmental Issues			22	22	0
2022/01	ENSC	10143	REG	107	Contemporary Environmental Issues			24	22	2
2022/01	GEOL	30163	REG	015	Evolution and Exploration of the Solar System			8	0	8
2022/01	PHYS	30163	REG	015	Evolution and Exploration of the Solar System			8	1	7
2021/04	ENSC	10143	JLY	002	Contemporary Environmental Issues			15	2	13
2021/04	ENSC	10143	JLY	102	Contemporary Environmental Issues			15	2	13
2021/03	ENSC	30123	REG	060	History of Women in Science			9	3	6
2021/03	ENSC	30123	REG	160	History of Women in Science			9	3	6
2021/01	ENSC	10143	REG	005	Contemporary Environmental Issues			52	33	19
2021/01	ENSC	20003	REG	055	Astrobiology: Hunting for Habitable Worlds			5	2	3
2021/01	ENSC	20003	REG	655	Astrobiology: Hunting for Habitable Worlds: Honors			11	5	6

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2020/04	ENSC	10143	MAY	010	Contemporary Environmental Issues			24	3	21
2020/04	ENSC	10143	MAY	110	Contemporary Environmental Issues			24	3	21
2020/04	ENSC	70970	JUN	079	Special Problems: Changes in Informal Learning			1	0	0
2020/04	ENSC	70970	JLY	901	Special Problems: Museum Curriculum Development			1	0	0
2020/03	ENSC	70990		079	Thesis			3	0	0
2020/03	GEOL	70970		714	Special Problems: Museum Sci & Curatorial Tech			1	0	0
2020/03	GEOL	30443		070	Earth Materials			12	1	11
2020/03	GEOL	30443		071	Earth Materials			12	2	10
2020/03	GEOL	70970		715	Special Problems: Meteoritics			1	0	0
2020/03	ENSC	70980		079	Thesis			3	0	0
2020/01	ENSC	10143	REG	130	Contemporary Environmental Issues			24	14	10
2020/01	ENSC	10143	REG	131	Contemporary Environmental Issues			26	22	4
2020/01	ENSC	10143	REG	105	Contemporary Environmental Issues			26	13	13

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2020/01	ENSC	10143	REG	132	Contemporary Environmental Issues			24	21	3
2020/01	ENSC	10143	REG	030	Contemporary Environmental Issues			98	67	31
2020/01	ENSC	10143	REG	120	Contemporary Environmental Issues			25	10	15
2020/01	ENSC	10143	REG	107	Contemporary Environmental Issues			26	16	10
2020/01	ENSC	10143	REG	133	Contemporary Environmental Issues			24	10	14
2020/01	ENSC	10143	REG	020	Contemporary Environmental Issues			72	43	29
2020/01	ENSC	10143	REG	122	Contemporary Environmental Issues			22	12	10
2020/01	ENSC	10143	REG	005	Contemporary Environmental Issues			77	47	30
2020/01	ENSC	10143	REG	106	Contemporary Environmental Issues			25	19	6
2020/01	ENSC	10143	REG	121	Contemporary Environmental Issues			24	20	4
2019/03	ENSC	70970		078	Special Problems: Public Outreach in the Sciences			1	0	0
2019/01	UNLF	10211		023	Introduction to University Life			14	14	0

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2019/01	GEOL	70970		715	Special Problems: Meteoritics			1	0	0
2019/01	ENSC	20003		035	Astrobiology: Hunting for Habitable Worlds			10	3	7
2019/01	ENSC	20003		635	Astrobiology: Hunting for Habitable Worlds: Honors			6	6	0
2018/03	PHYS	30163		005	Evolution and Exploration of the Solar System			2	1	1
2018/03	GEOL	30163		005	Evolution and Exploration of the Solar System			7	1	6
2017/03	GEOL	70970		716	Special Problems: Planetary Science			1	0	0
2017/03	GEOL	70980		079	Thesis			3	0	0
2017/03	GEOL	70990		079	Thesis			8	0	0
2017/03	GEOL	10113		117	Understanding the Earth			14	11	3
2017/03	GEOL	10113		115	Understanding the Earth			14	10	4
2017/03	GEOL	10113		131	Understanding the Earth			25	15	10
2017/03	GEOL	10113		132	Understanding the Earth			24	16	8
2017/03	GEOL	10113		116	Understanding the Earth			13	11	2

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2017/03	GEOL	10113		118	Understanding the Earth			11	7	4
2017/03	GEOL	10113		020	Understanding the Earth			68	52	16
2017/03	GEOL	10113		120	Understanding the Earth			20	17	3
2017/03	GEOL	10113		133	Understanding the Earth			24	15	9
2017/03	GEOL	10113		121	Understanding the Earth			22	15	7
2017/03	GEOL	10113		123	Understanding the Earth			8	5	3
2017/03	GEOL	10113		122	Understanding the Earth			18	15	3
2017/03	GEOL	10113		130	Understanding the Earth			23	15	8
2017/03	GEOL	40970		716	Special Problems: Planetary Science			1	0	1
2017/01	GEOL	10113		030	Understanding the Earth			109	87	23
2017/01	GEOL	10113		634	Understanding the Earth: Honors			1	1	0
2017/01	GEOL	10113		633	Understanding the Earth: Honors			2	2	0
2017/01	GEOL	10113		632	Understanding the Earth: Honors			2	0	2
2017/01	GEOL	10113		631	Understanding the Earth: Honors			5	3	2

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2017/01	GEOL	10113		630	Understanding the Earth: Honors			5	3	2
2017/01	GEOL	10113		140	Understanding the Earth			25	26	0
2017/01	GEOL	10113		139	Understanding the Earth			25	18	9
2017/01	GEOL	10113		138	Understanding the Earth			25	18	7
2017/01	GEOL	10113		137	Understanding the Earth			25	22	3
2017/01	GEOL	10113		136	Understanding the Earth			25	22	4
2017/01	GEOL	10113		135	Understanding the Earth			25	23	2
2017/01	GEOL	10113		134	Understanding the Earth			18	16	2
2017/01	GEOL	10113		133	Understanding the Earth			8	6	2
2017/01	GEOL	10113		129	Understanding the Earth			20	16	4
2017/01	GEOL	10113		111	Understanding the Earth			17	13	4
2017/01	GEOL	10113		110	Understanding the Earth			18	15	3
2017/01	GEOL	10113		130	Understanding the Earth			22	12	10
2017/01	GEOL	10113		112	Understanding the Earth			6	2	4
2017/01	GEOL	10113		131	Understanding the Earth			22	20	3

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2017/01	GEOL	10113		132	Understanding the Earth			19	17	2
2017/01	GEOL	70980		079	Thesis			8	0	0
2017/01	GEOL	70990		079	Thesis			4	0	0
2017/01	PHYS	30163		035	Evolution and Exploration of the Solar System			4	0	4
2017/01	GEOL	30163		035	Evolution and Exploration of the Solar System			12	5	7
2016/04	GEOL	70990		979	Thesis			2	0	0
2016/03	GEOL	70990		079	Thesis			10	0	0
2016/03	GEOL	50813		030	Meteorites, Asteroids, and Planets			4	0	2
2016/03	GEOL	70980		079	Thesis			1	0	0
2016/03	PHYS	50813		030	Meteorites, Asteroids, and Planets			4	0	4
2016/01	GEOL	40970		709	Special Problems: Curatorial Techniques			1	0	1
2016/01	GEOL	70980		079	Thesis			9	0	0
2016/01	GEOL	70990		079	Thesis			8	0	0
2016/01	PHYS	30163		035	Evolution and Exploration of the Solar System			3	0	3

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2016/01	GEOL	30163		035	Evolution and Exploration of the Solar System			9	0	12
2015/03	GEOL	10113		020	Understanding the Earth			71	63	20
2015/03	GEOL	10113		123	Understanding the Earth			10	6	7
2015/03	GEOL	10113		121	Understanding the Earth			20	21	3
2015/03	GEOL	40970		716	Special Problems: Meteorite ID			1	0	1
2015/03	GEOL	10113		120	Understanding the Earth			23	22	6
2015/03	GEOL	10113		122	Understanding the Earth			18	15	6
2015/01	GEOL	70970		710	Special Problems: Comm Science Social Media			2	0	0
2015/01	GEOL	40970		709	Special Problems: Curatorial Techniques			1	0	1
2015/01	PHYS	30163		035	Evolution and Exploration of the Solar System			5	0	5
2015/01	GEOL	30163		035	Evolution and Exploration of the Solar System			11	0	14
2014/03	PHYS	50813		030	Meteorites, Asteroids, and Planets			3	0	3

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2014/03	GEOL	50813		030	Meteorites, Asteroids, and Planets			2	0	0
2014/01	GEOL	70970		705	Special Problems: Meteorite Collections			2	0	0
2014/01	PHYS	30163		035	Evolution and Exploration of the Solar System			4	0	4
2014/01	GEOL	30163		035	Evolution and Exploration of the Solar System			13	0	15
2013/03	GEOL	10113		132	Understanding the Earth			20	16	4
2013/03	GEOL	10113		131	Understanding the Earth			15	17	5
2013/03	GEOL	10113		130	Understanding the Earth			13	14	2
2013/03	GEOL	40970		712	Special Problems: Planetary Science			1	0	1
2013/03	GEOL	60710		036	Geology Seminar: Presentations			8	0	0
2013/03	GEOL	10113		030	Understanding the Earth			48	45	11
2013/01	GEOL	40013		600	Honors Research			1	0	1
2013/01	GEOL	40970		707	Special Problems: Manuscript Preparation			1	0	1

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2013/01	PHYS	30163		035	Evolution and Exploration of the Solar System			3	0	4
2013/01	GEOL	30163		035	Evolution and Exploration of the Solar System			17	1	16
2012/04	GEOL	10113		110	Understanding the Earth			13	4	10
2012/03	GEOL	30003		678	Honors Seminar			1	0	1
2012/03	GEOL	50813		030	Meteorites, Asteroids, and Planets			5	0	3
2012/01	GEOL	10113		124	Understanding the Earth			18	11	7
2012/01	GEOL	10113		122	Understanding the Earth			15	13	4
2012/01	GEOL	10113		120	Understanding the Earth			9	11	0
2012/01	GEOL	30163		035	Evolution and Exploration of the Solar System			14	1	13
2012/01	GEOL	10113		020	Understanding the Earth			51	45	12
2012/01	GEOL	10113		121	Understanding the Earth			7	8	1
2012/01	PHYS	30163		035	Evolution and Exploration of the Solar System			1	0	1
2011/04	GEOL	10113		010	Understanding the Earth			15	2	14

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2011/04	GEOL	10113		110	Understanding the Earth			15	2	14
2011/03	GEOL	70970		710	Special Problems: Meteoritics			1	0	0
2011/01	GEOL	10113		010	Understanding the Earth			30	27	9
2011/01	GEOL	10113		112	Understanding the Earth			4	6	1
2011/01	PHYS	30163		035	Evolution and Exploration of the Solar System			4	0	5
2011/01	GEOL	10113		111	Understanding the Earth			23	21	6
2011/01	GEOL	30163		035	Evolution and Exploration of the Solar System			12	0	12
2010/03	GEOL	70970		709	Special Problems: Meteorite Petrology II			2	0	0
2010/03	GEOL	70970		708	Special Problems: Meteorite Petrology			2	0	0
2010/01	GEOL	60710		035	Geology Seminar			6	0	0
2010/01	PHYS	30163		005	Evolution and Exploration of the Solar System			2	0	2
2010/01	GEOL	30163		005	Evolution and Exploration of the Solar System			5	1	5

Term	Prefix	Course Number	Course Designation	Section	Course Title	Days	Time	Enrollment	Underclassmen Enrollment	Uppercl Enrollm
2009/03	GEOL	70970		708	Special Problems: Meteorites, Asteroids, Planets			1	0	0
2009/03	GEOL	50813		030	Meteorites, Asteroids, and Planets			12	1	7
2009/01	PHYS	20073		663	Introductory Astronomy: Earth and Planets: Honors			19	14	6

Personal Information

First Name: Rhiannon

Middle Initial: G

Last Name: Mayne

Gender: F

Race / Ethnicity: White

Service: Other Institutional Contributions (non-committees)

Start Term: 2022/03

Title: Police Training

Organization: 3

Description: On a few occasions, TCU police have not known where to respond when an alarm for the Monnig sounds. The Monnig has three separate room alarms, and two panic alarms and all of these are in locations where TCU Police have often not been before. As a result, this year, I started to train all members of TCU Police so that they are aware where and how to respond. This was done with coordination with the Chief of Police. I met with every shift and guided them through each area, and instructed them on how to respond. This is ongoing as every new officer has to undergo this training. Since the training started, I have not had an officer respond to an incorrect location.

Start Term: 2020/01

Title: Monnig Meteorite Gallery Educator

Organization: 12

Description: (Monnig is not given as a unit to select) As this position was eliminated in the hiring freeze, but the job responsibilities do not go away, I have had to assume this three quarter time position myself. I am trying to find unique ways of offering outreach as we used to, without having to work 100 hours a week to do it. COVID restrictions kept the Gallery closed until June 2022 and since then I have taken on the role of the Educator in addition to my normal responsibilities. This has involved: 1) monitoring the Monnig email in addition to my own 2) giving tours in my own time to individuals on request. From June 1 to Dec 31 2022, I saw over 3000 individuals. Outreaches for the 2023 year are listed individually. 3) developing online programs for schools that have requested them 4) cleaning the Monnig Gallery regularly as the janitorial staff are not permitted in the Gallery 5) hiring student workers to keep the gallery open, making up work schedules, training all students, and approving paysheets.

Start Term: 2019/03

Title: Building Emergency Coordinator

Organization: 3

Description: The TCU campus is comprised of many unique buildings and departments, and they require the perspectives of their departments and occupants for optimal emergency preparedness. The Building Emergency Coordinator (BEC) program was created to assist TCU public safety officials with coordinating emergency preparedness and response efforts across campus. Building Emergency Coordinators are appointed by their department to assist in public safety planning efforts, as well as evacuating and securing buildings during emergencies. Each department that occupies a building is tasked with developing a Building Emergency Response Plan to provide basic direction to building occupants in response to incidents which could occur on campus.

Start Term: 2019/03

Title: Head of Curriculum

Organization: 87

Description: I am in charge of the curriculum for ENSC. This includes: submitting all documentation to the CSE curriculum committee on any new courses or course changes; compiling the course schedule for ENSC, along with insuring its accuracy, and submitting any edits; coordinating schedules with GEOL as we share classroom spaces and have crosslisted courses.

Start Term: 2019/01

Title: Sexual Violence Prevention Coalition

Organization: 3

Description: The TCU SVPC strives to create a campus climate and culture where sexual violence is not tolerated. Together, we will advocate and prioritize respect, communication, and equity for all members of our horned frog community.

Start Term: 2015/03

Title: Website and Social Media Management for Monnig Meteorite Collection and Gallery

Organization: 12

Start Term: 2023/01

End Term: 2023/01

Title: Authored Instructor Justification

Organization: 87

Description: The Department of Environmental and Sustainability Sciences has requested a new Instructor position for the past few years. This year, I led the rewrite of our justification, choosing a new focus for this position that would both solve the teaching overload seen within ENSC, while also meeting the needs of the TCU students who are increasingly interested in sustainability issues. This justification, after edits and approval from the ENSC department, was approved by the Dean.

Start Term: 2022/03

End Term: 2023/01

Title: Authored Tenure and Promotion Guidelines for ENSC Department

Organization: 87

Description: The Department of Environmental and Sustainability Sciences did not have any tenure and promotion (T&P) documents for faculty. The guidebook used by the department had borrowed T&P from another department but these did not fit the current guidelines for the college or university. I compiled T&P documents from departments across TCU and from other comparable departments at other institutions and used these as a guide to write a set of T&P guidelines that worked for our department. They encompassed promotion to both associate and full professor. These were passed in December 2023 after feedback from faculty and the Dean.

Start Term: 2022/03

End Term: 2023/01

Title: Monnig Email Load

Organization: 3

Description: Now that there is no Monnig Educator or any other staff working in the Monnig Collection other than myself, all emails pertaining to the Monnig have become my responsibility. These emails come to both my personal account and to the Monnig account. This adds a substantial service load. In 2023 the emails were as follows. METEORITE ID: I receive emails from the general public asking for help with possible meteorite identification. This is not a service we offer in person anymore, but there is a need within the community so I receive significant email traffic. All emails detailed below were replied to. (1) 83 emails to my personal TCU email regarding meteorite

identification (2) 124 emails to the Monnig email regarding meteorite identification OUTREACH INQUIRIES I receive emails from people requesting tours of the Gallery or for someone to come to their institution/school/group to give a talk. The summer months are usually quite busy for requests off campus; however, in 2023, I was unable to drive for the summer due to an injury and so the numbers are lower over the summer than usual as a result. The emails detailed below were all replied to. (1) 40 outreach inquiry emails to my personal account (2) 188 outreach inquiry emails to the Monnig email account. GENERAL GALLERY INQUIRIES: There were 44 general inquiry emails re: opening hours etc. 4 of these were to my personal account and the rest were to the Monnig account. LOANS: There were 28 emails to my personal account about possible scientific loans from the Collection.

Start Term: 2021/03

End Term: 2022/01

Title: Donation Facilitator

Organization: 12

Description: This year I again managed to facilitate the donation of multiple meteorites to the Monnig Meteorite Collection. 8 meteorites were donated by a new donor, who was impressed after their first visit to the Gallery. I spent the morning with them on a tour and behind the scenes as I knew that they were a meteorite collector. These samples included both rare meteorites and unclassified meteorites. The latter are perfect projects for student research. A previous donor continued his past support and this year donated another rare meteorite and an additional 24 samples. The additional samples represent a complete suite of rocks from the Sudbury Impact Crater. These are an amazing addition to the teaching and research collection as they illustrate the processes that occur to terrestrial samples as a result of impact. Another collector, who I have had a long standing relationship with donated a lunar meteorite to the Collection this year. This was a thank you for helping him with the sale of some of his meteorites locally.

Start Term: 2020/03

End Term: 2021/01

Title: Donation Facilitator

Organization: 12

Description: This year, I have facilitated the donation of over \$60,000 worth of meteorites to the Monnig (donor specified value is \$61,694, but market value is almost certainly over \$100,000). These are all amazing scientific additions to the Collection, given by one donor who I have built up a relationship with over time.

Start Term: 2020/03

End Term: 2021/01

Title: Donation Facilitator

Organization: 12

Description: This year, I have facilitated the donation of over \$60,000 worth of meteorites to the Monnig (donor specified value is \$61,694, but market value is almost certainly over \$100,000). These are all amazing scientific additions to the Collection, given by one donor who I have built up a relationship with over time.

Start Term: 2019/04

End Term: 2020/03

Title: Supervised renovation

Organization: 87

Description: I supervised the renovation of lab spaces within the Monnig and Environmental Science. This involved the creation of a new lab (Monnig), the addition of a teaching/meeting space (Monnig), and renovation of 2 ENSC labs.

Start Term: 2019/01

End Term: 2019/01

Title: Outreach at Montessori School of Fort Worth

Organization: 12

Description: I attended the Montessori School of Fort Worth's star party. I offered an interactive educational program about meteorites throughout the evening.

Start Term: 2018/03

End Term: 2018/04

Title: Supervising Monnig Renovations

Organization: 12

Description: The Monnig Meteorite Gallery has not been renovated since it opened in 2003. The Monnig Endowment, the College of Science and Engineering, and the Provost's office all contributed to add new technology to the exhibit and renovate areas that had experienced severe wear and tear. My role in this included: 1) identifying key components of the exhibit that needed renovation and areas where technology could be added or replaced. These then had to be prioritized due to budget constraints, which I was also responsible for. 2) seeking out companies for quotes and selecting the most suitable. 3) being the point of contact for Dallas Museum Arts, the company retained for the renovation. 4) providing all the content for all renovated exhibits. This included calculating the results of impact simulations, writing the script and identifying graphics for a new video, and writing new content. 5) reviewing all proofs for all exhibits. 6) supervising installation and quality checks. 7) removing and securing meteorites from the exhibit during renovation.

Start Term: 2018/03

End Term: 2018/03

Title: Monnig Meteorite Tour for the TCU National Campaign Committee

Organization: 3

Description: I organized and gave a tour of the Monnig Meteorite Gallery and Collection for the TCU National Campaign Committee.

Start Term: 2017/04

End Term: 2017/04

Title: Invited Outreach at the Perot Museum

Organization: 12

Description: I was invited to be an expert for the day at the Perot Museum for Asteroid Day.

Start Term: 2017/04

End Term: 2017/04

Title: Invited Talk at Frontiers of Flight

Organization: 12

Description: I gave a talk at the annual Moon Day at the Frontiers of Flight Museum in Dallas

Start Term: 2017/04

End Term: 2017/04

Title: Tour for Physics REU students

Organization: 12

Description: Tour of the Monnig Meteorite Gallery for all the visiting Physics REU students.

Start Term: 2017/04

End Term: 2017/04

Title: Tour of the Smithsonian

Organization: 10

Description: Facilitated a behind the scenes tour at the Smithsonian Institution's National Museum of Natural History for the TCU Honors trip.

Start Term: 2017/03

End Term: 2017/03

Title: Invited speaker at Women's Career Day

Organization: 12

Description: Local Girl Scout Troop 3518 hosted a Women's Career Day for many local troops in the area. Women in male-dominated fields were invited to speak to the girls about their experiences and what they do for a living.

Start Term: 2017/03

End Term: 2017/03

Title: Organized invited speaker

Organization: 88

Description: Dr. Sarah Horst is a very well known, young planetary scientist, who is currently based at Johns Hopkins University. I organized her visit to campus and she gave an excellent talk attended by Geology, Environmental Science, and Physics and Astronomy students and faculty. Her post about her backstage tour behind the scenes at the Monnig went viral on twitter and was the number one post on reddit for several days.

Start Term: 2017/03

End Term: 2017/03

Title: Physics and Astronomy Search Committee

Organization: 70

Description: I was a member of the search committee for an Astronomy position within the Physics and Astronomy department.

Start Term: 2017/03

End Term: 2017/03

Title: Talk at Alice Carlson Applied Learning Center

Organization: 12

Description: Invited to talk to the Kindergarten class about the rock cycle, and meteorites.

Start Term: 2017/03

End Term: 2017/03

Title: Tour for CERA Gem and Mineral Club and Fort Worth Gem and Mineral Club

Organization: 12

Description: Tour of the Monnig Meteorite Gallery and Vault for members of CERA Gem and Mineral Club and Fort Worth Gem and Mineral Club

Start Term: 2017/01

End Term: 2017/01

Title: Invited Talk for FacultySpeak Series at TCU Library

Organization: 1

Description: Title: Much Ado About Meteorites

Grants and Contracts

Title: The Earth to Sky Observation Network in the Amakhala Game Reserve, South Africa.

Sponsor: National Geographic

Start Date: 2024-01-01

End Date: 2024-12-31

Period Length: 1

Period Unit: Year

Indirect Funding:

Total Funding: 20000

Currency Type: USD

Abstract:

I am requesting funds to install the world's first outdoor research lab that is capable of collecting and synthesizing data in both planetary science and conservation ecology. The Earth to Sky (E2S) Observation Network within the Amakhala Game Reserve (AGR) in South Africa will consist of three remote research stations equipped with a sky-observing fireball camera, acoustic detector, weather station, and trail camera. Owing to the remote location, each camera and all its accessories must be built to: 1) deliver the data remotely; 2) withstand the climate; 3) require minimal service, as I will only visit once a year unless a meteorite fall is observed. The funds requested here would allow me to complete a proof-of-concept study and ensure I have working cameras, existing datasets, and the expertise needed to expand the study in year 2 and beyond.

This cutting-edge technology will allow E2S to: (1) gain a better understanding of wildlife movements and behavior in AGR, providing data to inform eco-management practices. As AGR is currently surrounded by >10 wind resource facilities and the development of further sites in the area is proposed, E2S can also provide much needed long-term monitoring tools that aid research on bat behavior and movement at and in proximity to wind farms to help design solutions to protect them. (2) characterize the interplanetary matter falling in and around the AGR by detecting and characterizing fireballs and recovering any meteorite falls observed.

Number of Periods: 1

URL: <https://www.nationalgeographic.org/society/grants-and-investments/>

Collaborators: Rhiannon G Mayne (100%) PI

Status: Submitted - Not Funded

Title: Native Earth □ Native Sky □ Native Lands

Sponsor: NASA SCoPE Seed Grant

Grant ID / Contract ID: N/A

Start Date: 2022-05-01

Period Length: 1

Period Unit: Year

Indirect Funding:

Total Funding: 19200

Currency Type: USD

Description:

The NASA SCoPE Project at Arizona State University, part of NASA's Science Activation 2.0 Education and Community Outreach Program (SciAct), is offering seed grants to scientists and engineers using or capturing NASA data and early career scientists (i.e., Subject Matter Experts, or SMEs) that collaborate with a SciAct Team to develop or participate in NASA science communication activities. Preference will be given to early career SMEs (i.e., within 10 years of PhD) and those from underrepresented communities, but this grant opportunity is open to SMEs at all career levels.

Abstract:

The primary objective of Native Lands (NaLa) is to amplify the work of the Native Earth | Native Sky (NENS) SciAct program by recognizing the critical importance of free-choice learning in education and providing a different lens through which STEM can be made culturally-relevant for students in Native American nations.

Number of Periods: 1

URL: <https://scope.asu.edu/the-seed-grant/>

Collaborators: Rhiannon G Mayne (95%) PI with Kathryn G Gardner-Vandy (5%) CoInvestigator

Status: Completed

Title: The SpaceFrog Observation Network

Sponsor: TCU College of Science and Engineering

Start Date: 2023-01-31

End Date: 2023-12-31

Period Length: 1

Period Unit: Year

Indirect Funding:

Total Funding: 49905.9

Currency Type: USD

Abstract:

The *SpaceFrog Observing Network* proposes to develop an outdoor research lab that synthesizes planetary science and ecology to produce increased research opportunities for local community members, K12 students, and TCU undergraduate and graduate students. *SpaceFrog* will have locations in both in the DFW area and the Amakhala Game Reserve (AGR), South Africa, and will consist of a network of cameras that are able to observe fireballs as they descend through the Earth's atmosphere (both DFW and AGR) and the movement of wildlife (AGR). This study will address three research goals: (1) Characterize the interplanetary matter falling in DFW and AGR by detecting and characterizing fireballs and recovering any meteorite falls observed; (2) Gain a better understanding of the migratory behavior of bats and wildlife movements within the AGR; (3) Increase participation in STEM research by involving members of the local community, and K12, undergraduate, and graduate students in all levels of *SpaceFrog* using place-based education pedagogies. We anticipate that the proposed work will enhance the opportunities for external funding for several CSE faculty, strengthen the existing relationship with AGR, and cement new collaborations with fireball networks across the globe. The ultimate goal of *SpaceFrog* is to engage a diverse student body (K12, undergraduate, and graduate) in STEM research with TCU.

Number of Periods: 1

Collaborators: Rhiannon G Mayne (60%) PI with Tory J Bennett (40%) CoPI

Status: Submitted - Not Funded

Degrees

Degree: Ph.D.

Year Conferred: 2008

Discipline: Geology

Granting Institution: University of Tennessee

Level of Degree: Doctoral

Highest Degree Earned: Yes

Terminal Degree: Yes

City: Knoxville

Title of Dissertation or Thesis: Investigating the petrogenesis of the basaltic crust of asteroid 4 Vesta: A combined petrologic-spectral study of the unbrecciated eucrites.

State or Province: Tennessee

Nation: United States

Degree: BSc. Hons.

Year Conferred: 2002

Discipline: Geology

Granting Institution: Edinburgh Univeristy

Level of Degree: Other

Highest Degree Earned: No

Terminal Degree: No

City: Edinburgh

Title of Dissertation or Thesis: A 3D seismic study of the Wytch Farm Oilfield, Dorset.

State or Province: Scotland

Nation: United Kingdom

Teaching: New Courses Developed / New Instructional Strategies

Start Term: 2022/01

End Term: 2022/01

Course Name: GEOL 30163 Exploration and Evolution of the Solar System

Description: This course was completely revamped for the Fall 2022 semester. Instead of a lecture-based class, I employed an active-learning pedagogy. Last time this course was taught, each lecture focused on a specific planetary body. In the Fall, each lecture focused on a process that occurs on planetary bodies and asked the students to investigate actual data to better understand how these processes work.

Start Term: 2021/01

End Term: 2021/01

Course Name: ENSC 30123 The History of Women in Science

Description: I designed a new course entitled the History of Women in Science in Fall 2021. This course was granted both NSC and HT core credit. The course description is given below. It will be taught for the first time in Spring 2022. Examine the reasons behind the gender-related differences in STEM today. Review the societal and cultural reasons behind the historical exclusion and erasure of the contributions of women to the STEM fields. Explore and evaluate the contributions of women to the advancement of science throughout history.

Start Term: 2020/01

End Term: 2020/01

Course Name: GEOL 30443 - Earth Materials

Description: I took the lead in redeveloping GEOL 30443 - Earth Materials with Prof Johnson in the Fall semester, and over the winter break. While this course number existed, we have redesigned every aspect of this course and tailored it to fit the needs of our students.

Start Term: 2018/01

End Term: 2018/01

Course Name: ENSC 20003

Description: I developed a new course, which was passed by the CSE Curriculum Committee and the Undergraduate Council: ENSC 20003 Astrobiology, Hunting for Habitable Worlds. This course has also been awarded the CSV core credit and the Honors Cultural Visions designation. It is the first 20000 level course in the ENSC department and will employ team-based learning, which is a new instructional strategy for me.

Student Interaction: Undergraduate Academic Advising

Start Term: 2023/01

Undergraduate- Major: 1

Start Term: 2022/03

Undergraduate- Major: 1

Start Term: 2022/01

Undergraduate- Major: 5

Assessment of Advising: See previous semesters this has not changed

Advising Strategies: See previous semesters this has not changed I will note here that I am no longer an advisor for the ENSC undergraduate program. However, I believe it is essential that a student remain with one advisor, whenever possible. This ensure continuity and consistency for them in the advice they are receiving. It also allows them to form stronger bonds with a faculty member within the department. For these reasons, when I stepped back from advising, I decided to continue advising all current students until their graduation from our program.

Start Term: 2021/03

Undergraduate- Major: 8

Undergraduate- Minor: 1

Assessment of Advising: See previous semesters, this has not changed

Advising Strategies: See previous semesters, this has not changed

Start Term: 2021/01

Undergraduate- Major: 12

Undergraduate- Minor: 1

Assessment of Advising: Students were offered in person or zoom appointments in the Fall and most selected in person. It was great to see them again and I think everything went well. Students do appear more uncertain about their choices post online learning, so I spent more with each student than usual to compensate.

Advising Strategies: This is taken from last year as it has not changed. As an advisor, I always do the following: 1) Go beyond the catalog and handbook. We are a small department and so much of the value comes from the close relationships we have with our students. This year, in particular, it was so important to check on their well-being as well as their progress. 2) Research their student records before each appointment to anticipate as many issues as possible. 3) Provide students with a hard copy of all of my notes and what we discussed after the meeting. We have developed an excel spreadsheet for advising and I take detailed notes, ensuring I can always remember what was discussed and providing the student with a good record. 4) Ensure they know another appointment is always available should they need more time, or have any other issues pop up.

Start Term: 2020/03

Undergraduate- Major: 16

Undergraduate- Minor: 1

Assessment of Advising: I offered zoom appointments to students in the Spring. All were recorded (with permission) and the students were provided with copies of the recording. I got good feedback on this and there were less questions post advising as the students had the video to refer back to.

Advising Strategies: This is taken from last year as it has not changed. As an advisor, I always do the following: 1) Go beyond the catalog and handbook. We are a small department and so much of the value comes from the close relationships we have with our students. This year, in particular, it was so important to check on their well-being as well as their progress. 2) Research their student records before each appointment to anticipate as many issues as possible. 3) Provide students with a hard copy of all of my notes and what we discussed after the meeting. We have developed an excel spreadsheet for advising and I take detailed notes, ensuring I can always remember what was discussed and providing the student with a good record. 4) Ensure they know another appointment is always available should they need more time, or have any other issues pop up.

Start Term: 2020/01

Undergraduate- Major: 10

Undergraduate- Minor: 0

Undergraduate- Pre-Major: 0

Assessment of Advising: See spring 2020

Advising Strategies: See spring 2020

Start Term: 2019/03

Undergraduate- Major: 10

Undergraduate- Minor: 0

Undergraduate- Pre-Major: 0

Assessment of Advising: I feel that as a department we provided all our students with a similar experience in advising as we would have in-person.

Advising Strategies: As an advisor, I always do the following: 1) Go beyond the catalog and handbook. We are a small department and so much of the value comes from the close relationships we have with our students. This year, in particular, it was so important to check on their well-being as well as their progress. 2) Research their student records before each appointment to anticipate as many issues as possible. 3) Provide students with a hard copy of all of my notes and what we discussed after the meeting. We have developed an excel spreadsheet for advising and I take detailed notes, ensuring I can always remember what was discussed and providing the student with a good record. 4) Ensure they know another appointment is always available should they need more time, or have any other issues pop up.

Start Term: 2019/01

Undergraduate- Major: 16

Assessment of Advising: I am still learning and growing as a new advisor for the Environmental Science program. It is hard to come up with a metric to assess advising; however, all my students seem comfortable meeting and talking with me. I am much more confident with the degree program and have been working with Becky Johnson to continue and deepen this knowledge. I do not believe that the current method used in our department is as effective as it could be, but we are working on new strategies to tackle this together.

Advising Strategies: I follow the effective academic advising strategies given on: <https://evollution.com/attracting-students/retention/effective-academic-advising-four-strategies-to-anticipate-and-address-student-needs/> 1) Go beyond the Catalog and handbook 2) Research Student Records 3) Identify Issues and Potential Roadblocks 4) Use Online Resources as a Supplement—Not a Replacement—to Advising

Start Term: 2018/03

Undergraduate- Major: 16

Assessment of Advising: See Fall 2019

Advising Strategies: See Fall 2019

Teaching: Other Teaching Activities (non-credit and/or outside of institution)

Start Term: 2022/01

End Term: 2022/01

Title: Assisted with additional ENSC 10143 section

Organization: TCU

Description: I set up the TCUOnline shell for our adjunct faculty member for the Fall semester and, along with the Department Chair, kept it updated for the first half of the semester. I met with her four at least two hours weekly to help her prepare her materials and to talk through what was needed for the weeks ahead. I attended lectures to provide feedback, and updated all my materials with additional notes to enable her to teach the course. This, overall, took more time than teaching my own section of ENSC 10143.

Start Term: 2022/01

End Term: 2022/01

Title: Meteorite Classification Class

Organization: University of Texas at Dallas

Description: Gave a meteorite masterclass for honors students at UTD who were taking a meteorite course in the Fall semester. 20 students and faculty attended. This was a 3 hour course and involved not only a tour of the Gallery, but also around 2 hours in the classroom looking at different meteorite types.

Start Term: 2021/03

End Term: 2021/03

Title: ENSC 60203 - Environmental Issues

Organization: TCU

Description: This is a course team-taught by the ENSC faculty. I taught a section on Ethics and Bias within scientific fields.

Start Term: 2021/03

End Term: 2021/03

Title: GEOL 20111 - Introduction to Geological Sciences

Organization: TCU

Description: I taught one class session focused on my geological research.

Start Term: 2020/03

End Term: 2020/03

Title: GEOL 20111 - Introduction to Geological Sciences

Organization: TCU

Description: I taught one class session focused on my geological research.

Start Term: 2019/03

End Term: 2019/03

Title: GEOL 50713 - Environmental Geology

Organization: TCU

Description: While I was not an Instructor of record, I attended (and assisted) with GEOL 50713 Environmental Geology in the Spring. This was so that I could teach this course in the future, if necessary.

Service: Professional Service

Start Term: 2022/04

Activity: Member, Meteoritical Society Publications Committee

Organization: Meteoritical Society

Description: This Committee was established to oversee Meteoritics and Planetary Science (MAPS), one of the world's leading planetary science journals, and to serve in an advisory capacity to the Council.

Start Term: 2021/01

Activity: Co-Chair of the LPI IDEA Committee

Description: I am the Co-Chair of the Lunar and Planetary Institute's IDEA (Inclusion, Diversity, Equity, and Accessibility) Independent Advisory Committee. I was a member for the first year, and then undertook the Co-Chair role in 2022. The LPI is operated by the Universities Space Research Association under a cooperative agreement with the Science Mission Directorate of the National Aeronautics and Space Administration. LPI serves as a scientific forum attracting world-class visiting scientists, postdoctoral fellows, students, and resident experts; supports and serves the research community through newsletters, meetings, and other activities; collects and disseminates planetary data while facilitating the community's access to NASA science; and engages and excites, and educates the public about space science and invests in the development of future generations of explorers. The research carried out at LPI supports NASA's efforts to explore the solar system. Service is at the heart of the LPI's mission. As we support and serve members of our diverse planetary science community, we want to take actions to ensure we facilitate a culture and a profession that is inclusive, diverse, equitable, and accessible. As a mechanism for direct community feedback and accountability, we are announcing the creation of an independent advisory committee. The goal of the advisory committee is to provide guidance on the LPI's practices, in particular for meetings, conferences, and public and planetary community engagement activities.

Start Term: 2020/04

Activity: Co Chair of the Facilities and Informatics Committee on the Extraterrestrial Materials Assessment Group

Organization: Advises NASA

Description: This was a competitive appointment, which involved an interview process. All ExMAG committee members participate in and contribute to the activities of the committee including participating in regular meetings of the ExMAG committee and community, discussion and analysis of issues brought before the committee, assuming responsibility for activities, analyses, or initiatives as appropriate and decided by the committee or requested by NASA, identifying actions and findings coming from committee meetings and activities, and communicating with the chair and other members between meetings regarding projects and concerns. In addition to their regular duties as ExMAG committee members, each member may take on one or more of the additional duties below: Subcommittee chairs are responsible for insight and analysis into the maintenance and use of these collections, which they do by planning and holding subcommittee meetings, distributing minutes of meetings and other material from the

subcommittee to the ExMAG committee, and identifying and implementing action items and analysis for subcommittee consideration. Committee chairs are asked to prepare a written annual report at the end of a calendar year outlining the major activities and issues that were covered during the year.

Start Term: 2019/01

End Term: 2022/04

Activity: Scientific Organizing Committee

Organization: Asteroids, Comets, and Meteors Meeting of the American Astronomical Society

Description: The primary duties of the SOC are to define the conference schedule including the selection of plenary speakers, review and sorting of abstracts, and assignment of session chairs. This is going ahead now in 2023 so activity has resumed in Fall 2022.

Start Term: 2022/03

End Term: 2022/03

Activity: LPSC Program Committee

Organization: Lunar and Planetary Institute

Description: The LPSC Program Committee is the science organizing committee for the Lunar and Planetary Science Conference, the largest planetary science conference worldwide. The panel is by appointment only. I was the lead in two categories (Planetary Differentiation and Differentiated Meteorites) and responsible for peer-reviewing all submissions to each category and then assigning talks and posters, as appropriate. Some abstracts also have to be rejected due to the quality of science, and I had to write justification those for those in my session. Then, I was charged with planning the talk and poster sessions to ensure flow and quality of content.

Start Term: 2021/03

End Term: 2021/03

Activity: Grant Proposal Panel

Organization: NASA

Description: I am Chairing a review panel for NASA. I am not permitted to state which panel.

Start Term: 2021/03

End Term: 2021/03

Activity: Manuscript Reviewer for Meteoritics and Planetary Science

Start Term: 2021/01

End Term: 2021/01

Activity: NASA Grant Proposal Review

Organization: NASA

Description: I reviewed several grant proposals for a NASA Panel. I am not permitted to specify which panel.

Start Term: 2020/03

End Term: 2020/04

Activity: Meteoritical Society Science Organising Committee (SOC)

Organization: Meteoritical Society

Description: The Meteoritical Society Meeting is the primary international meeting in my field of meteoritics every year. As a member of the SOC, my primary responsibility was be to help evaluate abstracts and determine the program for the meeting.

Start Term: 2020/03

End Term: 2020/03

Activity: Manuscript Reviewer for Meteoritics and Planetary Science

Organization: Wiley

Description: I reviewed a manuscript for the journal Meteoritics and Planetary Science.

Start Term: 2018/03

End Term: 2020/03

Activity: Nominating Committee

Organization: Meteoritical Society

Description: The Nominating Committee is responsible for nominations of the Society's Officers and Councilors. The Committee consists of six members who are appointed in odd-numbered years and serve until the following election.

Start Term: 2020/01

End Term: 2020/01

Activity: NASA Review Panel

Organization: NASA

Description: Member of a NASA review panel.

Start Term: 2020/01

End Term: 2020/01

Activity: External Reviewer for Promotion

Organization: Chicago Field Museum

Description: I was asked to review a Curator for promotion at the Field Museum of Natural History's Integrative Research Center because I am "recognized as a leading scholar in [name redacted]'s research discipline.' Curatorial Ranks and Museum policy require that extramural evaluations of the qualifications and potential of each candidate for curatorial promotion be obtained from recognized authorities at other institutions in order to supplement the record and to provide the promotions committee with an independent assessment.

Start Term: 2018/03

End Term: 2018/04

Activity: Chair/Lead of Panel

Organization: NASA

Description: New Frontier Mission Scientific Review Panel. This was a major commitment spread over 3 months. We were evaluating the two final proposals for NASA's New Frontier 4, which is their medium class mission. The overall panel reviewed both proposals and went on site visits to assess the science of each mission. We were split into two groups, based on expertise. Each group was responsible for providing the primary review on one of the missions and a secondary review on the other. I was Chair of the Panel for one of the two groups. This was a major responsibility.

Start Term: 2018/03

End Term: 2018/03

Activity: Dworkin Award Judge

Organization: Geological Society of America, Planetary Geology Division

Description: The Dworkin Award was started in 1991 with a generous endowment by Dr. Stephen E. Dworkin, who wished to encourage U.S. students to become involved with NASA and planetary science. The Award consists of a plaque and a monetary award given for outstanding student presentations (in both poster and oral categories) or a plaque for honorable mentions (poster and oral) at the annual Lunar and Planetary Science Conference (LPSC) hosted by the Lunar and Planetary Institute (LPI). The awards are managed and judged by the Planetary Geology Division of the Geological Society of America.

Start Term: 2018/03

End Term: 2018/03

Activity: Official LPSC Microblogger

Organization: Lunar and Planetary Institute

Description: I was selected as one of the official microbloggers for the 2019 Lunar and Planetary Science Conference. The microbloggers blog, post, and tweet highlights of the 2019 LPSC using the official conference hashtag #LPSC2019.

Start Term: 2018/01

End Term: 2018/01

Activity: NASA Panel

Organization: NASA

Description: Further information is confidential.

Start Term: 2017/03

End Term: 2017/03

Activity: Program Committee for the Lunar and Planetary Science Conference

Organization: NASA and Lunar and Planetary Institute

Start Term: 2017/03

End Term: 2017/03

Activity: Reviewer for journal Icarus

Organization: Icarus

Start Term: 2017/03

End Term: 2017/03

Activity: External Reviewer for NASA Panel

Organization: NASA

Description: Provided external reviews for several proposals submitted for a NASA grant.

Comments/Explanatory Notes Regarding Faculty Annual Report

Start Term: 2022/03

Comments: Certain numbers are not included in this report (visitors to Monnig Gallery outside of tours, for example) because this data is only accessible on campus and I have been unable to get to my office for almost a week due to ill health.

Start Term: 2021/01

Comments: During COVID, I have taken on far more teaching than my 1:1 prescribed load. The reason my teaching load is supposed to be lower is because of my responsibilities to the Monnig. Curating the Collection takes a lot of my day to day time and is not something I have let slide during these times. In addition, I have had to take on the Educator's role and I work in a small department, so there is a heavy service load. I am both an undergraduate advisor, and head of curriculum. This has meant that my research has suffered, because something had to give and I am already working far more hours than pre-pandemic. I did, however, get a manuscript to coauthors, but they held onto it for over 3 months so it did not get submitted this year. My conference submissions have decreased due to cancelled conferences and online venues.

Start Term: 2019/01

Comments: I didn't want to submit this without acknowledging my colleagues in the Department of Environmental Sciences. I worked for years in what was a relatively toxic department for me. When SGEE was split into GEOL and ENSC, I was not a natural fit in ENSC; however, it was the only department of the two I could have worked in safely. The existing ENSC faculty have never made me feel like a square peg. In the last year, we have really moved forward and worked hard at creating a new department. I have never been so happy at TCU. While no situation is ever perfect, Dr. Slattery has worked hard to provide an environment where we all feel included and that our voices are valued at the table. Becky Johnson has become an amazing mentor to me, her management skills are second to none and she never fails to take the time to help explain how I can improve mine and to give me feedback. We attend each other's classes to review teaching so that we receive multiple forms of feedback and everyone is open to discussion and learning from others. This has only been possible because everyone has put in the work to move forward, engage in intentional dialogue, and put the needs of the department first.

Service: Community Service

Start Term: 2016/01

Activity: Helped Design Display at Disney's Animal Kingdom

Organization: Disney

Description: The Monnig helped design a display at the Animal Kingdom and loaned Disney samples. TCU's logo is clearly displayed. This is seen by more than 5 million people a year.

Start Term: 2009/01

Activity: Monnig Meteorite Collection Outreach

Organization: TCU

Description: As my job as the Curator of the Monnig Meteorite Collection at TCU involves a high-level of community outreach. This involves school visits, tours, working with local museums, giving outreach talks, and meeting with students.

Start Term: 2023/01

End Term: 2023/01

Activity: Outreach

Organization: Benbrook ISD 6th graders

Description: 10/24/23 About 60 6th graders from Benbrook ISD were given the opportunity to tour the Monnig Meteorite Gallery.

Start Term: 2023/01

End Term: 2023/01

Activity: Outreach

Organization: Mount St Michael School

Description: 12/05/23 15 members of the Mount St Michael School were given a tour of the Monnig Meteorite Gallery.

Start Term: 2023/01

End Term: 2023/01

Activity: Outreach

Organization: Pinnacle Christian School

Description: 11/28/2023 Pinnacle Christian School (17 students) were given a tour of the Monnig Meteorite Gallery

Start Term: 2023/01

End Term: 2023/01

Activity: Outreach

Organization: Hearts on Fire Homeschool

Description: 11/10/23 Hearts on Fire Homeschool. The members of this homeschool group were given a chance to "come and go" at the Gallery one morning. While no specific guided tour was given, I was present for these hours to answer questions directly. This was done as the group is too large for a guided tour and many of the homeschool members are younger than we usually recommend (<2nd grade) for guided tours. This allowed the children to approach me as needed and to cover the material on a more varied level. Around 50 members attended.

Start Term: 2023/01

End Term: 2023/01

Activity: Outreach

Organization: TCC STEM Night

Description: 11/8/23 The STEM club at TCC in downtown Fort Worth hosted a STEM careers night. I was invited to present about my research and work in the Monnig. There were about 80 students overall in attendance at this event.

Start Term: 2023/01

End Term: 2023/01

Activity: Outreach

Organization: Out and About class at TCC-NE

Description: 11/2/23 The Out and About class (SEPX-1460 Out and About) at TCC-NE visited the Monnig Gallery for a tour. This is a senior education course that visit museums and other places of regional interest throughout the semester. 40 individuals attended this tour.

Start Term: 2023/01

End Term: 2023/01

Activity: Outreach

Organization: Live Oak Montessori, Weatherford

Description: 9/26/23 I visited Live Oak Montessori School in Weatherford to talk to the elementary school students about meteorites. There were approximately 30 students over several classes that listened to my presentation. I was there for around three hours and we did many hands on activities to help expand out knowledge about space!

Start Term: 2023/01

End Term: 2023/01

Activity: Outreach

Organization: ENSC Club at TCU

Description: 9/19/23 I gave the members of the TCU ENSC Club a tour of the Meteorite Gallery. They were also able to see the Collection and equipment behind the scenes.

Start Term: 2023/01

End Term: 2023/01

Activity: Outreach

Organization: Burleson ISD Space Night

Description: 11/9/23 The Monnig was invited to present at Burleson ISD Space Night. This is an event I have been to for several years. I lost count after seeing approximately 250 parents and students. I was there for three hours and

there was a constant line to see the hands on meteorite exhibit that I brought with me.

Start Term: 2022/04

End Term: 2022/04

Activity: Outreach

Organization: Atatiana Project Summer Camp

Description: 07/21/23 The 45 student attendees of the Atatiana Project Summer Camp at TCU were allowed to tour the Monnig Meteorite Gallery.

Start Term: 2022/04

End Term: 2022/04

Activity: Outreach

Organization: STEM Scholar Summer Camp

Description: 6/28/23 The STEM Scholar Summer Camp (2 groups of 24 students) were given guided tours of the Gallery

Start Term: 2022/03

End Term: 2022/03

Activity: Outreach

Organization: Betty Warmack Library, Grand Prairie

Description: I ran the "Full STEAM ahead" club at the library (01/24/23). There were 25 children in attendance and I led an activity on how to identify meteorites. By the end of the activity, the children learned how to identify the meteorites in a set of rocks they were given.

Start Term: 2022/03

End Term: 2022/03

Activity: Outreach

Organization: University of Arkansas, Little Rock

Description: 03/25/2023 As part of a field course during the UALR spring break, they came to the Monnig Meteorite Collection. This group consisted of about ten students and two faculty. They spent the morning getting a tour of the Gallery and learning about the Collection. They were given the opportunity to see some of the Collection from behind the scenes and participate in hands on activities.

Start Term: 2022/03

End Term: 2022/03

Activity: Outreach

Organization: Tour for local meteorite collector

Description: 03/02/23 Tour for a local meteorite collector of the Monnig Meteorite Gallery and an opportunity to see the workings of the Collection behind the scenes.

Start Term: 2022/03

End Term: 2022/03

Activity: Outreach

Organization: Wellington Elementary

Description: 4/18/23 I traveled to Wellington Elementary for their STEM night. Approximately 200 students and parents visited my display and hands on activity about meteorites.

Start Term: 2022/03

End Term: 2022/03

Activity: Outreach

Organization: Birdsville ISD 6th graders

Description: All Birdsville ISD G&T 6th graders were brought to the BISD plaza to see a presentation by me on meteorites. I spent two mornings at the facility and saw 178 students.

Start Term: 2022/03

End Term: 2022/03

Activity: Outreach

Organization: Wedgwood Academy

Description: 4/4/23 Wedgwood Academy Girl Scouts (12 individuals) came for a tour of the Monnig Meteorite Gallery.

Start Term: 2022/01

End Term: 2022/01

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Educator Day

Description: A day for all teachers in local ISDs to visit and learn about the museums in Fort Worth. I was located in FWMSH all day and saw approximately 50 educators.

Start Term: 2022/01

End Term: 2022/01

Activity: Outreach for the Monnig Meteorite Gallery

Organization: MISD Lights on Afterschool

Description: Large outreach event where the Monnig had a table and meteorite activity for students. Approximately 1000 students and parents.

Start Term: 2022/01

End Term: 2022/01

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Burlison ISD Space Night

Description: Meteorite show and tell and learning activity for BISD. 200 students and parents.

Start Term: 2022/01

End Term: 2022/01

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Latinas in STEM

Description: Tour for 20 students for the Latinas in STEM organisation.

Start Term: 2022/01

End Term: 2022/01

Activity: Invited Talk at SMU

Organization: SMU Geology Department

Description: Talk on my research for SMU Geology Department.

Start Term: 2021/04

End Term: 2021/04

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Physics REU Students

Description: Gallery tour for Physics REU students. 20 students.

Start Term: 2021/04

End Term: 2021/04

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Atatiana Project Science Camp

Description: Gallery tour and learning activity for 50 students

Start Term: 2021/04

End Term: 2021/04

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Tour for 9th grade students

Description: 30 students visited the College of Science and Engineering and part of their visit was a tour of the Monnig Gallery

Start Term: 2021/04

End Term: 2021/04

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Moon Day at Frontiers of Flight Museum

Description: Spent the day at the Frontiers of Flight Museum with a meteorite activity and information table. 1314 people attended.

Start Term: 2021/04

End Term: 2021/04

Activity: Tour for Collectors

Organization: Monnig Meteorite Collection

Description: I gave a personalized tour to two meteorite collectors. This involved both the Gallery, all equipment, and the collection behind the scenes. It resulted in donations from one of the collectors.

Start Term: 2021/03

End Term: 2021/03

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Lily B Clayton Elementary School

Description: Marvelous Monday event. Did an interactive presentation on meteorite identification and classification to four classes. 100 students total.

Start Term: 2021/03

End Term: 2021/03

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Homeschool Tour Group

Description: Tour of the Gallery for 25 homeschool students preK to 4th grade.

Start Term: 2021/03

End Term: 2021/03

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Fort Worth Entrepreneurs Organization

Description: Tour and Show and Tell of the Gallery for 30 people.

Start Term: 2021/03

End Term: 2021/03

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Trinity Basin Elementary Science Night

Description: Meteorite activity and table at Science Night. Saw 150 students and parents.

Start Term: 2021/03

End Term: 2021/03

Activity: Outreach for the Monnig Meteorite Gallery

Organization: WGST Chair Welcome

Description: Tour (of both Gallery and Vault) and meteorite show and tell during WGST event. 25 people attending.

Start Term: 2021/03

End Term: 2021/03

Activity: Outreach for the Monnig Meteorite Gallery

Organization: Personal tour for donor

Description: I gave a donor and his family a personal tour of the Gallery and the vault. There were 5 people in attendance.

Start Term: 2020/03

End Term: 2020/03

Activity: Invited talk at UCLA Meteorite Gallery

Organization: UCLA

Description: Gave an invited talk: Charmed, I'm sure: Meteorites as Objects of Cultural Importance. I got great feedback on this talk. Here is a quote from an email I received: I felt I had to tell you that your well-organized presentation was, without any doubt, the most charming that's ever been delivered to the Gallery both in its scientific discussion (establishing that the Qarabawi Charm is a IIIAB) and in the associated cultural discussion (yes, I briefly gave up rocks and reviewed Wikipedia's article on the Ababda people and even looked at a Mideast map).

Start Term: 2020/01

End Term: 2020/01

Activity: Invited Talk

Organization: UT-Dallas GeoClub

Start Term: 2019/04

End Term: 2019/04

Activity: Outreach activity

Organization: Lily B Clayton

Description: Every year the students at Lily B. Clayton host "Terrific Tuesday," where they participate in this unique all-day event that helps all students explore different cultures and fine arts. The Monnig was invited to attend, but due to COVID the event went virtual. I developed an interactive, video-based outreach program for them.

Start Term: 2019/03

End Term: 2019/03

Activity: Invited Talk at Noble Planetarium

Organization: Fort Worth Museum of Science and History

Description: Invited speaker at the Fort Worth Museum's Lecture Series.

Public Media Contributions

Start Term: 2023/01

End Term: 2023/01

Type: Print

Title: A Stellar Space

Media Outlet: TCU Magazine

Location: Print and Online

URL link: <https://magazine.tcu.edu/fall-2023/oscar-monnig-meteorite-gallery/>

Description: An article in the special issue of TCU Magazine produced for the 150th anniversary.

Start Term: 2023/01

End Term: 2023/01

Type: Television

Title: Fun on the Run: See meteorites at the Monnig Meteorite Gallery in Fort Worth

Media Outlet: CW33

Location: Fort Worth

URL link: <https://cw33.com/news/dfw-metropets-dfw-metropets/fun-on-the-run-lifestyle-lifestyle/meteorites-at-monnig-meteorite-gallery-fort-worth/>

Date: 2023-11-01

Description: I was interviewed for a segment on fun things to do in the DFW metroplex.

Start Term: 2022/04

End Term: 2022/04

Type: Online

Title: A Visit To The Oscar E. Monnig Meteorite Gallery

Media Outlet: Meteorite Times

Location: Online

URL link: <https://www.meteorite-times.com/oscar-e-monnig-meteorite-gallery/>

Date: 2022-07-01

Start Term: 2022/03

End Term: 2022/03

Type: Online

Title: Meteor That Crashed to Earth in February Donated to TCU's Monnig Meteorite Gallery

Media Outlet: TCU College of Science and Engineering

URL link: <https://cse.tcu.edu/stories/posts/monnig-donation.php>

Date: 2023-04-05

Description: Article written about how the Monnig Meteorite Collection was chosen to be the repository of the recent meteorite fall in Texas.

Start Term: 2022/01

End Term: 2022/01

Type: Online

Title: Developing Culturally Relevant STEM Programming with Oklahoma Native American Nations

Media Outlet: TCU's College of Science and Engineering

Location: Online

URL link: <https://cse.tcu.edu/stories/posts/native-earth-native-sky.php>

Date: 2022-12-01

Description: Article about a grant I received to develop Culturally Relevant STEM Programming

Start Term: 2021/03

End Term: 2021/03

Title: Ready to launch: Students create app to make meteorite gallery more inclusive

Media Outlet: TCU360

Location: Online

URL link: <https://tcu360.com/2022/04/29/ready-to-launch-students-create-app-to-make-meteorite-gallery-more-inclusive/>

Date: 2022-04-29

Description: Article about my work at the gallery with Computer Science Students

Annual Report Statement: Special class-related factors or circumstances that influenced teaching effectiveness

Start Term: 2019/01

Description: This fall has probably been one of my hardest at TCU. Over the summer, I broke my arm. This required surgery as the bones were not only mis-aligned, but the break pinned my carpal nerve and I had severe traumatic carpal tunnel that had to be corrected. Unfortunately, as a result of this injury I developed complex regional pain syndrome. This is an incredibly debilitating pain condition, which left me in extreme pain 24/7 and prevented me from gaining any movement back in my wrist. I was faced with two new class preps (albeit one was UNLF, which is relatively easy) and a lot of other commitments to manage on top of this. I was advised to take FMLA for the semester to recover; however, no one could have taken over my Astrobiology course, which was a team-based class, so I opted to continue as best I could. Team-based classes require a whole new level of preparation. During the semester, I had 6 nerve blocks, each requiring heavy sedation and requiring me to miss days of work. I also had to put off gallbladder surgery due to this, which added to my issues. It was removed during dead days. In the midst of all this, I was also able to honor my commitment to the Manager Leader Program, which is more professional development than I have ever taken before. I ended the fall feeling somewhat defeated. I felt that my teaching effectiveness was impacted by my pain levels and surgical procedures. However, my SPOTs for my new classes do not show this at all. My astrobiology course was very successful and the students gave me wonderful feedback. I do feel it would have been even better in different circumstances, but I am proud of what I accomplished despite everything that was going on.

Teaching: Grade Distribution

Start Term: 2023/01

Subject: ENSC

Catalog: 10143

Section: 5

Session: REG

Course Name: Contem Environmental Issues

A: 21

A-: 0

B+: 4

B: 10

B-: 0

C+: 0

C: 6

C-: 0

D+: 0

D: 3

D-: 0

F: 1

P: 20

NC: 1

I: 0
AU: 0
Q: 0
Total: 66

Start Term: 2022/04

Subject: ENSC

Catalog: 10143

Section: 010

Session: MAY

Course Name: Contem Environmental Issues

A: 5

A-: 0

B+: 1

B: 0

B-: 0

C+: 1

C: 1

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 8

Start Term: 2022/03

Subject: ENSC

Catalog: 30123

Section: 60

Session: REG

Course Name: History of Women in Science

A: 10

A-: 0

B+: 1

B: 4

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 1

NC: 0

I: 0

AU: 0

Q: 0

Total: 16

Start Term: 2022/03

Subject: ENSC

Catalog: 60203
Section: 80
Session: REG
Course Name: Environmental Issues

A: 7
A-: 0
B+: 0
B: 0
B-: 0
C+: 0
C: 0
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0
I: 0
AU: 0
Q: 0
Total: 7

Start Term: 2022/03

Subject: PHYS

Catalog: 50970

Section: 713

Session: REG

Course Name: Special Problems in Physics

A: 0
A-: 0
B+: 1
B: 0
B-: 0
C+: 0
C: 0
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0
I: 0
AU: 0
Q: 0
Total: 1

Start Term: 2022/01

Subject: ENSC

Catalog: 10143

Section: 005

Session: REG

Course Name: Contem Environmental Issues

A: 17
A-: 0

B+: 9
B: 13
B-: 0
C+: 5
C: 1
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 17
NC: 3
I: 0
AU: 0
Q: 0
Total: 65

Start Term: 2022/01

Subject: GEOL

Catalog: 30163

Section: 015

Session: REG

Course Name: Explore the Solar System

A: 4

A-: 0

B+: 3

B: 1

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 8

Start Term: 2022/01

Subject: PHYS

Catalog: 30163

Section: 015

Session: REG

Course Name: Explore the Solar System

A: 5

A-: 0

B+: 0

B: 3

B-: 0

C+: 0

C: 0

C-: 0

D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0
I: 0
AU: 0
Q: 0
Total: 8

Start Term: 2021/04

Subject: ENSC

Catalog: 10143

Section: 002

Session: JLY

Course Name: Contem Environmental Issues

A: 3
A-: 0
B+: 5
B: 2
B-: 0
C+: 0
C: 2
C-: 0
D+: 0
D: 1
D-: 0
F: 0
P: 2
NC: 0
I: 0
AU: 0
Q: 0
Total: 15

Start Term: 2021/03

Subject: ENSC

Catalog: 30123

Section: 060

Session: REG

Course Name: History of Women in Science

A: 2
A-: 0
B+: 3
B: 0
B-: 0
C+: 1
C: 1
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 1
NC: 0

I: 0

AU: 1

Q: 0

Total: 9

Start Term: 2021/01

Subject: ENSC

Catalog: 10143

Section: 5

Session: REG

Course Name: Contem Environmental Issues

A: 13

A-: 0

B+: 0

B: 13

B-: 0

C+: 0

C: 6

C-: 0

D+: 0

D: 3

D-: 0

F: 0

P: 14

NC: 1

I: 0

AU: 0

Q: 0

Total: 50

Start Term: 2021/01

Subject: ENSC

Catalog: 20003

Section: 55

Session: REG

Course Name: Astrobiology

A: 3

A-: 0

B+: 1

B: 1

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 5

Start Term: 2021/01

Subject: ENSC

Catalog: 20003
Section: 655
Session: REG
Course Name: Astrobiology

A: 11

A-: 0

B+: 0

B: 0

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 11

Start Term: 2020/04

Subject: ENSC

Catalog: 10143

Section: 010

Session: MAY

Course Name: Contem Environmental Issues

A: 8

A-: 0

B+: 1

B: 7

B-: 0

C+: 0

C: 2

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 6

NC: 0

I: 0

AU: 0

Q: 0

Total: 24

Start Term: 2020/03

Subject: GEOL

Catalog: 70970

Section: 715

Session: REG

Course Name: Sp Problems

A: 1

A-: 0

B+: 0

B: 0

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 1

Start Term: 2020/03

Subject: ENSC

Catalog: 70980

Section: 079

Session: REG

Course Name: Thesis

A: 0

A-: 0

B+: 0

B: 0

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 3

AU: 0

Q: 0

Total: 3

Start Term: 2020/03

Subject: ENSC

Catalog: 70990

Section: 079

Session: REG

Course Name: Thesis

A: 1

A-: 0

B+: 0

B: 0

B-: 0

C+: 0

C: 0

C-: 0

D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0
I: 2
AU: 0
Q: 0
Total: 3

Start Term: 2020/03

Subject: GEOL

Catalog: 30443

Section: 070

Session: REG

Course Name: Earth Materials

A: 8
A-: 0
B+: 1
B: 2
B-: 0
C+: 0
C: 1
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0
I: 0
AU: 0
Q: 0
Total: 12

Start Term: 2020/03

Subject: GEOL

Catalog: 30443

Section: 071

Session: REG

Course Name: Earth Materials

A: 2
A-: 0
B+: 2
B: 5
B-: 0
C+: 0
C: 2
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0

I: 1

AU: 0

Q: 0

Total: 12

Start Term: 2020/03

Subject: GEOL

Catalog: 70970

Section: 714

Session: REG

Course Name: Sp Problems

A: 1

A-: 0

B+: 0

B: 0

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 1

Start Term: 2020/01

Subject: ENSC

Catalog: 10143

Section: 005

Session: REG

Course Name: Contem Environmental Issues

A: 19

A-: 0

B+: 1

B: 23

B-: 1

C+: 2

C: 15

C-: 0

D+: 2

D: 4

D-: 0

F: 0

P: 9

NC: 1

I: 0

AU: 0

Q: 0

Total: 77

Start Term: 2020/01

Subject: ENSC

Catalog: 10143
Section: 020
Session: REG
Course Name: Contem Environmental Issues

A: 12

A-: 1

B+: 4

B: 24

B-: 0

C+: 1

C: 4

C-: 0

D+: 3

D: 1

D-: 0

F: 2

P: 19

NC: 1

I: 0

AU: 0

Q: 0

Total: 72

Start Term: 2020/01

Subject: ENSC

Catalog: 10143

Section: 030

Session: REG

Course Name: Contem Environmental Issues

A: 21

A-: 0

B+: 11

B: 19

B-: 0

C+: 3

C: 13

C-: 0

D+: 0

D: 2

D-: 0

F: 3

P: 24

NC: 0

I: 2

AU: 0

Q: 0

Total: 98

Start Term: 2019/03

Subject: ENSC

Catalog: 70970

Section: 078

Session: REG

Course Name: Sp Problems

A: 0

A-: 0

B+: 0

B: 0

B-: 0

C+: 0

C: 1

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 1

Start Term: 2019/01

Subject: ENSC

Catalog: 20003

Section: 035

Session: REG

Course Name: Astrobiology

A: 5

A-: 0

B+: 2

B: 3

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 10

Start Term: 2019/01

Subject: ENSC

Catalog: 20003

Section: 635

Session: REG

Course Name: Astrobiology

A: 4

A-: 0

B+: 2

B: 0

B-: 0

C+: 0

C: 0

C-: 0

D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0
I: 0
AU: 0
Q: 0
Total: 6

Start Term: 2019/01

Subject: UNLF

Catalog: 10211

Section: 023

Session: REG

Course Name: Intro to University Life

A: 13

A-: 0

B+: 0

B: 0

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 13

Start Term: 2018/03

Subject: GEOL

Catalog: 30163

Section: 005

Session: REG

Course Name: Explore the Solar System

A: 2

A-: 0

B+: 1

B: 1

B-: 0

C+: 1

C: 1

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 1

AU: 0

Q: 0

Total: 7

Start Term: 2018/03

Subject: PHYS

Catalog: 30163

Section: 005

Session: REG

Course Name: Explore the Solar System

A: 1

A-: 0

B+: 0

B: 1

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 2

Start Term: 2017/03

Subject: GEOL

Catalog: 70980

Section: 079

Session: REG

Course Name: Thesis

A: 0

A-: 0

B+: 0

B: 0

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 3

AU: 0

Q: 0

Total: 3

Start Term: 2017/03

Subject: GEOL

Catalog: 70990
Section: 079
Session: REG
Course Name: Thesis

A: 1
A-: 0
B+: 0
B: 1
B-: 0
C+: 0
C: 0
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0
I: 6
AU: 0
Q: 0
Total: 8

Start Term: 2017/03

Subject: GEOL
Catalog: 10113
Section: 020
Session: REG

Course Name: Understanding the Earth

A: 12
A-: 0
B+: 7
B: 19
B-: 0
C+: 4
C: 5
C-: 0
D+: 0
D: 5
D-: 0
F: 3
P: 10
NC: 3
I: 0
AU: 0
Q: 0
Total: 68

Start Term: 2017/03

Subject: GEOL
Catalog: 40970
Section: 716
Session: REG

Course Name: Special Problems

A: 1
A-: 0

B+: 0
B: 0
B-: 0
C+: 0
C: 0
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0
I: 0
AU: 0
Q: 0
Total: 1

Start Term: 2017/03

Subject: GEOL

Catalog: 70970

Section: 716

Session: REG

Course Name: Sp Problems

A: 1

A-: 0

B+: 0

B: 0

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 1

Start Term: 2017/01

Subject: GEOL

Catalog: 10113

Section: 030

Session: REG

Course Name: Understanding the Earth

A: 16

A-: 0

B+: 10

B: 16

B-: 0

C+: 15

C: 13

C-: 0

D+: 1
D: 3
D-: 0
F: 2
P: 27
NC: 2
I: 0
AU: 0
Q: 0
Total: 105

Start Term: 2017/01

Subject: GEOL

Catalog: 10113

Section: 630

Session: REG

Course Name: Understanding the Earth

A: 6
A-: 0
B+: 0
B: 4
B-: 0
C+: 0
C: 1
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 1
NC: 0
I: 0
AU: 0
Q: 0
Total: 12

Start Term: 2017/01

Subject: GEOL

Catalog: 30163

Section: 035

Session: REG

Course Name: Explore the Solar System

A: 2
A-: 0
B+: 2
B: 5
B-: 0
C+: 1
C: 2
C-: 0
D+: 0
D: 0
D-: 0
F: 0
P: 0
NC: 0

I: 0

AU: 0

Q: 0

Total: 12

Start Term: 2017/01

Subject: PHYS

Catalog: 30163

Section: 035

Session: REG

Course Name: Explore the Solar System

A: 2

A-: 0

B+: 1

B: 1

B-: 0

C+: 0

C: 0

C-: 0

D+: 0

D: 0

D-: 0

F: 0

P: 0

NC: 0

I: 0

AU: 0

Q: 0

Total: 4

Professional Development

Start Term: 2023/01

End Term: 2023/01

Activity: Nature Masterclass: Increasing Your Visibility As a Researcher Using Social Media

Description: I attended this webinar to better understand how to represent my science on social media. Description given by Nature Masterclass on this webinar is given below. Extending your reach on social media can help you open the door to grants, collaborations, or your next (academic) position – opportunities that might not have been possible otherwise. To develop more insight into social media visibility for researchers, join our free webinar at Nature Masterclasses On-demand. Social media expert and rising cosmologist Dr Sophia Gad-Nasr will share her insight into building a meaningful social media presence as a scientist over time. She will also discuss how researchers can use social media to their greater advantage.

Online: Yes

Country: United States

Start Term: 2023/01

End Term: 2023/01

Activity: Creating Psychological Safety for Diverse Teams

Description: LinkedIn Learning Today's workforce comprises multiple generations, cultures, and ways of working. By creating a culture of psychological safety—in which team members feel comfortable taking risks—you can lead these diverse teams to greater success. In this course, leaders who've worked with organizations ranging from the New York Times to the NBA explain how to create a work environment where every team member feels valued, seen, and ready to innovate. Get strategies for communicating with people who think differently than you, managing across cultures, and helping your direct reports form habits that actually stick. Plus, learn how to find balance among the skill sets in your organization by embracing the unique talents that each person brings to the team.

Online: Yes

Country: United States

Start Term: 2023/01

End Term: 2023/01

Activity: Embracing Change with Mindfulness

Description: LinkedIn Learning In a world that never seems to stop changing, this course helps you process, handle, and cope with all of the changes in your life. Learn how to practice slowing down, processing what is happening around you, and accepting change. Explore how to use self-affirmation to expand your confidence. Discover how to practice visualization techniques to start to see your life as a series of cycles. Find out how to practice being thankful for all of the good things in your life to achieve a more positive state of mind. In conclusion, explore some techniques to connect with your physical body and shift to a more positive outlook on life.

Online: Yes

Country: United States

Start Term: 2023/01

End Term: 2023/01

Activity: DXR3 Raman Microscope e-Learning

Description: Course on how to operate the new raman microscope in ENSC/Monnig.

Online: Yes

Country: United States

Start Term: 2022/03

End Term: 2022/03

Activity: Prolifiko Writing RESET

Description: I participated in a 4 week course designed to help writes establish their best writing practice.

Online: Yes

Country: United States

Start Term: 2022/01

End Term: 2022/03

Activity: TCU STEPS Program

Description: This program is designed to assist all full time faculty and professors of practice to successfully identify grants and funding opportunities, develop fundable proposals and submit a completed proposal to an external sponsor.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2022/01

End Term: 2022/01

Activity: Next Level Inclusivity - Building Relationships with Indigenous Communities

Description: NASA workshop on best practices for working with Indigenous Communities

Online: Yes

Country: United States

Start Term: 2022/01

End Term: 2022/01

Activity: Write Winning Grant Proposals

Description: The workshop focused on proposal writing for the National Institutes of Health (NIH) and National Science Foundation (NSF). Offered by the TCU Office of Research.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2022/01

End Term: 2022/01

Activity: Inclusion Plan Best Practices Workshop

Description: Inclusion is one of NASA's core values, and one of the agency's highest priorities is moving toward an increasingly diverse and inclusive workforce that fully engages varied talents, ideas, and perspectives. Many programs within NASA's Research Opportunities in Space and Earth Sciences (ROSES) are now requiring proposers to contain an inclusion plan that outlines how the team will work against barriers to create and sustain inclusive work environments and how the team will equip members in such a way that they can go on to lead and contribute to other teams that are diverse and inclusive. As a result, in coordination with social scientists, NASA's Science Mission Directorate (SMD) is hosting this Inclusion Plan Best Practices Workshop to discuss best practices to consider when creating and maintaining inclusive teams. Examples include recruitment best practices; common barriers to inclusive working environments; and understanding the distinction between inclusion, diversity, equity, and accessibility. The goal of this workshop is to provide proposers with some background and tools needed to be active participants in creating and maintaining inclusive work environments. This workshop is open to any member of the science community and may be of particular interest to those writing ROSES or mission proposals requiring inclusion plans.

Online: Yes

Country: United States

Start Term: 2021/04

End Term: 2021/04

Activity: Lunar and Planetary Institute (LPI) Planetary ReaCH Workshop

Description: Planetary Resources and Content Heroes (ReaCH) team seeks to enhance the ability of planetary scientists, aka "Content Heroes," to engage Latinx and Black youth and their families. The ReaCH team has initiated a series of pilot workshops in 2022 titled Culturally Inclusive Planetary Engagement at multiple locations across the country. In addition to planetary scientists, NASA Science Activation teams and informal educators who serve minority communities are invited to participate in these workshops. The design of these workshops has been, and will continue to be, informed by needs assessments of planetary scientists and informal educators, research literature, lived experiences of ReaCH team members and workshop participants, and iterative, formative evaluation of workshops. In addition to providing their expertise and sharing their public engagement experiences, planetary scientists participating in these workshops will come away with actionable strategies for engaging Black and Latinx audiences and begin to build relationships/collaborations with other participants. Following each workshop, a public engagement event will be held at a local institution allowing workshop participants the opportunity to utilize engagement strategies discussed in the workshop. Stipends are available for those who are able to accept them.

Online: No

Country: United States

City: Houston

State or Province: Texas

Start Term: 2021/03

End Term: 2021/03

Activity: Faculty Media Training 101

Description: This training discussed: Why scholars should be interested in working with the media What reporters want from you How to engage with media and feel confident in interviews What is news? How to develop your key message Building media relationships

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2021/01

End Term: 2021/01

Activity: Student Organization Advisor Training

Description: Required training for Advisors of TCU student organisations.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2020/04

End Term: 2021/01

Activity: National Center for Faculty Diversity and Development: Faculty Success Program

Description: Helps tenure-track and tenured faculty with the skills necessary to increase research and writing productivity while maintaining a healthy work-life balance.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2020/04

End Term: 2020/04

Activity: Building Emergency Coordinator Training

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2020/03

End Term: 2020/03

Activity: Avoiding and Addressing Microaggressions in Service Learning and Community Engagement (101)

Description: Avoiding and Addressing Microaggressions in Service Learning and Community Engagement (101) will define and discuss key concepts associated with bias and microaggressions as well as highlight micro-resistance strategies that can be used to demonstrate how to apply these strategies in service learning and community engagement settings.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2020/03

End Term: 2020/03

Activity: Avoiding and Addressing Microaggressions in Service Learning and Community Engagement (201)

Description: Avoiding and Addressing Microaggressions in Service Learning and Community Engagement (201) builds on the 101 session and provides more advanced discussion by employing the IPARDE service learning cycle to sample scenarios which participants can apply micro-resistance strategies. By the end of this workshop, participants should be able to identify how bias and microaggressions occur in service learning and community engagement spaces and practice responses to it.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2020/03

End Term: 2020/03

Activity: Developing a Learning Mindset

Description: LinkedIn Learning A learning mindset means that you see challenges as opportunities and that you are motivated to learn something new every day. eParachute founder Gary Bolles shows you how to develop a learning mindset so that learning becomes a habit and not a chore. Find your motivation to learn, explore how the brain acquires and retains information, and discover how to conduct a self-inventory that reveals what you've learned and how you learn best. Gary also introduces strategies to make learning a fun and rewarding practice that stays with you for life.

Online: Yes

Country: United States

Start Term: 2020/03

End Term: 2020/03

Activity: Overcoming Overwhelm

Description: LinkedIn Learning Being overwhelmed isn't having too much to do; it's not knowing where to start. Learn how to get more done without feeling overcome. In this course, adapted from the popular podcast How to Be

Awesome at Your Job, host Pete Mockaitis interviews CEO Tanya Dalton. Tanya provides her take on being more productive daily, which involves figuring out and focusing on your own passions instead of other people's fires. She identifies where overwhelm truly comes from and explains how to craft the three components of your personal North Star. Plus, learn the benefits of a biweekly brain dump to get a bird's eye view of your task list and focus on the things that matter most.

Online: Yes

Country: United States

Start Term: 2020/03

End Term: 2020/03

Activity: Enhancing Resilience

Description: LinkedIn Learning Resilience is one of the most common traits of successful, happy people. Developing your resilience will not only help you to cope with challenging situations, but it can help you reach peak performance and enhance satisfaction, both in your personal and professional life. Learn how to get an edge at work and build your ability to thrive in the midst of obstacles, changes, and setbacks, by investing in the six pillars of resilience. Executive coach and author Gemma Leigh Roberts shows how to create a proactive plan to build your resilience, maintain it in the face of challenges, and track your progress over time.

Online: Yes

Country: United States

Start Term: 2020/01

End Term: 2020/03

Activity: Preparing to Teach Online

Description: Preparing to Teach Online is an online, asynchronous instructor-led course that takes fifteen weeks to complete. The course proceeds according to a course schedule and covers the regulations that govern distance education at TCU, online course design best practices, and strategies for successful online teaching and student engagement. Participants will receive a certificate upon completion. Successful completion of preparing to Teach Online is one of the TCU requirements to teach online.

Online: Yes

Country: United States

City: FORT WORTH

State or Province: Texas

Start Term: 2020/01

End Term: 2020/01

Activity: Call to Action: Anti-Racism Efforts in the Geosciences

Description: American Geophysical Union Workshop

Online: No

Country: United States

City: N/A

Start Term: 2020/01

End Term: 2020/01

Activity: Mitigating Unconscious Bias Training

Description: TCU Training taken with my colleagues in the Environmental Sciences Department

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/03

End Term: 2020/01

Activity: Informal Learning in Museums Professional Certificate.

Description: An innovative program that immerses museum, zoo, aquarium and science outreach professionals and volunteers in informal and free-choice learning theories. You will work with some of the field's leading researchers in museum studies programs and you will learn how to apply informal learning environments theories in real-world educational settings. What this certificate covers: Personal, socio-cultural and physical dimensions of free-choice learning and informal learning theory. Learn from Oregon State University scholars leading the field of free-choice

learning research. Valuable professional development by enrolling in the full professional certificate program or a single course.

Online: Yes

Country: United States

City: N/A

Start Term: 2019/04

End Term: 2019/04

Activity: Preventing Harassment in Science: Building a Community of Practice Toward Meaningful Change

Description: The goal of this workshop is to bring leaders of anti-harassment efforts together to share ideas and discuss best practice methods to reduce harassment in the scientific workplace. An expected outcome of this workshop is to create a community of practice to continue future anti-harassment efforts.

Online: Yes

Country: United States

City: N/A

Start Term: 2019/04

End Term: 2019/04

Activity: Microsoft Webinar: Online classes & lectures with all your students

Description: This webinar is designed to help first time users of Microsoft Teams get started hosting online meetings with their students. Agenda: 1) Overview of Microsoft Teams & setting up your first Class Team 2) How to schedule your first online meeting with all your students. 3) Approach to an effective online meeting before, during and after.

Online: Yes

Country: United States

City: N/A

Start Term: 2019/04

End Term: 2019/04

Activity: Microsoft Teams Webinar: Online meetings with student groups or anyone via their email

Description: This webinar teaches first-time users of Microsoft Teams how to get started. With Microsoft Teams, you can host online meetings, also known as video conference calls, with groups of students or people external to your institution using just their email address.

Online: Yes

Country: United States

City: N/A

Start Term: 2019/04

End Term: 2019/04

Activity: Understanding Cultural Influence: Sociocultural Dimensions of Free-Choice / Informal Learning

Description: This 7 week course, which was part of my Informal Learning in Museums Program leads you through investigations of connections between learning theories, particularly informal learning and the fundamental concepts of sociology, social psychology and anthropology.

Online: Yes

Country: United States

City: N/A

Start Term: 2019/04

End Term: 2019/04

Activity: Ramping Up Rapidly

Description: TCUOnline course to help facilitate ongoing instructional continuity to adapt instructional delivery and make pedagogical changes.

Online: Yes

Country: United States

City: FORT WORTH

State or Province: Texas

Start Term: 2019/04

End Term: 2019/04

Activity: Hybrid Design and Delivery Training

Description: Consistent with SACSCOC guidelines for distance learning, this training focuses on how instructors can modify their course to a hybrid course format.

Online: Yes

Country: United States

City: FORT WORTH

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: Dr. Jacqueline Jones Royster, So, What Do You Mean?: In Search of Transformative Spaces for Action and Leadership

Description:

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: Dr. Khalil Gibran Muhammad, The Condemnation of Blackness: Slavery, Racial Capitalism, and Abolition in the 21st Century

Description: CRES Cecil H. and Ida Green Premier Honors Chair lecture

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: CRES Faculty Dev Workshop: Adopting Anti-Racist Pedagogy Across Disciplines

Description: Pedagogy training on how to talk about race in the classroom and incorporate anti-racism into curricula across academic disciplines Given by CRES Premier Green Honors Chair recipient, Dr. Khalil Gibran Muhammad.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: Fundamentals of Feedback

Description: Part of the Manager Leaders Program at TCU

Online: No

Country: United States

City: FORT WORTH

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: Strengths Deployment Inventory Level II

Description: The SDI Applied session explores the concept of borrowing or dialing up your own strengths based on others motivations and finding ways to achieve better results regardless of your role on a team.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: Lindsey Pollak, How to Lead and Succeed in the Multigenerational Workplace.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: Legal Issues Training

Description: Part of the Manager Leaders Program at TCU

Online: No

Country: United States

City: FORT WORTH

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: Leading Courageous Cultures

Description: Capstone of the the TCU Manager Leaders Program

Online: Yes

Country: United States

City: FORT WORTH

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: Overdone Strengths Feedback Session

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/03

End Term: 2019/03

Activity: Examining the Learner's Own Ideas: Personal Dimensions of Free-Choice / Informal Learning

Description: As part of the Informal Learning in Museums Certificate program I am taking, the Examining the Learner's Own Ideas: Personal Dimensions of Free-Choice / Informal Learning course investigates the fundamental roles in the psychology of learning, including identity, motivation, interest, prior knowledge and experience, choice and control play in supporting lifelong learning.

Online: Yes

Country: United States

City: N/A

Start Term: 2019/01

End Term: 2019/03

Activity: Manager Leader Program

Description: TCU Manager Leaders ProgramThe TCU Manager Leaders program is a highly-selective 10-month (August—June) leadership development intensive that engages faculty and staff from all positions, roles and corners of TCU. It brings together a network of individuals committed to enriching TCU's workplace culture by developing skills necessary for effective and impactful supervisory or managerial level positions. Using a multi-faceted approach of large group workshops and educational trainings, small group accountability sessions, and individual assessment and reflection participant growth is supported in a holistic way.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Difficult Conversations

Description: This session focuses on how to communicate productively when leading a difficult conversation. Participants will learn coach-centered communication skills, methods to recognize and master their personal stories, and a framework to follow up conversations. This interactive session includes opportunities to practice with common scenarios.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Connection and Conversation

Description: A discussion-based session between the current and past Manager Leader Cohorts to discuss the program.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Performance Management Best Practices

Description: Build your skills as an individual contributor or supervisor at all levels by attending this session to prepare for end-of-year feedback, completing appraisals and setting 2019 individual and team performance goals. Participants will learn best practices for providing and soliciting feedback that is specific and actionable, identifying accountability measurements, and clarifying expectations and goal setting.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Coaching Habit

Description: This innovative, award-winning program is an introduction to coaching skills for managers and leaders. Beginning with a half-day session, The Coaching Habit program shows busy managers how to slay the advice monster so that they can say less, ask more and change the way they lead forever.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Recovery Ally

Description: What if students struggling with alcohol or drugs aren't bad students who need to get good, but rather--sick students who are trying to get well? How might seeing them in this perspective amplify their success in long term recovery? The Recovery Ally Training was created to educate faculty, staff, and students about addiction and recovery, and to equip our campus with skills to support the TCU Collegiate Recovery Community. The Recovery Ally Training is a 1.5 hour training facilitated by Substance Use and Recovery Counselors and students in recovery from Substance Use Disorder.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Intentional Dialogue Part II

Description: Intentional Dialogue Training--Level 2 provides participants with an opportunity to engage advanced dialogue practices with a focus on powered and privileged identities. Participants will gain greater insight and strengthen their ability to articulate their own identities and their positionality within groups by practicing dialogue.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Executive Presence

Description: Approaches for deepening your own self-awareness, improving your ability to communicate, and enhancing your capability to project authenticity and stronger "leadership presence" to lead even more effectively in your organization.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Bystander to Upstander: Transforming Culture

Description: The Bystander to Upstander workshop empowers participants to transform from bystanders to upstanders to build communities that support difference and unify against intolerance. An upstander is an individual who chooses to take positive action in the face of injustice or intolerance. Participants will learn how to identify harmful behaviors such as sexual violence, racism, and sexism. Participants will also learn and apply upstander skills to impact positive change and promote a culture of nonviolence. This interactive workshop allows each participant to practice upstander strategies that match their personality and comfort level. By the end of this workshop, participants will be able to: Identify moments of injustice or intolerance Gain confidence in addressing moments of injustice or intolerance Use engagement and conversational tactics to de-escalate harmful situations Take the most appropriate and effective action to stand up to injustice or intolerance

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Bystander to Upstander: Transforming Culture Train-the-Trainer Workshop

Description: This interactive, train-the-trainer workshop provides a sustainable way for participants to facilitate the Bystander to Upstander: Transforming Culture workshop with colleagues in their units. Participants will gain the knowledge and skills required to facilitate the Bystander to Upstander: Transforming Culture workshop in which participants learn how to identify harmful behaviors such as sexual violence, racism, and sexism, learn upstander skills to impact positive change and promote a culture of nonviolence, and practice upstander strategies with real-life scenarios. This train-the-trainer workshop also includes a discussion of potential issues that may arise during the workshop facilitation, as well as ideas on how to customize the workshop to meet the needs of different groups. Train-the-trainer workshop participants will receive all materials needed to facilitate the workshop and will join a collaborative team of trainers that work together to build communities that support difference and unify against intolerance. By the end of this workshop, participants will be able to: Effectively facilitate the Bystander to Upstander: Transforming Culture workshop Customize the Bystander to Upstander: Transforming Culture workshop to best meet the needs of the target group Gain confidence in addressing potential issues that may arise during the workshop facilitation Connect with other Bystander to Upstander: Transforming Culture trainers

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Women's Leadership Symposium

Description: The focus of this annual event is to bring together a diverse mix of successful women leaders who, through the discussion of topics relevant to today's issues will educate, inspire and encourage women to reflect on their own goals and status as they strive to advance within their organizations.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2019/01

End Term: 2019/01

Activity: Developing STEAM curriculum

Description: As part of the Informal Learning in Museums Certificate program I am taking, this online short course on developing STEM / STEAM curriculum focuses on the analysis of STEAM - Science, Technology, Engineering, Arts and Math - curriculum to incorporate science, mathematics, and technology disciplines into the design of free-choice learning experiences. The online Design STEAM Curriculum course prepares learners of all ages and backgrounds with the critical thinking skills, content knowledge, and literacy for positive and productive participation in the 21st century.

Online: Yes

Country: United States

Start Term: 2018/04

End Term: 2018/04

Activity: Protecting Youth: Prevention

Description: Part of the University's ongoing compliance program.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/04

End Term: 2018/04

Activity: FERPA Basics

Description: Part of the University's ongoing compliance program.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/04

End Term: 2018/04

Activity: Code of Conduct

Description: Part of the University's ongoing compliance program.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/04

End Term: 2018/04

Activity: Bridges: Taking Action

Description: Part of the University's ongoing compliance program.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/04

End Term: 2018/04

Activity: Space Advocacy 101

Description: This course provides you with an overview of important aspects of space policy that make you a better advocate: how Congress works, how to read White House budget requests, and how to communicate effectively with your elected officials. Taking this course will help you participate better in our year-round work in space policy and advocacy in Washington, D.C.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/03

End Term: 2018/03

Activity: Engagement Through Movement

Description: Matthew Cumbie (Associate Artistic Director of internationally renowned Dance Exchange) shared pedagogical tools to promote engagement through movement, opening space for social justice dialogue and expression.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/03

End Term: 2018/03

Activity: Teaching and Learning Conversation: Improving Scientific Teaching: What We Learned from the Summer Institutes on Scientific Teaching

Description: In this workshop, the Koehler Center discussed and shared some of the active learning and assessment techniques from the Summer Institutes that can be applied to a variety of disciplines and settings, and that can create more inclusive environments for the broad array of students we strive to reach.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/03

End Term: 2018/03

Activity: Teaching & Learning Conversation: A Peer Mentorship Program for Scientific Writing and Information Literacy

Description: This workshop introduced a peer mentorship program educators can employ to motivate students to become proficient scientific writers and to train other students to do the same.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/03

End Term: 2018/03

Activity: Create Accessible Content in TCU Online

Description: In this workshop, attendees learned how to check TCU Online content using the HTML accessibility checker, use HTML templates, and use accessibility guidelines to build accessible content.

Online: Yes

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/03

End Term: 2018/03

Activity: Office of Inclusion Luncheon: American Dream Deferred: Black Federal Workers in Washington, D.C

Description: Dr. Frederick Gooding spoke about his work on the long and difficult struggle of African-Americans who worked in the federal government.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/03

End Term: 2018/03

Activity: Teaching and Learning Conversation: Pronoun Fluency Workshop: Creating Safer Spaces Through Inclusive Language,

Description: This workshop was designed to give faculty and staff an opportunity to develop familiarity with pronoun usage and strategies of address. This workshop included practical, hands-on opportunities to improve knowledge or usage of pronouns. Best practices for inclusion of this information into syllabi and classroom settings were also shared.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/03

End Term: 2018/03

Activity: Team-Based Learning 101

Description: This is the single best introduction to TBL. This workshop is conducted in a TBL format in which the structure, process, and essential components of an effective TBL module are explored. You will prepare ahead of time, take individual and group Readiness Assurance Tests, and engage actively with your team members during application exercises. At the end of this workshop, you will be able to: Describe what TBL is. Explain how and why TBL works. Explain the key components of a successful TBL module. Discuss the benefits of using TBL.

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/03

End Term: 2018/03

Activity: Designing Learning Environments: Physical Dimensions of Free-Choice / Informal Learning

Description: As part of the Informal Learning in Museums Certificate program I am taking, the Designing Learning Environments course involves the analysis of the ways in which learning environment features like entrances, exits, sounds and crowding enhance and guide the informal learning process.

Online: Yes

Country: United States

Start Term: 2018/01

End Term: 2018/01

Activity: Performance Management Best Practices

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/01

End Term: 2018/01

Activity: Communicating for Best Results

Online: No

Country: United States

City: Fort Worth

State or Province: Texas

Start Term: 2018/01
End Term: 2018/01
Activity: Gatekeeper Training
Online: No
Country: United States
City: Fort Worth
State or Province: Texas

Start Term: 2018/01
End Term: 2018/01
Activity: Diversity in the Classroom: Examining Oppression
Online: No
Country: United States
City: Fort Worth
State or Province: Texas

Start Term: 2018/01
End Term: 2018/01
Activity: Diversity in the Classroom: Exploring Identity
Online: No
Country: United States
City: Fort Worth
State or Province: Texas

Start Term: 2017/04
End Term: 2017/04
Activity: Alliance for Children
Online: No
Country: United States
City: Fort Worth
State or Province: Texas

Start Term: 2017/03
End Term: 2017/03
Activity: Strengths Deployment Inventory
Online: No
Country: United States
City: Fort Worth
State or Province: Texas

Start Term: 2017/03
End Term: 2017/03
Activity: Intentional Dialogue
Online: No
Country: United States
City: Fort Worth
State or Province: Texas

Start Term: 2017/03
End Term: 2017/03
Activity: Title IX Training
Online: No
Country: United States
City: Fort Worth
State or Province: Texas

Start Term: 2017/03
End Term: 2017/03
Activity: Relationship Awareness Training
Online: No

Country: United States
City: Fort Worth
State or Province: Texas
Start Term: 2017/01
End Term: 2017/01
Activity: Clery Act Training
Online: No
Country: United States
City: Fort Worth
State or Province: Texas

Teaching: Mentoring/Advising Undergraduate Research and Creative Activities

Start Term: 2023/01

Student Name: Rayven Perkins, Tommy Truong, Berkeley Danysh, Mason O'Connor, Justin Huther, and Yash Tyagi

Title/Description: I am working with 6 COSC and Data Science undergraduate students in the Computer Science Senior Design course. They are helping me to redesign the Monnig Meteorite Database so that it is more functional for both me (admin) and the users (general public and researchers).

Start Term: 2022/03

End Term: 2022/03

Student Name: Liam Pittinger

Title/Description: Classification of unknown meteorites in the Monnig Collection

Start Term: 2022/01

End Term: 2022/03

Student Name: Robby Dai, Erika Rebollo Diaz, Alberto Gaucin, and Ayomide Ayowole-Obi

Title/Description: I participated in the Computer Science Senior Design course as a client and worked with four students on a project developing web resources for meteorites that fell on Native Lands in Oklahoma.

Start Term: 2021/01

End Term: 2021/03

Student Name: Aparajita Biswas, Amanuel Taddesse, Asa Tuten, Alex Matthews, and Kendric D'Spain

Title/Description: I worked with 5 undergraduate students as a client for the Computer Science Department's Senior Design course. They worked to develop an app for the Monnig Gallery that would enable those with visual disabilities to view all the exhibits in the Gallery more accessibly.

Start Term: 2020/04

End Term: 2020/04

Student Name: Maleigha Barber

Title/Description: Maleigha was an undergraduate student accepted into the Physics REU program for the Summer 2020 semester, which was cancelled. This went ahead this year, although it was remote. This is very challenging for my area of work, but we were successful in our goal.

University Affiliation (if external to TCU): Angelo State University

Start Term: 2019/04

End Term: 2019/04

Student Name: Maleigha Barber

Title/Description: Advisor for REU (research experience for undergraduates) in the TCU Physics and Astronomy Department

Start Term: 2017/03

End Term: 2017/03

Student Name: Sean Kelly

Title/Description: Digitization of the Monnig Meteorite Collection Documents

Start Term: 2014/04

End Term: 2014/04

Student Name: Sarah Carroll

Title/Description: Spectral and compositional variability amongst the winonaites. Physics REU program.

Start Term: 2014/04

End Term: 2014/04

Student Name: Tom Leith

Title/Description: Origin of the Solar System's earliest planetesimals: A spectroscopic analysis of differentiated asteroids and meteorites. USGS REU Project

University Affiliation (if external to TCU): United States Geological Survey

Start Term: 2013/01

End Term: 2013/03

Student Name: Katelyn Lehman

Title/Description: Improving data return from the NASA Dawn spacecraft.

Start Term: 2013/01

End Term: 2013/03

Student Name: Katelyn Lehman

Title/Description: Characterization of an unclassified ordinary chondrite.

Start Term: 2013/01

End Term: 2013/03

Student Name: Lauren Pfeiffer

Title/Description: Characterization of an unclassified eucrite

Start Term: 2013/01

End Term: 2013/03

Student Name: Katelyn Lehman

Title/Description: A composition analysis of the of Marius Hill volcanic complex on the Moon. Ronald E. McNair Program Research Project

Start Term: 2013/01

End Term: 2013/03

Student Name: Kayla Miller

Title/Description: Using Microprobe Data from Meteorite Classification to Devise New Planetary Petrology Laboratories.

University Affiliation (if external to TCU): University of Arkansas, Little Rock

Start Term: 2012/01

End Term: 2012/03

Student Name: Brianne Meyers

Title/Description: Fundamental parameters of cleaned open clusters using 2MASS + GLIMPSE/WISE.

Start Term: 2011/01

End Term: 2011/03

Student Name: John Gilliam

Title/Description: Classification of Carbonaceous Chondrite

University Affiliation (if external to TCU): University of Arkansas, Little Rock

Start Term: 2010/04

End Term: 2010/04

Student Name: Katelyn Lehman

Title/Description: Quantifying the Ni-content of iron meteorites using energy dispersive x-ray fluorescence.

Start Term: 2010/04

End Term: 2010/04

Student Name: Kiersten Daviau

Title/Description: Assessing the suitability of x-ray fluorescence as a meteorite identification tool. Physics REU project.

Student Interaction: Graduate Academic Advising

Start Term: 2017/03

Masters: 18

Start Term: 2017/01

Masters: 20

Service: Memberships in Professional Organizations

Start Term: 2019/01

Organization Name: Team Based Learning Collaborative

Description: The Team-Based Learning Collaborative is an organization of educators from around the world who encourage and support the use of Team-Based Learning in all levels of education.

Start Term: 2018/03

Organization Name: American Alliance of Museums

Description: The American Alliance of Museums' mission is to champion museums and nurture excellence in partnership with our members and allies.

Start Term: 2009/01

Organization Name: National Association of Geoscience Teachers

Start Term: 2002/01

Organization Name: Meteoritical Society

Start Term: 2002/01

Organization Name: Geological Society of America

Division/Section Name: Planetary Science Division

Start Term: 2002/01

Organization Name: The Geological Society

Start Term: 2002/01

Organization Name: American Geophysical Union

Division/Section Name: Planetary Sciences

Start Term: 2002/01

Organization Name: Mineralogical Society of America

Start Term: 2017/03

End Term: 2019/02

Organization Name: International Meteorite Collectors Association

Annual Report Statement: Ways the University, college/school, and/or department could be more supportive of your work

Start Term: 2023/01

College/School: College of Science & Engineering

Description: The Monnig Meteorite Collection would like to provide generous tuition for a new graduate student position (between 25-30K a year salary) within the College of Science and Engineering, but cannot pay tuition in addition to this stipend. We request 18 hours of tuition a year to support this new position. We note this is a maximum value and may be less depending on degree and degree progress. Justification: (1) the current funding situation for the graduate students working in the Monnig is complex – teaching in ENSC while gaining a degree in GEOL. This means funding that could be used for ENSC-based research has to be used for another department; (2) The Monnig lost the three-quarter time educator position during the hiring freeze in 2020. Outreach demand is not enough to necessitate this position any more, but would be ideal for a graduate student working 15-20 hours a week. A graduate assistant in the Monnig would: Allow us to increase the number of graduate degrees offered in CSE. This position could be for a student in Geology (MS), ENSC (MS), or even Physics and Astronomy (Ph.D. – a planetary science track is in development) Be a competitive position as it would be increased funding over usual stipends, therefore attracting a high quality candidate Increase the outreach program currently offered.

Start Term: 2018/03

College/School: College of Science & Engineering

Department/School: Monnig Meteorite Collection

Description: The Monnig Meteorite Collection and Gallery is one of TCU's jewels and it is not shown well. One of the ways I have felt this the most during my time here is financially. The Monnig is one of the few endowments where benefits (mine) are paid out of the endowment. Every year there is less to support the work of the Monnig as my pay (and benefits) increase. This seems shortsighted given that we see more people each year than are enrolled at TCU. I would like the Monnig to become a fundraising focus for a short time. This would allow us to grow the endowment. Even a small addition to the endowment by TCU standards would alleviate these financial concerns.

Start Term: 2022/01

End Term: 2022/01

College/School: College of Science & Engineering

Description: The instructor position we lost during COVID is essential to the running of our department. Almost without exception, the Environmental Science and Sustainability faculty are overburdened. I have never been so burned out and I know I am not alone. As a small department, the service load is already high and adding additional teaching to that (on top of other responsibilities) makes it not sustainable. We struggle to find adjuncts and, last semester, both my chair and I ended up with far more work as a result of the only adjunct we could find. The demand for places in NSC courses continues to rise with the incoming class size, with requests to increase our numbers being received almost every semester for the past two years. In order to continue to meet this demand, ENSC needs another position.

Start Term: 2021/03

End Term: 2022/01

College/School: College of Science & Engineering

Department/School: Environmental Sciences

Description: There are still, to my knowledge, no MOUs in place with the Geology Department despite recommendations made by OIE. These are essential to ensure the cooperative working relationships for the two departments into the future. If they have been put into place, then this should be communicated. Without these, ENSC may be left without anyone who is willing to become the next Chair. I would certainly not entertain taking on the position without these in place and without these being discussed by both departments so that all involved are aware of any and all agreements moving forward. This is essential documentation.

Start Term: 2019/04

End Term: 2022/01

College/School: College of Science & Engineering

Description: As mentioned previously, the Monnig is one of TCU's largest (likely the largest) public outreach activity. However, without the replacement of our educator, who retired in August 2020, most of these efforts will cease. This is hard to explain to those K12 institutions who we can no longer visit, many of whom are under-served, particularly when TCU is so vocal in saying that Diversity, Equity and Inclusion initiatives are a key part of TCU's core values. Eliminating such a large, and relatively inexpensive effort is counterintuitive. It is also very damaging to TCU's reputation. I am going to do as much of the work as I can, but we were already turning people away with a 3/4 time position dedicated to this work and I already have a full-time job! I cannot understand why the gallery educator was not viewed as an essential position. As an update to this text, which I typed in 2020, since June I have personally seen over 3000 individuals at outreaches and opened the Gallery to at least another 496 individuals (people do not always say how many are in their party in our guest book). I have done this while doing my normal job responsibilities, and teaching overload, and taking on an extremely heavy service load. I receive about 3 emails every day from the general public asking if their rock is a meteorite, which is a service I cannot even offer right now. The need for this position is great, the impact is even greater, and the funds required are small compared to other positions.

Start Term: 2020/01

End Term: 2020/01

Description: I am saddened by the sudden negative change in the relationship between the administration and faculty and staff. The rhetoric that has been used by both parties has not helped; however, the administration should lead by example. I say what follows with the greatest respect and with the acknowledgement that I would not wish to be in the position to lead a university during a pandemic and budget crisis. I acknowledge the challenges that must come with such a task, and the inability to communicate certain aspects of those challenges due to legal issues. However, Colin Powell said "As a leader you set the tone for your entire team. Communicate your vision." I do not believe that publicly disrespecting staff that have left by saying how glad we are that they offered their retirement is

helpful for creating a good work environment that fosters collaboration and active listening, nor is using derogatory terms for faculty to faculty when they are clearly expressing concern and fear for the University that they all love. There has been a disconnect between the public-facing image and actual personal expression - you cannot send an email claiming gratitude for hard work, while at meetings say that everyone is replaceable and that quantity of applications matters more than quality. That is not what made TCU great. I feel everyone has stopped listening to one another (administration and faculty alike) and instead have assumed they must start from an offensive position.

Start Term: 2019/03

End Term: 2020/01

Description: TCU needs to acknowledge the importance of graduate students and explain what the mission of the university is with regard to graduate programs. We are being told all our programs are threatened because graduate programs are not profit-bearers. You only have to look at a list of universities with high academic profiles to see that graduate programs are the linchpin. If our programs are cut, TCU will fall down the ranks and research faculty will leave. That loss of reputation is hard to regain. This information is also filtered down through so many layers of administration, it is hard to understand what the genuine feelings of the board and TCU truly are. Again, this comes back to a lack of clear communication, which has allowed rumors and assumption to take over. These important issues should not become a game of telephone, the campus should be united in knowing what our mission is and the plan of how we will all meet it together.

Start Term: 2019/01

End Term: 2019/01

College/School: College of Science & Engineering

Department/School: Environmental Sciences

Description: I am disappointed that ENSC was not allowed to advertise our new Instructor hire at the MS level with industry experience. As an MS-only granting department, most of our students go into industry. Industry experience in such a hire is far more useful and important to both us and our students than a Ph.D. While Dean Hartman did come and talk to our department about this policy change (the Instructor we are replacing has an MS), I did not feel the rationale for this was strong for our department other than it is just what the college and TCU will do from now on. The teacher-scholar model at TCU has flourished, not in small part because of the influence of PPPs and Instructors that come from a wide variety of backgrounds, not just academia. It would be a shame if we lost that. However, I am also aware that I am on the bottom of the rung when it comes to such decision making and, as such, I am not aware of many facts, figures, and other important information that goes into these decisions. I just feel these were not communicated well to us.

Start Term: 2019/01

End Term: 2019/01

College/School: College of Science & Engineering

Description: Last semester, the Provost held a discussion on the role of scholarship for tenure and promotion. This was titled "What are you wine-ing about?" and advertised by the Associate Provost for Research and Dean of Graduate Studies. I followed up immediately as I believe this title is highly inappropriate for several reasons: 1) Focusing any event on alcohol absolutely marginalises faculty who abstain, for whatever reason. Dr. Wormley did respond by adding to the invitation today that other beverages would be provided. I do not believe this is sufficient. If TCU is truly committed to inclusion then we need to be able to own mistakes and move on. I had two faculty members who approached me about this, knowing I have experienced the issues that come from having a loved one with alcohol use disorder, and expressed their own concerns related to this matter. 2) The name implies any questions faculty may have about the tenure and promotion process are whines. If I was a new tenure-track faculty member, I would certainly not have attended such an event for fear of how any questions would be perceived. I know of two such faculty members that did not attend for this very reason and another came to talk to me about their concerns. I am frankly surprised that this event name was approved and then that, when concerns were raised, it was not changed and an apology issued. For an event to have this name when it is a discussion with the Provost does imply that it is approved of by the very highest administrators at the University. In addition, Dean Hartman was wonderful in the way he heard and relayed my concerns to Dr. Wormley; however, they appeared to fall on deaf ears and had to be repeated on more than one occasion. Seeing that email arrive numerous times in my inbox in what was already a very hard semester, was actually quite difficult based on past experiences and I am not alone in that. If it were not for the kind response of my Dean, I would have felt very unsupported. If TCU could perhaps consider the names of some of these events in the future, it would absolutely encourage and support more faculty to attend and honor the inclusion we are currently driving for.

Start Term: 2018/01

End Term: 2018/01

College/School: College of Science & Engineering

Department/School: Monnig Meteorite Collection

Description: I have emphasized for a few years now that there is no paperwork connected to the Monnig Endowed position, except Oscar Monnig's will. His will is very vague and my position was set up in a very specific way, consulting with those who knew Mr. Monnig the best to ensure we honoured his intent. However, many of those people are no longer at TCU and many of them will leave in the next 5 years and the role of the Curator/Endowed Chair and the use of Endowed funds must be documented and agreed upon. I have been working on this for some time, but the format requested has changed a few times. I am hoping this can get done in the next few months. For this to happen, it is vital that I have the support of the administration both at the College, and University level.

Start Term: 2018/01

End Term: 2018/01

College/School: College of Science & Engineering

Department/School: Monnig Meteorite Collection

Description: In the Fall, I requested a significant sum of money to allow the Monnig Gallery to be renovated. In the 15 years since the Gallery opened, no major updates have occurred. This work would be done by a local gallery arts company, who are very well-known and will execute this work to the high quality needed. I have not yet heard if this money will be awarded. If we do not act soon, this company will be booked over the summer months and any work will be delayed. In addition, the Gallery is seen by thousands of people a year; Ms. Batiste, the Gallery Educator, saw over 16,000 people a year last year. That number is higher than TCU enrollment. The outreach that the Monnig performs has a huge impact on our local community and we need to reflect the best of TCU when they visit us. Investment in the Gallery is crucial for this, e.g. all the computers in the Gallery had to be removed in the Fall after two unexpected power cuts caused them to fail. This space is currently empty. Supporting the Monnig in this way not only supports my work, but that of the Gallery Educator and the work she does in our community.

Start Term: 2017/03

End Term: 2018/01

College/School: College of Science & Engineering

Department/School: Environmental Sciences

Description: When SGEE was split into two departments, we were assured that the scheduled trainings we had begun would continue into the Fall. I felt this was an excellent plan, as splitting up a group does not solve the problems that were there in the first place. I think many of us felt that continued training was absolutely required, especially considering the attitude of some faculty after previous ones. However, this has not happened. I have followed up on this, and I know Dean Hartman has too. I must say that I am very disappointed in the lack of response and action taken. Both departments are hiring new faculty members and I think it is very naive to assume this will go smoothly with all of the issues that have gone on. It is not setting us up for success, I worry that instead - once again - it may put us in a situation where instead of preventing conflict before it happens, it will require intervention after it does. I will also note that some of the advice given to me by HR was concerning. I noted this in an email to them at the time. I am happy to discuss this in person, but do not feel comfortable logging it in a report.

Annual Report Statement: Teaching, research, service, advising and professional development goals for the upcoming academic year

Start Term: 2023/01

Description: Research Goals: 1. Publish at least one peer-reviewed articles in reputable journals within the field of planetary science. 2. Apply for external funding for one research project. 3. Classify at least one new meteorite to science. 4. Present research findings at least one national or international conferences.

Start Term: 2022/03

Description: Teaching Goals: 1. Foster an inclusive and engaging learning environment by incorporating diverse perspectives and resources into course content. 2. Implement active learning strategies to enhance student participation and critical thinking skills. 3. Utilize technology and innovative teaching methods to adapt to various

learning styles and preferences. This will likely require some professional development so that I can familiarize myself with recent developments in this field, e.g. ChatGPT in teaching 4. Provide timely and constructive feedback to students to support their academic growth and development. This is key in the spring as my course is very grading heavy. 5. Develop a new course rotation schedule as the new instructor joining us in Fall 2023 means I am no longer required to teach ENSC 10143. This may involve the development of a new course or the redesign of courses that I have already developed for TCU.

Start Term: 2020/03

End Term: 2021/01

Description: My goals for the 2022 year as follows: 1) submit a manuscript. I have one that coauthors have returned to me and I wish to get this submitted in the spring semester. 2) get a second manuscript to coauthors. 3) continue with my professional development 4) focus on teaching supported by the endowment. My spring course is a new prep, so ensuring the students receive high level instruction and a good semester is key despite the continued uncertainty of COVID. 5) I rotate off of the WGST Advisory Board this spring. I will not be taking on any additional roles so I can ensure that my service goes to my department, where it is needed.

Start Term: 2019/01

End Term: 2020/01

Description: I was unable to finish all the manuscripts I had hoped to work on this fall because of my health. However, one was accepted with revisions and another is with my coauthors. Last year, I focused a lot on professional development and this year I wish to focus on my research. My goals are: 1) Revise accepted abstract and resubmit by end of February 2) Submit paper currently in prep before Spring Break (coauthor dependent) 3) Have another paper to coauthors by end of Spring semester 4) Submit one grant proposal by the end of the year. Due to COVID hybrid teaching trainings and increased teaching load, I am extending these goals into 2021.

Start Term: 2018/01

End Term: 2019/01

Description: I am going to begin advising ENSC undergraduates this Spring. This requires me to become familiar with the ENSC BS and BA degrees, which I have not had any formal involvement with up until now. My goals as an advisor are: 1) to provide an open and safe environment, where all students feel valued and heard. 2) to encourage students to take ownership of their education and make their own decisions based upon their needs and values (both academic and personal). I want to be their academic advisor, checking and balancing the course plans they bring to me with the academic needs of our program, and not the one making all those decisions for them.

Start Term: 2017/03

End Term: 2018/01

Description: I would like to design a new undergraduate course called Science and Society in Sci-fi. This would be a class listed both under the WGST and a science designation (to be determined). I aim to teach this class in the Spring 2020 semester.

Start Term: 2017/03

End Term: 2018/01

Description: I would like to publish two manuscripts this year.

Start Term: 2017/03

End Term: 2018/01

Description: I aim to submit one grant proposal this year.

Start Term: 2017/03

End Term: 2018/01

Description: I aim to attend two conferences and present at both.

Annual Report Statement: Ways in which you supported specific unit or college or University strategic goals

Start Term: 2022/03

End Term: 2023/01

Description: I facilitated the donation of 11 new meteorites to the Monnig Meteorite Collection. None of these donors worked with advancement for this donation, these are all the result of relationships I have forged in the

meteorite community myself: NWA 16081 21.3 g - diogenite NWA 16171 28.5 g – ordinary chondrite melt breccia, type 4 NWA 16181 27.0 g – LL3 ordinary chondrite NWA 13758 36.9g - R3 chondrite El Sauz - 23.52g - L6 ordinary chondrite Lamesa (b) 52g - L5 ordinary chondrite NWA 8555 6 g- a monomict eucrite NWA 12929 5g - monomict eucrite NWA 15368 4.8g - lunar breccia sample - donated specifically for a scientific research project and not to add to collection. 72 pieces of Agoudal meteorite for giveaway pieces at outreach events (not for the scientific collection) NWA 12564 5.3g - martian meteorite.

Start Term: 2022/03

End Term: 2022/03

Description: I provided several meteorites for "The Story of Us: An Immersive TCU Experience" that was produced to celebrate the 150th anniversary. The meteorites I selected were all found 150 years ago, which tied in with the theme of the exhibit well.

Start Term: 2021/03

End Term: 2022/01

Description: This whole document shows that I continue to invest in both the goals of the College and my Department, above and beyond my responsibilities and, probably, to my detriment. I would like to thank my Chair here for also investing in me. It is noted and appreciated.

Start Term: 2020/01

End Term: 2020/01

Description: We were days away from replacing our Instructor when the hiring freeze began. I taught a large overload in the Fall to help us cover this unexpected loss. The ENSC 10143 course is not in my area of expertise, but it is a core course for the University, my college, and my department. It is one of the most popular NSC credits at TCU and the first stepping stone for our majors, in addition to being required by other majors (geology) and minors (sustainability). I did this at the sacrifice of my own research program, to serve our students.

Start Term: 2020/01

End Term: 2020/01

Description: It is my privilege to be on the SIS taskforce to provide the provost with a recommendation for the leadership, vision, structure and resource needs of SIS. This is a school I am proud to be a part of, albeit indirectly. I believe that I am also serving my home college, Science and Engineering, in participating in this taskforce, as well as all the anti-racist trainings, and DEI-workshop offerings I am attending. There is no doubt that discrimination within the sciences is a massive problem, and TCU is not exempt from this. I am determined to be a leader and to serve my community where I can and to the best of my ability in this realm.

Start Term: 2019/03

End Term: 2020/01

Description: The development of DEI is key to nearly all the strategic goals that TCU currently aspires to. The Monnig Meteorite Collection was the university's largest source of public outreach. On average 10,000 people a year are impacted by the programming, which I am responsible for. We are always free and we travel to those who cannot visit us, as a result, the vast number of K12 institutions we visited were at under-served institutions. Please see my later statement about how putting this in jeopardy impact the reputation of the university.

Start Term: 2019/03

End Term: 2020/01

Description: I have spent significant amounts of time mentoring a new faculty member within my college (not within my department). I receive no service credit for it, but it has probably taken more of my time than any of the other tasks that are listed in that category. This honors the core values of my college: Integrity – acting with compassion in an honest and trustworthy manner Respect – honoring individual differences and embracing inclusiveness

Start Term: 2018/03

End Term: 2019/01

Description: I feel that my focus on professional development this year, and the work of the Monnig Meteorite Collection have absolutely supported two of the University's strategic goals from the Lead On campaign. Goal 1: Strengthen Academic Profile and Reputation Recommended Action: provide a highly engaging and inclusive TCU experience. My team-based class this semester fostered a very engaged and inclusive classroom experience. Student feedback reflected this: "Dr. Mayne was so amazing and honestly this class is my favorite I've ever taken. She did so well at listening and valuing opinions." "Dr. Mayne's style of teaching should be the way that most courses throughout all of academia should be taught, she is literally that good! I have no doubt in my mind that Dr. Mayne will

be receiving glowing surveys from everyone, please recognize that she is a very valuable member of the TCU teaching staff and take good care of her/train others to be like her for lectures." Goal 3: Strengthen the TCU Experience & Campus Culture Recommended Action: foster a diverse and inclusive university for all This year I have taken the Train the Trainer course for the Bystander to Upstander training, to help train faculty to improve the campus culture here at TCU. I also took a workshops on pronouns, accessible teaching, and intentional dialogue and difficult conversations. I was also voted in as a member of the Women and Gender Studies Advisory Board. WGST works very hard to be a leader in fostering both diversity and inclusiveness at TCU and I am honored to support their mission. The Monnig Meteorite Collection and Gallery also does a lot of outreach with underserved populations at local schools, which support the DEI efforts of Lead On. Recommended Action:provide a highly engaging and inclusive TCU experience See above under Goal 1. Recommended Action:catalyze a culture of connection at TCU I was selected to join the Manager Leader Program. This is focused on helping members of the TCU community foster the connection culture we are known for, whilst still being ethical and inclusive leaders. It has been a wonderful experience so far and I have connected with more people across campus in one semester than in my previous ten years here.

Start Term: 2018/01

End Term: 2018/01

Description: I was on sabbatical for the Fall and typically this would mean that my committee responsibilities were covered by other faculty members. However, it was also the first semester for the new ENSC department. ENSC has a small faculty and it requires the cooperation and work of all of them for it to function smoothly. As a result, I made the decision to take on several responsibilities during the Fall to support my new department. These involved weekly faculty meetings and serving on the Tenure and Promotion committee of two faculty members.

Student Interaction: Student Engagement

Start Term: 2013/01

Activity: Faculty sponsor of the Knights Who Say Knit

Start Term: 2022/03

End Term: 2022/03

Activity: College 101 Mentor.

Description: I participated in the TCU College 101 program as a mentor. This is an effort by the university to increase retention of first-year students by intervening when students earn a grade point average of less than 2.0 in their first semester. In that case, students receive the resources, tools, and mentorships necessary to help them to achieve academic good standing by the end of their second semester of freshman year. The program includes mandatory meetings with a mentor.

Start Term: 2018/01

End Term: 2019/01

Activity: Mentor for Beyond Borders student organisation

Description: I mentor an international student here at TCU through the Beyond Borders program.

Service: Consulting

Start Term: 2021/04

End Term: 2021/04

Entity: Perot Museum

Description: Perot Museum came to me with a possible meteorite from their collection that they wanted help identifying. They then asked for my opinion on the next steps with this sample.

Awards, Honors, Recognitions

Start Term: 2022/03

Organization: Women and Gender Studies

Activity/Title: Nominee for the Jean Giles-Sims Award for Feminist Teaching

Description: The Jean Giles-Sims Award for Feminist Teaching is presented to the faculty member who best exemplifies the principles of Women & Gender Studies and helps to further gender justice on campus. The award

recognizes faculty contributions both inside and outside of the classroom. Faculty must be nominated by students to receive this award. I was a nominee for 2023.

Amount Awarded: \$0

Start Term: 2021/03

Organization: College of Science and Engineering

Activity/Title: Deans' Award for Teaching Finalist

Description: College of Science and Engineering's nominee for the Deans' Award for Teaching

Start Term: 2021/03

Organization: Women and Gender Studies

Activity/Title: Nominee for the Jean Giles-Sims Award for Feminist Teaching

Description: The Jean Giles-Sims Award for Feminist Teaching is presented to the faculty member who best exemplifies the principles of Women & Gender Studies and helps to further gender justice on campus. The award recognizes faculty contributions both inside and outside of the classroom. Faculty must be nominated by students to receive this award. I was a nominee for 2023.

Start Term: 2020/04

Organization: International Astronomical Union (IAU)

Activity/Title: Asteroid officially named after me

Description: The IAU small body nomenclature group named asteroid 27529 after me in recognition of my contributions to the field of asteroid science. It is now called Rhiannonmayne. The press release for this said the following: Rhiannon Mayne (b. 1980) is an associate professor at Texas Christian University and curator of the Monnig Meteorite Collection. Using laboratory and telescopic techniques, she has made important contributions towards understanding the process of planetary differentiation in the early Solar System.

Amount Awarded: \$0

Start Term: 2018/03

Organization: Lunar and Planetary Institute

Activity/Title: Science Haiku Honorable Mention

Description: The Lunar and Planetary Science Conference runs a light-hearted competition each year for the best haiku written by an author to summarize the scientific abstract they submitted. While there is no true "prize" to this award, I do feel it demonstrates my ability to communicate my science clearly and concisely. I also love haikus, so on a personal note this made me quite happy.

Teaching: Graduate Theses, Dissertations, Projects

Start Term: 2022/03

Student Name: Peyton Harper

Title/Description: Does Surface Area Availability and Associated Weather Conditions Affect Water Resource Use by Bats?

Start Term: 2022/03

Student Name: Camden Butterworth

Title/Description: CONSERVATION EDUCATION MANAGERS' PERCEPTIONS OF SHORT- AND LONG-TERM LEARNING STRATEGIES

Start Term: 2020/03

Student Name: Ethan Gower

Title/Description: TBD

Start Term: 2023/01

End Term: 2023/01

Student Name: Hailey Ellis

Title/Description: ENSC 70351 Publication Writing aims to help Graduate students learn how to produce a scientific research publication based on their own research. Such skills will aid thesis development and potentially lead to the production of a submittable manuscript. Each student is assessed on their progress by a committee of ENSC Faculty.

Start Term: 2022/03

End Term: 2023/01

Student Name: I'Yanna Scott

Title/Description: ENSC 70351 Publication Writing aims to help Graduate students learn how to produce a scientific research publication based on their own research. Such skills will aid thesis development and potentially lead to the production of a submittable manuscript. Each student is assessed on their progress by a committee of ENSC Faculty.

Start Term: 2019/01

End Term: 2022/04

Student Name: Michael Toth

Title/Description: TBD Michael is digitizing all of the Monnig documents during his Ph.D. The Monnig is paying his stipend but Michael is in the history department

Start Term: 2022/03

End Term: 2022/03

Student Name: Manuel de Oyarzabal Barba

Title/Description: ENSC 70351 Publication Writing aims to help Graduate students learn how to produce a scientific research publication based on their own research. Such skills will aid thesis development and potentially lead to the production of a submittable manuscript. Each student is assessed on their progress by a committee of ENSC Faculty.

Start Term: 2022/01

End Term: 2022/03

Student Name: Jake Scruton

Title/Description: ENSC 70351 Publication Writing aims to help Graduate students learn how to produce a scientific research publication based on their own research. Such skills will aid thesis development and potentially lead to the production of a submittable manuscript. Each student is assessed on their progress by a committee of ENSC Faculty.

Start Term: 2022/01

End Term: 2022/03

Student Name: Peter Fahey

Title/Description: ENSC 70351 Publication Writing aims to help Graduate students learn how to produce a scientific research publication based on their own research. Such skills will aid thesis development and potentially lead to the production of a submittable manuscript. Each student is assessed on their progress by a committee of ENSC Faculty.

Start Term: 2020/01

End Term: 2022/01

Student Name: Emily Gackstatter

Title/Description: Classification and Petrogenesis of New Martian Meteorite, NWA 14904

Start Term: 2019/01

End Term: 2019/03

Student Name: Maria Hruska

Title/Description: TBD

Start Term: 2015/03

End Term: 2019/01

Student Name: Katelyn Lehman

Title/Description: Exploring the Geochemical Evolution of Magmatic Sources in Relation to Tectonic Setting in the Mesoproterozoic Konkiep Terrane in the Namaqua-Natal Orogen, SW Namibia.

Start Term: 2017/01

End Term: 2018/04

Student Name: Lindsay Caves

Title/Description: Analysis and Evaluation of Critical Processes during Metal-Silicate Mixing in Mesosiderites

Start Term: 2016/01

End Term: 2018/01

Student Name: Rebecca Funderburg

Title/Description: Metasomatism in Eucrites

Start Term: 2016/01

End Term: 2018/01

Student Name: Drew Ciampa

Title/Description: Near-Side Supernova Driven Winds from the Large Magellanic Cloud

Start Term: 2014/01

End Term: 2015/03

Student Name: Julia Gregory

Title/Description: Characterization of the ungrouped pallasite Choteau

Start Term: 2014/01

End Term: 2015/03

Student Name: Samuel Crossley

Title/Description: Stannern trend eucrites as contaminants of partial melting: Constraining the petrogenesis of Vesta through experimental petrology

Start Term: 2013/01

End Term: 2014/04

Student Name: Chelsea Toews

Title/Description: Cambrian igneous breccia of possible phreatomagmatic origin and associated mafic/felsic hypabyssal intrusions in the West Timbered Hills, Arbuckle Mountains, Southern Oklahoma.

Start Term: 2013/01

End Term: 2014/04

Student Name: Joseph Boro

Title/Description: Volcanic lithofacies and geochemistry of rift-related rhyolites in the West Timbered Hills, Southern Oklahoma.

Start Term: 2010/01

End Term: 2014/03

Student Name: Benjamin Thompson

Title/Description: Properties of binary populations in open clusters.

Start Term: 2012/01

End Term: 2013/04

Student Name: Jennifer Hill

Title/Description: Complex Eocene-Oligocene hypabyssal intrusive systems associated with basaltic phreatomagmatic vents in the area east of Big Bend National Park, West Texas.

Start Term: 2011/01

End Term: 2013/01

Student Name: Sarah Garcia

Title/Description: An analysis of anomalous meteorite, Enon: Classification and thermal history.

Start Term: 2010/01

End Term: 2012/01

Student Name: Amy Eschberger

Title/Description: Volcanological and geochemical studies of Cambrian rift-related igneous rocks in the western Arbuckle Mountains, Southern Oklahoma

Start Term: 2009/03

End Term: 2011/03

Student Name: Samantha Smith

Title/Description: Using petrology and mineralogy to understand the surface of Vesta: A collection of fine-grained eucrites

Start Term: 2009/01

End Term: 2010/03

Student Name: Benjamin Hermann

Title/Description: Impact at Ingalls? Evidence for a subsurface Ordovician meteorite impact near Ingalls, Oklahoma.

Victoria (Tory) J. Bennett Curriculum Vita

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EDUCATIONAL BACKGROUND

Ph.D. in Ecology, University of Leeds, U.K.	2004
M.Sc. in Biodiversity and Conservation, University of Leeds, U.K.	1998
B.Sc. hons in Zoology, University of Leeds, U.K.	1997

TEACHING AND RESEARCH APPOINTMENTS

2019-	Associate Professor of Wildlife Ecology, Dept of Environmental Sciences, Texas Christian University
2014-2019	Assistant Professor of Wildlife Ecology, SGEE, Texas Christian University
2013-2014	Acting Assistant Professor of Professional Practice, SGEE, Texas Christian University
2011-2013	Postdoctoral Research Associate, Department of Biology, Texas Christian University
2009-2011	Postdoctoral Research Associate, Department of Forest Ecosystems and Society, Oregon State University
2007-2009	Postdoctoral Research Associate, Department of Forestry, Purdue University
2004-2007	Senior ecologist, Cresswell Associates Ecological Consultants, UK
2004	Bat researcher, Operation Wallacea, Honduras
2004	Research assistant, British Antarctic Survey

SERVICE APPOINTMENTS

Global Oversight committee member (University)	2023-present
Student Research Symposium committee chair (College)	2023-2024
Student Research Symposium committee member (College)	2021-present
Graduate director for the Department of Environmental Sciences	2018-present
Graduate director for the School of Geology, Energy and the Environment	2016-2018
Faculty search committee member for Environmental Sciences	2015-present
Graduate coordinator for the Environmental Sciences Program	2014-2018
Graduate search committee member for Environmental Sciences	2013-present
Graduate faculty	2013-present
Faculty member in the Institute of Environmental Studies (http://environment.tcu.edu/faculty/)	2013-present

TEACHING RESPONSIBILITIES**Department of Environment Sciences**

ENSC 40030 and 70030: Research in Applied Wildlife Ecology (Directed study)	2023-present
ENSC 70790: Sp Problems Geographic Information Systems (GIS) Applications in Environmental Science Research (Team taught lecture with integrated lab)	2020
ENSC 70351: Publication Writing	2016-present
ENSC 60011: Literacy of Science Review (Seminar)	2016-2022
ENSC 60021: Oral Examination	2016-2024
ENSC/ART 40553/60553: Zoo Enrichment (Lecture with integrated lab) (http://newsevents.tcu.edu/stories/tcu-brings-art-and-science-together-to-benefit-fort-worth-zoo/)	2015-present
ENSC 50693: Natural Resources Compliance (Lecture)	2015-present
ENSC 40603, 40611 and 60603: South African Biodiversity and Human Development (Study abroad and global awareness) (http://environment.tcu.edu/research-initiatives/rhino-conservation-in-south-africa/)	2015-present
ENSC/BIOLOG 40173 and 60173: Mammalogy (Lecture with integrated lab)	2015-present
ENSC 40790 and 70790: Sp Problems Applied Research in Wildlife Ecology (Directed study)	2014-2023
ENSC 30453: Wildlife Research Project (Writing emphasis)	2014-present
ENSC 50551: Anthropogenic Disturbance of Wildlife (Seminar)	2014-present
ENSC/BIOLOG 40235 and 60253 Wildlife Ecology and Management (Lecture with integrated lab)	2014-present
ENSC 60001: Environmental Presentations (Seminar)	2014-present
ENSC 60203: Environmental Issues (Team Taught Lecture)	2014-2023
<u>Guest Lecturer in:</u>	2014-present
SCIE 20970-082 Stem Scholar Seminar	2023
HARE 30403 Perspectives in Human-Animal Relationships	2017-present
ENTM 40803 Advanced Readings in Energy	2017
ENSC 10514 Special Problems: Biodiversity and Conservation	2014

Department of Biology, Texas Christian University

BIOL 40021/60011 Introduction to Biological Research	2012-2013
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Department of Forestry and Natural Resources, Purdue University

FNR 37000 Natural Resources Summer Practicum	2008-2013
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Guest Lecturer in:

FNR 44700 Vertebrate Population Dynamics	2007-2009
FNR 24200 Mammals	2007-2009

Department of Biology, University of LeedsGraduate Teaching Assistant:

African Ecology (MSc level)	2000-2002
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Population Dynamics (BSc level)	1998-2002
Wildlife Ecology Field Project (BSc level)	1998-1999

EXTERNAL SUPPORT

a. Received	(\$2,069,819 received)
Fort Worth Zoo - Using community outreach to explore and address the impacts of water quality on bats in urban parks. PI (\$4,669.80)	2022
U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy: Wind Energy-Bat impact minimization technologies and field testing opportunities – a miniature radio-frequency transmitter for environmental permitting and mitigation of wind energy. Subcontracted by Pacific Northwest National Laboratory (\$58,000)	2019
U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy: Wind Energy-Bat impact minimization technologies and field testing opportunities – Texturizing wind turbine towers to reduce bat mortality. CoPI with Dr. A. Hale (\$249,076)	2015-2017
U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy: Wind Energy-Bat impact minimization technologies and field testing opportunities – Testing Ultrasonic Bat Deterrent Technology. Sub-award from General Electric and CoPI (\$174,382)	2015-2017
TCU – NextEra Energy Wind Research Initiative (2014-2016) Development and testing of a practical deterrent to minimize bat fatalities at wind turbines. Co-PI (\$195,000)	2014-2016
TCU – NextEra Energy Wind Research Initiative (2013-2015), Co-PI (\$1,321,032)	2013-2015
Indiana Academy of Science Senior Research Grant, Research Award (\$2,730)	2012-2013
Illinois-Indiana Sea Grant – Research Award (\$10,000)	2010
The National Geographic Waitt Grant – Research Award (\$14,879)	2010-2011
Oregon Zoo: Future for Wildlife Grant Program Cooper – Research Award (\$4,245)	2010
Oregon State University’s General Research Fund – Research Award (\$9,991)	2010
Indiana Department of Natural Resources – Research Award (\$13,000)	2010
Massive Software Ltd, New Zealand – In-kind contribution (\$10,000)	2009
Indiana Academy of Science Senior Research Grant, Research Award (\$2,814)	2009

INTERNAL SUPPORT**(\$103,873 received from TCU)**

Dean’s Opportunity Fund - Initiating a TCU research and teaching program at Tanglewood Conservation Area in Eastern Cape of South Africa (Funded \$42,544)	2023
Research and Creative Activities Fund	2023
<ul style="list-style-type: none"> Establishing a long-term bat activity monitoring station at the TCU Bat Flight Facility (Funded \$4,205) 	2021

<ul style="list-style-type: none"> Assessing water resource use by bats at residential swimming pools in Arizona (Funded \$4,295) 	2017
<ul style="list-style-type: none"> Identifying the features and resources in urban parks that allow bat populations to persist. (Funded \$4,392) 	2014
<ul style="list-style-type: none"> Monitoring species-specific bat activity in north central Texas to determine the current status of bat populations. (Funded \$3,184) 	2019
TCU Instructional Equipment Grant for replica skulls and skeletons. (Funded \$22,315)	2015-2019
Andrews Institute of Mathematics & Science Education Research Grant – TCU Bat Outreach Program.	
<ul style="list-style-type: none"> Funded - \$2,338 (2019) Funded - \$2,349 (2018) Funded - \$2,400 (2017) Funded - \$2,287 (2016) Funded - \$2,000 (2015) Funded - \$2,564 (2014) Funded - \$3,000 (2011) 	
Junior Faculty Summer Research Program – Monitoring species-specific bat activity in north central Texas to determine the current status of bat populations. (Funded \$6,000 stipend)	2014
Total amount received in career \$2,173,692	

GRADUATE THESES DIRECTED

Melissa Mills, MS Environmental Science 2015 (Can a noninvasive camera trapping technique be used to monitor urban bobcats (*Lynx rufus*)?)

Brad Yuen, MS Environmental Science 2015 (Surface texture discrimination using synthetic bat echolocation calls: implications for reducing bat fatalities at wind turbines)

Luyi Zheng-Jarzombek, MS Environmental Science 2016 (Aerial-hawking bats can glean prey items from surfaces similar to wind turbine towers: implications for reducing bat fatalities at wind facilities)

Christina Bienz, MS Environmental Science 2016 (Surface texture discrimination by bats: implications for reducing mortality at wind turbines)

Cecily Foo, MS Biology 2016 (Are wind turbines a foraging resource for bats? Testing the feeding attraction hypothesis)

Cole Lindsey, MS Biology 2017 (Assessing changes in bat activity in response to an acoustic deterrent – Implications for decreasing bat fatalities at wind facilities)

Brynn Huzzen, MS Environmental Science 2019 (Evaluation of the effectiveness of a textured application, as an effective minimization strategy, to reduce bat activity at wind turbines)

Kathryn Smith, MS Environmental Science 2019 (Assessing whether transmitters impact bat flight and behavior in a controlled environment.)

Ellen Hall, MS Environmental Science 2020 (Seasonal home range expansion of evening bats in urban environments)

Elizabeth Agpalo, MS Environmental Science 2020 (Improving urban habitat for bats: What makes residential swimming pools bat-friendly?)

Lyall Blanche, MS Environmental Science 2021 (Edge effect on habitat availability and distribution of wildlife on small game reserves in South Africa)

James McGee, MS Environmental Science 2022 (The use of swimming pools by bats in a game reserve in South Africa)

I'Yanna Scott, MS Environmental Science 2023 (Water quality can impact water resource use by bats in urban areas)

Manuel de Oyarzabal Barba, MS Environmental Science 2023 (Modelling suitability of tree connectivity for bats in urban areas)

Peyton Harper, MS Environmental Science intended Fall 2024 (Extent to which available surface area impact water resource use by bats)

Gloria Serrano, MS Environmental Science intended Fall 2025 (Variation in abundance and diversity of bat activity between natural and anthropogenic water sources in a game reserve in South Africa)

Elizabeth Hargis, MS Environmental Science intended Fall 2025 (The socio-economic status of urban neighborhoods impacts prey abundance and foraging activity of bats)

GRADUATE COMMITTEES

Lauren Wyatt, MA Environmental Science 2013 (Creating a community outreach program)

C. Danielle Cochran, MS Environmental Science 2013 (Bats, bugs and wind farms – is there a connection?)

Alexis Ackles, MS Environmental Science 2016 (The devil in the details: Population estimation for conservation management of Texas horned lizards (*Phrynosoma cornutum*))

Claire Crawbuck, MS Environmental Science 2021 (Effects of compounds derived from smoke on germination of *Sarracenia alata*)

PRESENTATION OF SCHOLARY AND CREATIVE ACTIVITIES

a. Refereed Publications (* = graduate students and ** = undergraduate students)

McGee, JE*, **VJ Bennett**, SJ Maartens. 2023. The use of swimming pools by bats on a game reserve in South Africa. *Journal of Wildlife Management* e22479, DOI: 10.1002/jwmg.22479

Bennett VJ, EJ Agpalo*. 2022. Citizen science helps uncover the secrets to a bat-friendly swimming pool in an urban environment. *Frontiers in Ecology and Evolution | Urban Ecology* 10:860523, DOI: 10.3389/fevo.2022.860523 (Invited; Research topic: Spatial aspects of urban animal ecology and conservation biology)

Hall EM*, **VJ Bennett**. 2021. Variations in home range size of evening bats (*Nycticeius humeralis*) in an urban environment. *Journal of Mammalogy* 107:1497-1506.

Huzzen, BE*, AM Hale, **VJ Bennett**. 2020. An effective survey method for studying volant species activity and behavior at tall structures. *PeerJ* 8:e8438, DOI: 10.7717/peerj.8438

Nystrom, GS**, **VJ Bennett**. 2019. The importance of residential swimming pools as an urban water source for bats. *Journal of Mammalogy*, 100:394-400, DOI: 10.1093/jmammal/gyz020

- Bennett, VJ, AM Hale. 2018. Resource availability may not be a useful predictor of migratory bat fatalities or activity at wind turbines. *Diversity* 10:44, DOI:10.3390/d10020044 . (Invited; Special Issue: Diversity and conservation of bats)
- Korstian, J*, M Chumchal, **VJ Bennett**, AM Hale. 2018. Mercury contamination in bats from the central United States. *Environmental Toxicology and Chemistry* 37: 160-165.
- Foo, CF*, **VJ Bennett**, AM Hale, JM Korstian, AJ Schildt, DA Williams. 2017. Increasing evidence that bats actively forage at wind turbines, *PeerJ* 5:e3985, DOI:10.7717/peerj.3985
- Bennett, VJ**, AM Hale, DA Williams. 2017. When the excrement hits the fan: bat feces collected from wind turbine surfaces reveal species-specific activity. *Mammalian Biology* 87:125-129.
- Bennett VJ**. 2017. Effects of road density and pattern on the conservation of species and biodiversity. *Current Landscape Ecology Reports*, 2: 1-11. (Invited; Special topic: Effects of landscape structure on conservation of species and biodiversity)
- Katzner T, **VJ Bennett**, T Miller, A Duerr, M Braham, and AM Hale. 2016. Wind energy development: methods for pre-construction risk assessment for birds and bats. *Human-Wildlife Interactions*, 10: 42-52. (Invited; Special topic: Wildlife and Wind Energy: Are they compatible?)
- Korstian, JM*, AM Hale, **VJ Bennett**, and DA Williams. 2016. Using DNA barcoding to improve bat carcass identification at wind farms in the United States. *Conservation Genetics Resources* 8: 27-34.
- Korstian JM*, AJ Schildt**, **VJ Bennett**, DA Williams, and AM Hale. 2015. A method for PCR-based identification of bat species from fecal samples. *Conservation Genetics Resources* 7:803-806.
- Hale AM, ES Hatchett*, JA Meyer*, and **VJ Bennett**. 2014. No evidence of displacement in breeding grassland birds. *Condor* 116: 472-482.
- Bennett VJ**, Betts M, Smith WP. 2014. Influence of thermal conditions on habitat use by a rare spring emerging butterfly *Euphydryas editha taylori*. *Journal of Applied Entomology* 138: 623-634.
- Bennett VJ**, KB Karsten, AM Hale, CE Gordon, and BJ Suson. 2014. Effect of wind turbine proximity on nesting success in shrub-nesting birds. *American Midland Naturalist* 172: 317-328.
- Rodriguez-Prieto I, **VJ Bennett**, PA Zollner, E Fernández-Juricic, M List, and M Mycroft. 2014. Simulating the responses of forest bird species to multi-use recreational trails. *Landscape and Urban planning* 127: 164-172.
- Bennett VJ**, and AM Hale. 2014. Red aviation lights on wind turbines do not increase bat-turbine collisions. *Animal Conservation* 17: 354-358.
- Bennett VJ**, SM Pack**, M Betts, and WP Smith. 2013. Sex-biased dispersal in a rare butterfly and the implications for its conservation. *Journal of Insect Conservation* 17(5):949-958.
- Korstian JM, AM Hale, **VJ Bennett**, and DA Williams. 2013. Advances in sex determination in bats and its utility in wind-wildlife studies. *Molecular Ecology Resources* 13:776-780.
- Stevens TK*, AM Hale, KB Karsten, and **VJ Bennett**. 2013. An analysis of displacement from wind turbines in a wintering grassland bird community. *Biodiversity and Conservation* 22:1755-1767.
- Bennett VJ**, V Quinn, and PA Zollner. 2013. Exploring the implications of recreational disturbance on an endangered butterfly using a novel modelling approach. *Biodiversity and Conservation* 22:1783-1798.
- Hatchett ES*, AM Hale, **VJ Bennett**, and KB Karsten. 2013. Wind turbines do not negatively affect nest success in the Dickcissel (*Spiza americana*). *The Auk* 130:520-528.
- Bennett VJ**, DW Sparks, and PA Zollner. 2013. Modeling the indirect effects of road networks on the foraging activities of bats. *Landscape Ecology* 28:979-991.

- Bennett VJ**, and AA Zurcher**. 2013. When corridors collide: a study into the road-related disturbance of commuting bats. *Journal of Wildlife Management* 77(1):93-101.
- Bennett VJ**, M Betts, and WP Smith. 2012. Evidence for mate guarding behavior in the Taylor's checkerspot butterfly. *Journal of Insect Behavior* 25:183-196.
- Bennett VJ**, E Fernández-Juricic, PA Zollner, M Beard*, L Westphal, and CL LeBlanc. 2011. Modelling the responses of wildlife to human disturbance: An evaluation of alternative management scenarios for black-crowned night-herons. *Ecological Modeling* 222:2770-2779.
- Zurcher AA**, DW Sparks, and **VJ Bennett**. 2010. Why did the bat not cross the road? *Acta Chiropterologica* 12(2):337-340.
- Bennett VJ**, M Beard*, PA Zollner, E Fernández-Juricic, L Westphal, and CL LeBlanc. 2009. Understanding wildlife responses to human disturbance through simulation modelling: A management tool. *Ecological Complexity – Special Edition* 6:113-134.
- Phillips RA, JRD Silk, JP Croxall, V Afanasyev, and **VJ Bennett**. 2005. Summer distribution and migration of non-breeding albatrosses: individual consistencies and implications for conservation. *Ecology* 86:2386–2396.

b. Non-refereed Publications

- Williams DA, JM Korstian, **VJ Bennett**, and AM Hale. 2016. Barcoding's role in bat fatality monitoring at wind farms. *Barcode Bulletin* 7(1):2-3.
- Bennett VJ**, Smith WP, and Betts M. 2011. Toward Understanding the Ecological Impact of Transportation Corridors. Pacific Northwest General Technical Report PNW-GTR-846. USDA Forest Service, Pacific Northwest Research Station, 40p.

c. Publications Under Active Review (*=graduate students)

- de Oyarzabal Barba, M*, BL Lavy, **VJ Bennett**. (in review) Improving urban flyways for bats: The importance of tree canopy structure. Submitted to *Wildlife Biology*.
- Blanche L*, **VJ Bennett**. (in revision) Edge effects influence wildlife in a small game reserve in South African. Submitted to *South African Journal of Wildlife Research*.
- Agpalo EJ*, **VJ Bennett**. (in revision) Improving urban environments: What makes a bat-friendly swimming pool? Submitted to *Urban Ecosystems*.
- Smith KE*, **VJ Bennett**. (in revision) Get off my back! Assessing the impacts of transmitters on bat flight and behavior. Submitted to *Journal of Mammalogy*.
- Bennett VJ**, AM Hale. (in revision) Acoustic monitoring does not predict bat mortality at a wind energy facility? Intended for *PeerJ*.

d. Papers Presented at Scholarly Meetings

- de Oyarzabal Barba, M*, BL Lavy, **VJ Bennett**. 2023. Improving urban flyways for bats: The importance of tree canopy structure. Southwest Division of the American Association of Geographers.
- Scott, IE*, **VJ Bennett**., G. Kharel. 2023. Enhancing urban areas for bat communities: Water quality influences water availability. The Wildlife Society Annual Conference. (Graduate Travel Award recipient)
- Agpalo EJ*, **VJ Bennett**. 2021. Improving urban habitats for bats: what makes a bat-friendly residential swimming pool? 100th Annual Meeting of the American Society of Mammalogists, virtual. (Annie M. Alexander Honorarium Award recipient)

- McGee, J*, **VJ Bennett**. 2021. The use of swimming pools by bats in a game reserve in South Africa, 100th Annual Meeting of the American Society of Mammalogists, virtual. (Graduate Travel Award recipient)
- Blanché, LA*, **VJ Bennett**. 2021. Do edge effects influence wildlife distributions in a small game reserve in South Africa? 100th Annual Meeting of the American Society of Mammalogists, virtual. (Graduate Travel Award recipient)
- Hall, EM, **VJ Bennett**. 2019. Weather-dependent Home Range Expansion by *Nycticeius humeralis* in an Urban Environment. 48th Annual North American Symposium for Bat Research in Kalamazoo, MI.
- Agpalo, EJ, **VJ Bennett**. 2019. Improving Urban Habitats For Bats: What Makes A Bat-Friendly Residential Swimming Pool? 48th Annual North American Symposium for Bat Research in Kalamazoo, MI.
- Lindsey, CT, AM Hale, **VJ Bennett**, KW Kinzie. 2018. Assessing changes in bat activity in response to an acoustic deterrent – implications for decreasing bat fatalities at wind energy facilities. 12th NWCC Wind Wildlife Research Meeting, St. Paul, MN.
- Hale, AM, **VJ Bennett**, CR Bienz, BC Cooper, BE Huzzen, AM McAlexander. 2018. Could the smooth surfaces of tower monopoles be a contributing factor to bat fatalities at wind turbines? 12th NWCC Wind Wildlife Research Meeting, St. Paul, MN.
- Smith, K, **VJ Bennett**. 2018. Assessing the potential impacts of radio transmitters on bat flight in a controlled environment, 47th Annual North American Symposium for Bat Research in Puerto Vallarta, Mexico.
- Huzzen, BE, **VJ Bennett**, AM Hale. 2018. Does a textured coating alter bat activity at wind turbine towers? 98th Annual Meeting of the American Society of Mammalogists, Kansas State University, Manhattan, Kansas. (Graduate Travel Award recipient)
- Korstian, J, M Chumchal, **V Bennett**, A Hale. 2017. Mercury contamination in bats from the central United States, 13th International Conference on Mercury as a Global Pollutant (ICMGP), Providence.
- Hale, AM, **VJ Bennett**, CR Bienz, RS Conley, BG Cooper, AM McAlexander. 2017. Could the smooth surfaces of tower monopoles be a contributing factor to bat fatalities at wind turbines? Conference on Wind Energy and Wildlife Impacts, Estoril, Portugal.
- Foo, CF, **VJ Bennett**, AM Hale, AJ Schildt, DA Williams. 2017. Wind turbines provide foraging opportunities for bats in the southern Great Plain, U.S., Conference on Wind Energy and Wildlife Impacts, Estoril, Portugal.
- Bennett, VJ**, CT Lindsey, BC Cooper, C Granthon, AM Hale. 2017. Bat behavior in response to ultrasonic signals: implications for reducing mortality at wind turbines, 97th Annual Meeting of the American Society of Mammalogists, University of Idaho, Moscow, Idaho.
- Foo, CF, **VJ Bennett**, AM Hale, DA Williams. 2017. Are tree bats actively foraging at wind turbines in the southern Great Plains? 97th Annual Meeting of the American Society of Mammalogists, University of Idaho, Moscow, Idaho.
- AM Hale, **VJ Bennett**, Lindsey, CT. 2017. Assessing changes in bat activity in response to an acoustic deterrent – implications for decreasing bat fatalities at wind facilities. 24th Annual Conference of the Wildlife Society, Albuquerque, NM.
- Nystrom, G, **VJ Bennett**. 2017. The importance of residential swimming pools as an urban water source for bats. 97th Annual Meeting of the American Society of Mammalogists, University of Idaho, Moscow, Idaho.

- Hale, AM, **VJ Bennett**. 2017. Bat behavior at wind turbines and impact reduction strategies, Ecological Society of America, Portland, Oregon.
- Bennett, VJ**, CT Lindsey, BC Cooper, C Granthon, AM Hale. 2017. Bat behavior in response to ultrasonic signals: implications for reducing mortality at wind turbines, 47th Annual North American Symposium for Bat Research in Knoxville, Tennessee.
- Slattery, MC, **VJ Bennett**, and AM Hale. 2016. Utility-scale wind energy projects: managing public perception and environmental risk, 35th International Geographical Congress, Cape Town, South Africa.
- Foo, C, **VJ Bennett**, DA Williams, and AM Hale. 2016. Are tree bats actively foraging at wind turbines in the southern Great Plains?, 96th Annual Meeting of the American Society of Mammalogists, Minneapolis, MN.
- Bienz, CR, **VJ Bennett** and AM Hale. 2016. Surface texture discrimination by bats: implications for reducing mortality at wind turbines, 96th Annual Meeting of the American Society of Mammalogists, Minneapolis, MN.
- Bienz, CR, **VJ Bennett** and AM Hale. 2015. Surface texture discrimination by bats: implications for reducing mortality at wind turbines, 45th Annual North American Bat Research Symposium in Monterey, CA.
- Bennett VJ**, and AM Hale. 2015. Handbook for the recently deceased: Long-term bat fatality monitoring at a wind facility in Texas, AWEA Wind Project Siting Seminar, Austin, TX.
- Bennett VJ**. 2015. The value of individual-based models (IBM) to study wildlife responses to anthropogenic disturbance, Invited seminar for 75th Midwest Fish and Wildlife Conference. Indianapolis, IN.
- Johnson, ME, D Broman, J Golla, J Young, R Heilbrum, B Johnson, M Mills, **V Bennett**, and T Blankenship, 2015, Food habitat of bobcats in the Dallas Fort Worth Metroplex, International Urban Wildlife Conference, Chicago, IL.
- Bennett VJ**, AM Hale, AJ Schildt and DA Williams. 2014. Evidence that bats utilize wind turbines as a foraging resource, The National Wind Coordinating Collaborative Wind Wildlife Research Meeting X, Bloomfield, CO.
- Bennett VJ**, AM Hale, AJ Schildt, AM McAlexander, BG Cooper and DA Williams. 2014. Exploring potential hypotheses behind bat-wind turbine collisions, The National Wind Coordinating Collaborative Wind Wildlife Research Meeting X, Bloomfield, CO.
- Hale AM and **VJ Bennett**. 2014. Investigating the benefits of fine-tuning curtailment strategies at operational wind facilities, The National Wind Coordinating Collaborative Wind Wildlife Research Meeting X, Bloomfield, CO.
- Korstian J, AJ Schildt, **VJ Bennett**, DA Williams and AM Hale. 2014. A Method for PCR-based Identification of Species from Bat Fecal Samples, 44th Annual Symposium on Bat Research. Albany, NY.
- Hale AM and **VJ Bennett**. 2014. Investigating the Benefits of Fine-tuning Curtailment Strategies at Operational Wind Facilities, 44th Annual Symposium on Bat Research. Albany, NY.
- Bennett VJ**, AM Hale, AJ Schildt, AM McAlexander, BG Cooper and DA Williams. 2014. Exploring Potential Hypotheses Behind Bat-wind Turbine Collisions, 44th Annual meeting for the North American Bat Research Symposium, Albany, NY.
- Hale AM, ES Hatchett, TK Stevens, JA Meyer, TG Rubenstahl, KB Karsten and **VJ Bennett**. 2014. Limited evidence of indirect effects of wind turbines on grassland songbirds. Symposium for Avian Interactions with Energy Infrastructure. The American Ornithologists' Union 132nd Annual

meeting and joint meeting with the Cooper Ornithological Society and the Society of Canadian Ornithologist. Estes Park, CO.

Bennett VJ, AM Hale, AJ Schildt and DA Williams. 2014. Evidence that bats utilize wind turbines as a foraging resource. The American Society of Mammalogists 94th Annual Meeting. Oklahoma City, OK.

Mills MA, R Denkhaus, MC Slattery, **VJ Bennett** and JK Young. 2014. Monitoring urban bobcats (*Lynx rufus*) in Fort Worth/Dallas area, Texas. The American Society of Mammalogists 94th Annual Meeting. Oklahoma City, OK.

Slattery M, AM Hale and **VJ Bennett**. 2014. Environmental, social, and economic impacts of utility-scale wind power development. The World Future Energy Summit (WFES). Abu Dhabi, UAE.

McAlexander AM, AM Hale, **VJ Bennett**, and BG Cooper. 2013. A test of a novel attraction hypothesis – why are bats attracted to wind turbines? The Wildlife Society Annual Conference. Milwaukee, WI.

Bennett VJ, and AM Hale. 2013. Site-specific wind turbine curtailment has its advantages. The Wildlife Society Annual Conference. Milwaukee, WI.

Hale AM, and **VJ Bennett**. 2013. What can we learn from long-term post-construction fatality monitoring at a wind facility? The Wildlife Society Annual Conference. Milwaukee, WI.

Hale AM, AM McAlexander, **VJ Bennett**, and BG Cooper. 2013. A test of a novel attraction hypothesis: why are bats attracted to wind turbines? 16th International Bat Research Conference & 43rd North American Symposium on Bat Research. San Jose, Costa Rica.

Bennett VJ, and AM Hale. 2013. Site-specific wind turbine curtailment has its advantages. 16th International Bat Research Conference & 43rd North American Symposium on Bat Research. San Jose, Costa Rica.

Hale AM, JM Korstian, **VJ Bennett**, and DA Williams. 2012. Can genetics and stable isotopes be used to gain geographical insights into the seasonal movement patterns and population structure of eastern red bats (*Lasiurus borealis*)? National Wind Coordinating Collaborative Wind Wildlife Research Meeting IX. Denver, CO.

Bennett VJ, and AM Hale. 2012. Can resource and activity hotspot mapping predict bat fatalities at wind turbines? National Wind Coordinating Collaborative Wind Wildlife Research Meeting IX. Denver, CO.

Bennett VJ, C Sutter, AM Hale, A Costello, and K Heist. 2012. Can bat fatality be predicted from bat acoustic activity within the rotor-swept zone? National Wind Coordinating Collaborative Wind Wildlife Research Meeting IX. Denver, CO.

Bennett VJ, C Sutter, AM Hale, A Costello, and K Heist. 2012. Can species-specific acoustic activity be relied upon to predict bat fatality at wind turbines? 42nd North American Symposium on Bat Research. San Juan, Puerto Rico.

Korstian JM, AM Hale, **VJ Bennett**, and DA Williams. 2012. A genetic method to determine the sex of *Lasiurus* bat carcasses found at wind farms. 42nd North American Symposium on Bat Research. San Juan, Puerto Rico.

Bennett VJ, and AM Hale. 2012. The use of resource and activity hotspot mapping to predict bat-wind turbine interactions. The Wildlife Society Annual Meeting. Portland, OR.

Bennett VJ, and AM Hale. 2012. The use of resource and activity hotspot mapping to predict bat-wind turbine interactions. American Society of Mammalogists Annual Meeting. Reno, NV.

- Hale AM, KB Karsten, JA Meyer, ES Hatchett, TG Rubenstahl, TK Stevens, and **VJ Bennett**. 2012. Limited indirect effects of wind turbines on resident birds. AWEA WindPower 2012 Conference & Exhibition. Atlanta, GA.
- Bennett VJ**, and Hale AM. 2012. Exploring ways to make wind turbines more bat friendly, both physically and operationally. AWEA WindPower 2012 Conference & Exhibition. Atlanta, GA.
- Zollner PA, I Rodriguez Prieto, **VJ Bennett**, E Fernandez-Juricic, and M Mycroft. 2012. Using an individual based spatially explicit simulation to inform the recreational planning of Fort Harrison State Park. 2012 Joint Meeting of the Indiana American Fisheries Society and Indiana Chapter of the Wildlife Society. Indianapolis, Indiana.
- Hale AM, KB Karsten, and **VJ Bennett**. 2012. Recommendations for fatality monitoring studies at utility-scale wind farms. Association of American Geographers Annual Meeting. New York, NY.
- Bennett VJ**, AM Hale, and KB Karsten. 2012. Toward an understanding of the effects of wind turbines on bats. Association of American Geographers Annual Meeting. New York, NY.
- Korstian J, DA Williams, AM Hale, and **VJ Bennett**. 2012. Population genetics of migrating eastern red bats (*Lasiurus borealis*). Association of American Geographers Annual Meeting. New York, NY.
- Stevens TK, AM Hale, KB Karsten, and **VJ Bennett**. 2012. The effects of wind energy on over-wintering grassland birds. Association of American Geographers Annual Meeting. New York, NY.
- Zollner PA, I Rodriguez Prieto, **VJ Bennett**, E Fernandez-Juricic, and M Mycroft. 2011. Using an individual based spatially explicit simulation to inform the recreational planning of Fort Harrison State Park. Sustainability in Dynamic Landscapes, 2011 US-IALE Symposium. Portland, OR.
- Campbell P, M Gryzbek, **VJ Bennett**, and VS Quinn. 2010. Pedestrian foot traffic disturbs ovipositing Karner blue butterflies. 71st Midwest Fish and Wildlife Conference. Minneapolis, MN.
- Bennett VJ**. 2010. Movement and behavior of the Taylor's Checkerspot butterfly: Implications for management. Taylor's Checkerspot Working Group Meeting, Lacey, WA.
- Gryzbek M, P Campbell, **VJ Bennett**, and VS Quinn. 2010. Pedestrian foot traffic disturbs ovipositing Karner blue butterflies. Butler University Undergraduate Research Conference. Indianapolis, IN.
- AA Zurcher, and **VJ Bennett**. 2009. Cars can disturb commuting bats, but to what degree is this influenced by the landscape? 39th Annual Symposium on Bat Research, The North American Society for Bat Research. Portland, OR.
- AA Zurcher, and **VJ Bennett**. 2009. Cars can disturb commuting bats, but to what degree is this influenced by the landscape? Indiana Academy of Science, 125th Annual Conference at Indiana University. Kokomo, IN.
- Campbell P, M Gryzbek, **VJ Bennett**, and VS Quinn. 2009. Pedestrian foot traffic disturbs ovipositing Karner blue butterflies. Indiana Academy of Science, 125th Annual Conference at Indiana University. Kokomo, IN.
- Gryzbek M, P Campbell, **VJ Bennett**, and VS Quinn. 2009. Pedestrian traffic as a disturbance agent in the little wood satyr butterfly. Indiana Academy of Science, 125th Annual Conference at Indiana University. Kokomo, IN.
- Zollner PA, SL Lima, and **VJ Bennett**. 2009. Advances in the behavioral ecology of ecological landscapes. Landscape Ecology in Latin America: Challenges and Perspectives. Latin American IALE conference, Brazil.
- Bennett VJ**, AA Zurcher, DW Sparks, and PA Zollner. 2009. Simulating the impacts of roads on the foraging opportunities of the Indiana Bat (*Myotis sodalists*). American Society of Mammalogists 89th Annual Meeting, University of Alaska. Fairbanks, AK.

Bennett VJ, PA Zollner, E Fernandez-Juricic. 2008. Understanding wildlife responses to human disturbance through simulation modeling: A conservation tool. US-IALE – 23rd Annual Landscape Ecology Symposium. Madison, WI.

Bennett VJ, PA Zollner, E Fernandez-Juricic. 2007. Using spatially explicit simulations to investigate the impacts of human disturbance on wildlife. American Society of Mammalogists 87th Annual Meeting, University of New Mexico. Albuquerque, NM.

Bennett VJ, and B Shorrocks. 2001. Modelling the herbivore population dynamics in the Serengeti-Mara ecosystem. British Ecological Society Annual General Meeting, University of Birmingham. Birmingham, UK.

Bennett VJ, and B Shorrocks. 2001. Computer modeling the Serengeti-Mara ecosystem. British Ecological Society Annual General Meeting, University of Warwick. Warwick, UK.

e. Invited Seminars

Bennett V.J., 2024. Bats 101: All you need to know about bats. Grapevine Parks and Recreation Department ECO Talks Lecture Series.

Bennett V.J., 2023-2024. Bats 101: All you need to know about bats. Silver Frogs Extended Education Program.

Bennett V.J., 2022. How to start prepping for graduate school and what to expect. Plano Senior High School.

Bennett V.J., 2021. Disturbing Wildlife. Botanic Research Institute of Texas Ten Talk Series (virtual).

Bennett V.J., 2021. All you need to know about bats. TCU Science Café (virtual).

Bennett V.J., 2013-2020. Bats 101: Raising awareness for local bats for AP Biology and Environmental Science Classes.

- Paschal High School, Fort Worth, TX. (2013-2020)
- Grapevine High School, Fort Worth, TX. (2019)
- Colleyville Heritage High School, Fort Worth, TX. (2018)
- Texas Wesleyan University, Fort Worth, TX. (2017)
- WEBLOS Boy Scout Troop, Benbrook, TX. (2016)
- Teacher Tuesday Series: Pollinators - Spread the Word at Botanical Research Institute of Texas, Fort Worth, TX. (2015)
- Texas Academy of Biomedical Sciences, Fort Worth, TX. (2015)
- Teachers Quality meeting for the Andrews Institute for Mathematics and Education, Fort Worth. (2014).
- Environmental Boot Camp, Brit, Fort Worth, TX. (2014)

Bennett V.J. Monitoring bats in Fort Worth through outreach.

- Keller Garden Club. Keller TX. (2018)
- Botanical Research Institute of Texas – Brown Bag Presentations Session. (2018)
- River Legacy Living Science Center, Arlington, TX. (2014,2016)

Bennett V.J. Bats and the Texas wind farm massacre.

- Angelo State University, TX. (2018)
- School of Geology, Energy and the Environment Seminar Series, TCU. (2017)

Hale, A., **V.J. Bennett**, 2017. DE-EE0007033 Texturizing Wind Turbine Towers to Reduce Bat Mortality, Wind Energy Technologies Office Peer Review, U.S. Department of Energy: Energy Efficiency and Renewable Energy, Arlington, VA.

Bennett V.J. Disturbing Wildlife, part I and II

- Seminar Series, Murray State University, KY. (2017)
- School of Geology, Energy and the Environment, Texas Christian University, Fort Worth, TX. (2013)

Hale AM and **VJ Bennett**. 2015. Reducing bat mortality at wind turbines: Curtailment and testing hypotheses of attraction. Dallas Zoo, Dallas, TX.

Bennett VJ and AM Hale. 2014. Impacts of wind energy on birds and bats. State Department, Fort Worth TX.

Hale AM, **VJ Bennett**, BL Johnson, and K Wyrick. 2014. TCU's Women of the Wind: A Panel Discussion. Co-sponsored by the TCU Women's Studies Program and the American Association of University Women (AAUW), Fort Worth, TX.

Hale AM, and **VJ Bennett**. 2012-2013. Impacts of wind energy on birds and bats: research priorities and new initiatives. NextEra Energy Resources & Wolf Ridge Wind, LLC, Muenster, TX.

Bennett VJ. 2011. A crash course in the wildlife management of bats. Department of Biology, University of Maryland, College Park, MD.

Bennett VJ. 2010. Disturbing bats: the role of anthropogenic disturbance in bat ecology. Department of Life Sciences, Indiana State University, Terre Haute, IN.

Bennett VJ. 2007. Using spatially explicit simulations to investigate the impacts of human disturbance on wildlife. Department of Forestry and Natural Resources, Purdue University, West Lafayette, IN.

Bennett VJ. 2002. Modelling the herbivore population dynamics in the Serengeti-Mara ecosystem. Department of Biology, University of Leeds, Leeds, UK.

Bennett VJ. 2001. Computer modelling the Serengeti-Mara ecosystem. Department of Biology, University of Leeds, Leeds, UK.

f. Training, Courses, and Workshops

Mandatory Reporting (in person)	2018,2023
White paper writing workshop, TCU guest trainer	2023
Acoustic ID of Western Bats from Vesper Bat Detection Services	2023
Using Kaleidoscope Software for identification of bat species from Wildlife Acoustics, Austin, TX	2022
Optimize your bat call analysis and reporting methods using Anabat Insight from Titley Scientific, Austin TX	2022
TCU Online: Preparing to Teach Online (15-week course)	2021
Springer Nature: Book Publishing Mini Course	2021
Wildlife Acoustics: Acoustic Indices Series	2021
Interrupting Microaggressions	2021
Making Difficult Conversations Easy	2021
Unconscious Bias: Exploring blind spots for understanding	2020
TCU Online: Creating course videos on Panopto	2020

TCU Online: Hybrid Teaching Training	2020
R Workshop for Biologists: An introduction to R, a statistical programming language	2018
Noldus 3D Software Training	2018
Active Bystander	2018, 2019
Management for Candidate and Listed Bat Species, Pre-meeting Workshop, December 2, NWCC Wind Wildlife Research Meeting X, Broomfield, CO.	2014
Sonobat Acoustic Monitoring Workshop, Bat Conservation and Management, September 28-October 1, Jumonville, PA.	2011

EDITORSHIP, CONSULTANTSHIPS, AND APPLIED PROFESSIONAL ACTIVITIES

Review Editor for Frontiers in Mammal Science.	2022-present
Topic Editor for <i>Diversity</i> , MDPI.	2021-present
American Society for Mammologists Honoraria and Travel Awards Committee member (www.mammalogy.org/committees/honoraria-and-travel-awards#tab1).	2018-present
Research Associate for the Botanical Research Institute of Texas (BRIT).	2014-present
Section Editor of the Behavioral Landscape Ecology section of <i>Current Landscape Ecology Reports</i> , Springer.	2018-2019
Consultant to Tierra Verde Golf Club regarding their Audubon International Biodiversity Certification Application.	2014-2016
Oral and Poster Presentation Abstract Reviewer for the National Wind Coordinating Collaborative Wind Wildlife Research Meeting X, Bloomfield, CO.	2014
Consultant to the field-based testing of a bat sound deterrent for General Electric.	2014
Invited Reviewer - U.S. Department of the Interior and the U.S. Geological Survey, Report series 2014: Draft methodology to assess the national and regional impact of wind energy development on birds and bats.	2014
Consultant on the “Bat Assessment Guidance for Wind Energy Facilities in Nebraska” for the Nebraska Wind Energy and Wildlife Research Unit	2013
Bioblitz: <ul style="list-style-type: none"> • Parr Park BatBlitz for the Grapevine Parks and Recreation Department • Tandy Hills Natural Area in Fort Worth, Texas • Lewisville Lake Environmental Learning Area 	2019-2020 2016 2017,2018
Manuscript Reviewer (Reviewed = 63) American Midland Naturalist (2), Animal Conservation (2), Biodiversity and Conservation (2), Biological Conservation (11), Diversity (2), Ecological	2007-present

<p>Applications (3), Ecological Complexity (1), Ecological Modeling (1), Ecology and Evolution (2); Ecosphere (1); Environmental Conservation (1), European Journal of Wildlife Research (1), Frontiers in Ecology and the Environment (2), Ibis (2), Journal of Applied Ecology (7), Journal of Bat Research and Conservation (1), Journal of Environmental Management (1), Journal of Mammalogy (8), Journal of Ornithology (2), Journal of Unmanned Vehicle Systems (1), Journal of Urban Ecology (1), Journal of Wildlife Management (3), Land Degradation and Development (1), PLOS ONE (3), Proceedings of the Royal Society of London B (1), Proceedings of the Indiana Academy of Science (1).</p> <p>Grant Reviewer: National Geographic Society (1)</p>	2017
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ACADEMIC ADVISING ACTIVITIES

Honors thesis advisor (n=4)	2014-present
Honors thesis committee member (n=2)	2015-present
Advisor to Science and Engineering undergraduate research grant recipient (n=5)	2014-present
Advisor to the TCU chapter of the Wildlife Society	2014-2018

COMMUNITY SERVICE

Eagle Scout Bat House Building Project and Bat Box Blitz	2015-present
Active member of the TCU Rhino Initiative (www.rhino.tcu.edu/)	2014-present
TCU Bat Monitoring Outreach Program (March to November) (cse.tcu.edu/environmental-sciences/research/bat-monitoring-program.php)	2013-present
Field Methods to Survey Bat Activity Workshop for K-12 teachers. Thomsen Nature Preserve, Forestburg, Texas.	Summer 2012
The cost of going green – impacts of wind energy on birds and bats. Andrews Institute of Mathematics & Science Education Teacher Quality Enhancement Workshop (Environmental Systems Emphasizing Sustainable Education).	Summer 2011

MEMBERSHIPS AND SERVICE TO PROFESSIONAL ORGANIZATIONS

British Ecological Society UK
 Institute of Ecology and Environment UK
 Butterfly Conservation UK
 North America Butterfly Association
 Western working bat group
 Lepidopterist Society
 Bat Conservation International
The Wildlife Society (Member since 2011)

Student oral and poster presentation reviewer for the 20th Wildlife Society Annual Conference, Milwaukee, WI, Oct 2013.

American Society for Mammalogists (member since 2007)

Student oral and poster presentation reviewer, and took part in meal with a mammalogist, for the American Society of Mammalogists 98th Annual Meeting. Manhattan, KS. June 2018.

Student oral and poster presentation reviewer, and took part in meal with a mammalogist, for the American Society of Mammalogists 97th Annual Meeting. Moscow, ID. June 2017.

Student oral and poster presentation reviewer, and took part in meal with a mammalogist, for the American Society of Mammalogists 96th Annual Meeting. Minneapolis, MN. June 2016.

Student oral and poster presentation reviewer for the American Society of Mammalogists 94th Annual Meeting. Oklahoma City, OK. June 2014.

National Wind Coordinating Collaborative (Attendee from 2012 to 2014)

Oral and poster presentation abstract reviewer for the National Wind Coordinating Collaborative Wind Wildlife Research Meeting X, Bloomfield, CO. 1-5 Dec 2014

North American Bat Research Symposium (Member since 2009)

Student Oral Presentation Reviewer for Student Oral and Poster Presentation Reviewer for the 47th Annual North American Symposium for Bat Research, Knoxville, TN. Oct 2017.

Student Oral Presentation Reviewer for Student Oral and Poster Presentation Reviewer for the 46th Annual North American Symposium for Bat Research, San Antonio, TX. Oct 2016.

Student Oral Presentation Reviewer for Student Oral and Poster Presentation Reviewer for the 45th Annual North American Symposium for Bat Research, Monterey Bay, CA. Oct 2015.

AWARDS. HONORS, AND RECOGNITIONS

2022 TCU Graduate Studies Outstanding Faculty Mentor Award: **Received**

2018 Wassenich Award for Mentoring in the TCU Community: **Nominated**

Updated: 16 Jan 2024

GEHENDRA KHAREL

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g.kharel@tcu.edu • 817.257.5318 • [weblink](#)

Curriculum Vitae

Passionate multi-disciplinary professional dedicated to research and teaching in environmental sciences and hydrology, streamlining student success through motivating, educating, and inspiring full engagement in the rapidly globalizing 21st-century challenges.

Research & Teaching Interests: Hydrology • Hydrological Modeling • Geospatial Technologies • Environmental Assessment • Environmental Policy & Planning • Coupled Nature-Human Systems

Analytical: GIS & Remote Sensing (ArcGIS, ERDAS IMAGINE, QGIS) • Hydrological Modeling (SWAT, SWMM) • Statistics (SPSS, SAS) • System Modeling (STELLA, VenSim) • Integrated Modeling (ENVISION) • Stakeholder Analysis (SWOT-AHP/ANP)

Computing/Programming: Python • R • SQL • MS Office Suite

Education and Credentials

Ph.D., Earth System Science and Policy, 2015 University of North Dakota, Grand Forks, ND

Dissertation: *The impacts of climate, land use, economics, and conservation policies on the hydrology of the Devils Lake basin*

Supervisor: Dr. Andrei Kirilenko

Masters, City and Regional Planning, 2010 University of Texas, Arlington, TX

Specialization: *Environmental Policy, Planning & Management*

Supervisor: Dr. Ardeshir Anjomani

Bachelors, Environmental Studies, 2007 University of Nebraska, Omaha, NE

Specialization: *Geography & Planning*

Professional Experience

Assistant Professor: Environmental & Sustainability Sciences, Texas Christian University, Fort Worth, TX, 2019–Current

Academic advisor: Environmental & Sustainability Sciences, Texas Christian University, Fort Worth, TX, 2020–Current

Postdoctoral Researcher: Natural Resources Management, Oklahoma State University, Stillwater, OK, 2016–2019

Graduate Research Assistant: Earth System Science & Policy, University of North Dakota, Grand Forks, ND, 2011–2015

Graduate Research Assistant: City and Regional Planning, University of Texas, Arlington, TX, 2009–2010

Teaching Experience

Instruction

- ENSC 10143 Contemporary Environmental Issues, Spring 2022 @ TCU
- ENSC 30493 The Water Planet, every Fall semester since 2020 @ TCU
- ENSC 40503 Environmental Methods & Statistics, every spring since 2023 @ TCU
- ENSC 50493 Physical Hydrology, every Fall semester since 2019 @ TCU

- ENSC 50593 Environmental Modeling, every Spring semester since 2020 @ TCU
- NREM 3083 Geospatial Technologies for Natural Resources, Fall 2017 (@ OSU)
- NREM 5443/4443- Watershed Hydrology and Water Quality (Lab), Fall 2016 and 2017 (@ OSU)

Guest Lectures

9. *NREM 3083- Geospatial Technologies for Natural Resources*: "GIS Application and Career." Invited by Dr. Bryan Murray, Oklahoma State University, September 05, 2018.
8. *NREM 4473- Global Issues of Water and Ecosystem Management*: "Managing Water Resources in the Great Plains: A Case of Devils Lake, North Dakota." Invited by Dr. Chris Zou, Oklahoma State University, April 13, 2016.
7. *ESSP 502- Biogeochemical Cycles*: "Hydrological Modeling and Regional Climate Change." Invited by Dr. Andrei Kirilenko, University of North Dakota, 2015.
6. *ESSP 502- Biogeochemical Cycles (lab)*: Carbon Cycle, Phosphorus Cycle, and Rock Cycle using STELLA Tool with Reference to IPCC Report on Climate Mitigation, Adaptation, and Vulnerability. University of North Dakota, 2015.
5. *ESSP 570- Communicating Environmental Information*: "Let's Talk or Communicate?" Invited by Dr. Rebecca Romsdahl, University of North Dakota, Spring 2015.
4. *ESSP160- Sustainability & Society*: "Sustainability in Nepal." Invited by Dr. Rebecca Romsdahl, University of North Dakota, Spring 2015.
3. *ESSP 501- Environment and Society*: "Addressing Long-term Flood Risks under Changing Climate: A Green Paradiplomacy Perspective." Invited by Dr. Rebecca Romsdahl, University of North Dakota, Fall 2014.
2. *ESSP 502- Biogeochemical Cycles*: "Endorheic Lakes under Changing Climate: A Case of Devils Lake, North Dakota." Invited by Dr. Andrei Kirilenko, University of North Dakota, Spring 2014.
1. *NRCS 3344- Land Use Planning*: "The Impacts of Climate and Land Use Change on Environmental Resources." Invited by Mr. Erick Castle, University of Minnesota - Crookston, Spring 2012.

Student Mentoring

Ph.D. Dissertation Research

2. Yu Zhong • Ph.D. • Land use impact on soil and water ecosystem sustainability in the grassland and forest ecotone of the Great Plains of the USA • 2021 – **Role:** committee member
1. Solmaz Rasoulzadeh Gharibdousti • Ph.D. • Evaluating the least cost selection of agricultural management practices in the Five Milk Creek area of Fort Cobb Watershed • 2018 – **Role:** committee member

MS Thesis Research

10. Peyton E. Harper • MS • Does Surface Area Availability and Associated Weather Conditions Affect Water Resource Use by Bats? • 2024 (expected) – **Role:** Committee member
9. Camden Butterworth • MS • Conservation Education Managers' Perceptions of Short-and Long-Term Learning Strategies • 2024 (expected) – **Role:** Committee member
8. Colin Dixon • MS • An Evaluation of Water and Sediment Quality in a Mine-Impacted Watershed: Case Study of Elm Creek, Picher, Oklahoma • 2024 (expected) – **Role:** Committee member
7. Daniel Ayejoto • MS • Modeling the Impact of Climate Change on the Hydrology of Eagle Mountain Lake, Texas • 2024 (expected) – **Role:** advisor
6. I'Yanna Scott • MS • Restoring Water Quality to Improve Urban Parks and Enhance Bat Communities • 2023 – **Role:** Committee member
5. Manuel de Oyarzabal Barba • MS • Modeling Suitability of Tree Connectivity for Bats in Urban Forests • 2023 – **Role:** Committee member

4. Benite Ishimwe •MS • Assessing the Spatiotemporal Change of Surface Water Quality Parameters in Lake Arlington: Integrated Satellite-UAV Remote Sensing and In-situ Data • 2023 – **Role:** Committee member
3. Binita Ghimire •MS • Development of Climate Change-Informed Intensity-Duration-Frequency (IDF) Curve for Dallas-Fort Worth (DFW) Metroplex, Texas • 2023 – **Role:** advisor
2. Summer Barrett •MS • Long-term Consequences of Short-term Thinking: A Study on the EPA Remediation of Elm Creek in Picher, Oklahoma • 2022 – **Role:** committee member
1. Holly Gould •MS • Modeling the Impacts of Green Infrastructure on E. coli Reductions in the Village Creek Watershed, Texas • 2021 – **Role:** advisor

Online Course Mentoring at Coursera

1. *Geospatial and Environmental Analysis*: provide academic support to the course learners in the topics related to geospatial analysis tools and project
-

Research Accomplishments

Proposal Development

19. **NSF DISES, 2023:** Cool Spots – The distribution, vulnerability, and future potential of green and blue heat refuges [as Co-PI with Julian et al.] (*pending*).
18. **TCU Sponsored Programs, 2023:** Evaluating the effectiveness of urban green infrastructure in mitigating flood risk in the Dallas-Fort Worth metroplex [as PI] (*funded - \$6,000*)
17. **DOE, 2023:** Establish Southcentral Onsite Energy Technical Assistance Partnership (SOE TAP) at Oklahoma State University [as Co-PI with Krushna Patil et al.] (*not funded*)
16. **TCU CSE Dean Opportunity Fund, 2023:** Modeling trees as urban green infrastructure to mitigate heat stress and enhance environmental justice outcomes in low-income neighborhoods [as PI with Brendan Lavy] (*not funded*)
15. **Texas A&M Forest Service, 2023:** Using park trees to mitigate heat stress and address environmental justice [as Co-PI with Brendan Lavy and Gina Alexander] (*not funded*)
14. **Tree Fund, 2022.** Modeling trees as urban green infrastructure to mitigate heat stress and enhance environmental justice outcomes in low-income neighborhoods [as Co-PI with Brendan Lavy and Gina Alexander] (*not funded*)
13. **TCU Sponsored Programs, 2021:** Modeling the impacts of urbanization on water resources in North-Central Texas [as PI] (*funded - \$6,000*)
12. **National Fish and Wildlife Foundation, 2021:** Restoring water quality to improve urban parks and enhance bat communities [as PI with Victoria Bennett] (*not funded*)
11. **DOE, 2020:** Switchgrass biomass production to restore ecosystem services in woody encroached and degraded rangeland in the southcentral Great Plains [as Co-PI with Chris Zou et al.] (*not funded*)
10. **USDA Foundational Program, 2019:** Sustainable management of the forest-grassland transition- At-risk agroecosystems [as Co-PI with Chris Zou et al.] (*not funded*)
9. **USDA NIFA, 2018:** Valuing environmental benefits of Lesser Prairie Chicken conservation in the southern Great Plains [as Co-PI with Omkar Joshi et al.] (*not funded*)
8. **USDA AFRI Foundational Program 2018:** Sustainable management of the forest-grassland transition- At-risk agroecosystems [as Co-PI with Chris Zou et al.] (*not-funded*)
7. **South Central Sun Grant, 2017:** Sustainable development of biofuel, bioproduct, and bioenergy in Oklahoma: A social acceptability analysis [as Co-PI with Omkar Joshi and Chris Zou] (*not funded*)
6. **USGS 104G, 2017:** Assess the effects of land-use changes and hydrometeorological extremes on water quantity, quality, stream ecosystems and associated socio-economic impacts in Midwest and southern watersheds [as Co-PI with Omkar Joshi] (*not funded*)

5. **USGS 104B, 2017:** Assessing the impacts of climate variability, land use and management practices on surface flow and groundwater recharge in the Cimarron Terrace and Alluvial Aquifer [as Co-PI with Chris Zou] (*not funded*)
4. **JSFP, 2017:** Understanding social factors affecting co-management of wildland fire risk: A case study-based approach [as a collaborator with Omkar Joshi (PI), John Weir (Co-PI), Neelam Poudyal (Co-PI)] (*not funded*)
3. **USDA AFRI, 2016:** Economics of alternative land management practices in Cross-timbers region [as Co-PI with Omkar Joshi (PI), Rod Will (Co-PI), Chris Zou (Co-PI), Dwayne Elmore (Co-PI)] (*not funded*)
2. **USGS 104G, 2016:** Assess the effects of climate change and hydro-meteorological extremes on water quantity, quality, stream ecosystems and associated socio-economic impacts in southern-forested watersheds [as Co-PI with Chris Zou (PI), Rod Will (Co-PI), Jim Long (Co-PI), Lei Qiao (Co-PI)] (*not funded*)
1. **UND Summer Doctoral Fellowship 2014:** The impacts of climate, land use, economics and conservation policies on the hydrology of the Devils Lake Basin [Gehendra Kharel (PI), \$5,000] (*funded*)

Publications

Peer-Reviewed

* denotes graduate students supervised/mentored

21. Ghimire et al.*, 2023. Evaluating non-stationarity in precipitation intensity-duration-frequency curves for the Dallas-Fort Worth Metroplex, Texas, USA. *Hydrology*. <https://doi.org/10.3390/hydrology10120229>
20. Kharel et al., 2022. Potential hydrological impacts of planting switchgrass on marginal rangelands in South Central Great Plains. *Water*. <https://doi.org/10.3390/w14193087>
19. Acharya et al., 2021. Unmanned aerial vehicles in hydrology and water management: Applications, challenges, and perspectives. *Water Resources Research*. <https://doi.org/10.1029/2021WR029925>
18. Acharya, B.S., and Kharel, G., 2020. Acid Mine Drainage from Coal Mining in the United States—An Overview. *Journal of Hydrology*. <https://doi.org/10.1016/j.jhydrol.2020.125061>
17. Joshi, O., Chapagain, B., Kharel, G., Poudyal, N., Murray, B., Mehmood, S. 2020. Benefits and challenges of online instruction in agriculture and natural resource education. *Interactive Learning Environments*. <https://doi.org/10.1080/10494820.2020.1725896>
16. Hao, Y., Liu, Q., Li, C., Kharel, G., An, L., Stebler, E., Zhong, Y., Zou, C. 2019. Interactive effect of meteorological drought and vegetation types on root-zone soil moisture and runoff in rangeland watersheds. *Water*. Special Issue- Hydrology. <https://doi.org/10.3390/w11112357>
15. Joshi, O., Will, R., Zou, C., **Kharel, G.** 2019. Sustaining Cross-timbers Forest Resources: Current Knowledge and Future Research Needs. *Sustainability*. <https://doi.org/10.3390/su11174703>
14. Gharibdousti, S.*, **Kharel, G.**, Stoecker, A., 2019. Modeling the impacts of agricultural best management practices on runoff, sediment, and crop yield in an agriculture-pasture intensive watershed. *PeerJ*. DOI: [10.7717/peerj.7093](https://doi.org/10.7717/peerj.7093)
13. Gulbin, S., Kirilenko, A., **Kharel, G.**, Zhang, X. 2019. Wetland loss impact on long term flood risks in a closed watershed. *Environmental Science & Policy*. <https://doi.org/10.1016/j.envsci.2018.12.032>
12. Gharibdousti, S.*, **Kharel, G.**, Miller, R., Stoecker, A., 2019. A projected climate could increase water yield and cotton yield but decrease winter wheat and sorghum yield in an agricultural watershed in Oklahoma. *Water*. DOI: 10.3390/w11010105
11. Acharya, B., **Kharel, G.**, Zou, C., Wilcox, B., Halihan, T. 2018. Woody plant encroachment impacts on groundwater recharge: A review. *Water*. DOI:10.3390/w10101466
10. **Kharel, G.**, Joshi, O., Miller, R., Zou, C., 2018. Perceptions of government and research expert groups and their implications for watershed management in Oklahoma, USA. *Environmental Management Journal*. DOI: 10.1007/s00267-018-1108-4
9. **Kharel, G.**, Romsdahl, R., Kirilenko, A., 2018. Managing the wicked problem of Devils Lake flooding along the USA-Canada border. *International Journal of Water Resources Development*. DOI: 10.1080/07900627.2018.1523050
8. **Kharel, G.**, Kirilenko, A., 2018. Comparing CMIP-3 and CMIP-5 climate projections on flooding estimation of Devils Lake of North Dakota, USA. *PeerJ*. DOI: [10.7717/peerj.4711](https://doi.org/10.7717/peerj.4711)

7. Joshi, O., Fontanier, C., Harris, D., Poudyal, N., **Kharel, G.** 2018. Determinants of public golf course visitation and willingness to pay for landscape enhancements: A case study from Oklahoma, USA. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2018.09.125>
6. Joshi, O., Parajuli, R., **Kharel, G.**, Poudyal, N., Taylor, E., 2018. Stakeholder opinions on scientific forest management policy implementation in Nepal. *PLoS ONE* 13(9): e0203106. DOI: 10.1371/journal.pone.0203106
5. Li, C., Zhang, Y, **Kharel, G.**, Zou, C. 2018. Climate variability and changing landscape pattern impact water budget and nutrient loads in a peri-urban watershed – a coupled analysis using process-based hydrological model and landscape indices. *Environmental Management Journal*. DOI: <https://doi.org/10.1007/s00267-018-1019-4>
4. Khanal, S., Lal, R., **Kharel, G.**, Fulton, J. 2018. Identification and prioritization of critical soil and water conservation areas in Muskingum River Basin in Ohio. *Journal of Soil and Water Conservation*. DOI: 10.2489/jswc.73.2.213
3. **Kharel, G.**, Zheng, H., Kirilenko, A., 2016. Can land-use change mitigate long-term flood risks in the Prairie Pothole Region? The case of Devils Lake, North Dakota, USA. *Regional Environmental Change*. DOI: 10.1007/s10113-016-0970-y
2. **Kharel, G.**, Kirilenko, A., 2015. Considering climate change in the estimation of long-term flood risks of Devils Lake in North Dakota. *Journal of the American Water Resources Association*. DOI: 10.1111/1752-1688.12300
1. Lemons, R., Hewitt, A., **Kharel, G.**, New, C., Kirilenko, A., Zhang, Xi. 2012. Evaluation of satellite-derived agro-climate variables in the Northern Great Plains of the United States. *Geocarto International*. DOI: 10.1080/10106049.2011.653408

Proceedings and Reports

3. **Kharel, G.**, Miller, R., Zou, C., Koch, J., Boyer, T., McCarthy, H., Dilekli, N., Huhnke, R. 2018. An integrated modeling approach coupling stakeholders' values and policy trade-offs in Oklahoma, USA. Proceedings of the 9th International Environmental Modelling and Software Society (iEMSs), June 24-28, Fort Collins, Colorado, USA.
2. **Kharel, G.**, Kirilenko, A., 2014. Estimating long-term flood risks under changing climate: A case of Devils Lake, North Dakota. In: Ames, D.P., Quinn, N.W.T., Rizzoli, AE (Eds.), Proceedings of the 7th International Environmental Modelling and Software Society (iEMSs), June 15-19, San Diego, California, USA. ISBN: 978-88-9035-744-2.
1. Kockelman, K., Anjomani, A., Paul, B., Nostikasari, D., Tayyebi, A., **Kharel, G.** 2010. Design and Application of Accessible Land-Use Modeling Tools for Texas Regions, Center for Transportation Research, Bureau of Engineering Research, the University of Texas at Austin.

Conference Presentations

19. Moreno, I., and **Kharel, G.** Are our creeks safe? Investigating the presence of bacteria in Village Creek, Everman, Texas. *TCU CSE Student Research Symposium, 2023*
18. **Kharel, G.**, Ghimire, B., Cheng, L., and Gebremichael, E. Would climate change increase the risk of flood in Dallas-Fort Worth Metroplex, USA? *AGU Fall Meeting, 2022*.
17. Washington, M., Trion, A., and **Kharel, G.** *E. Coli* bacteria in our local streams: A case of the Village Creek in Everman, Texas. *TCU CSE Student Research Symposium, 2022*
16. **Kharel, G.**, et al. Modeling of *E. coli* and conservation scenarios in the peri-urban Village Creek Watershed, Texas, USA. *AGU Fall Meeting, 2021*
15. **Kharel, G.** Miller, R., Zou, C., Koch, J., Boyer, T., McCarthy, H., Dilekli, N., Huhnke, R. An integrated modeling approach coupling stakeholders' values and policy trade-offs in Oklahoma, USA. *9th International Congress on Environmental Modelling and Software*, Fort Collins, Colorado, June 24-28, 2018.
14. Rasoulzadeh, S., Stoecker, A., **Kharel, G.** Evaluating the least cost selection and placement of crops and agricultural management practices in the Five-Mile Creek area of Fort Cobb Watershed. Oklahoma Clean Lakes and Watersheds Association. 27th Annual Conference, Stillwater, OK, April 4-5, 2018.

13. Rasoulzadeh, S., Stoecker, A., **Kharel, G.** Evaluating the effectiveness of agricultural conservation practices in the Upper Washita River basin, OK. Oklahoma Clean Lakes and Watersheds Association. 27th Annual Conference, Stillwater, OK, April 4-5, 2018.
12. Rasoulzadeh, S., Stoecker, A., **Kharel, G.**, Storm, D. Evaluating the effectiveness of agricultural management practices under climate change for water quality improvement in a rural agricultural watershed of Oklahoma, USA. *American Society of Civil Engineers, Unconventional Resource Technology Conference*, Austin, TX, July 24-26, 2017.
11. **Kharel, G.**, Zou, C., Fuhlendorf, S., Joshi, O., Miller, R., Melstrom, R., Boyer, T. Coupling natural and human systems: An integrated modeling approach in Oklahoma, USA. *American Association of Geographers Annual Meeting*, Boston, MA, April 05–April 09, 2017.
10. Rasoulzadeh, S., Stoecker, A., **Kharel, G.**, Storm, D. Evaluating the effectiveness of agricultural management practices under climate change for water quality improvement in a rural agricultural watershed of Oklahoma, USA. *American Geophysical Union Fall Meeting*, San Francisco, CA, December 12-16, 2016.
9. **Kharel, G.**, Zou, C., Melstrom, R. The lower Cimarron River watershed under changing climate: A coupled nature-human system approach. *Oklahoma Clean Lakes and Watersheds Association Annual Conference*, Stillwater, OK, March 29-30, 2016
8. Kirilenko, A., **Kharel, G.**, Zheng, H., Gulbin, S. Effects of climate and land-use change on the long-term flooding in the Devils Lake, North Dakota watershed. *Association of American Geographers Annual Meeting*, San Francisco, CA, March 28 - April 2, 2016.
7. **Kharel, G.**, Kirilenko, A. Taking Climate Change into Estimation of Long-Term Flood Risks: A Case of Devils Lake of North Dakota, USA. *American Geophysical Union Fall Meeting*, California, December 15-19, 2014.
6. **Kharel, G.**, Kirilenko, A. Estimating Long-term Flood Risks under Changing Climate: A Case of Devils Lake, North Dakota. *7th International Congress on Environmental Modelling and Software*, San Diego, CA, June 15-19, 2014.
5. **Kharel, G.**, Kirilenko, A. Taking Climate Change into Estimation of Long-Term Flood Risks: A Case of One Billion Dollar Disaster. *Water and Society: A Space-Time Framework for Integrated Studies*. CAES CNRS, France, May 11-17, 2014.
4. **Kharel, G.**, Kirilenko, A. Estimating Devils Lake Water Levels Using the Soil and Water Assessment Tool (SWAT). *SWAT International Conference & Workshops*. Toulouse, France, July 16-19, 2013.
3. **Kharel, G.**, Kirilenko, A. Estimating Future Devils Lake Water Levels Using the Soil and Water Assessment Tool (SWAT). *ND EPSCoR State Conference*. North Dakota, September 18, 2012.
2. Lemons, R., Hewitt, A., **Kharel, G.**, New, R., Kirilenko, A., Zhang, X. Evaluation of satellite-derived agro-climate variables in the Northern Great Plains. *ND-SD joint EPSCoR conference*, NDSU, Fargo, ND, October 4, 2011.
1. **Kharel, G.** Impacts of urbanization on environmental resources: A case study of Austin, Texas.

Academic Activities & Service

Committee Roles

- Member, Undergraduate Council, Texas Christian University (Fall 2023 – current)
- Member, Undergraduate Curriculum Committee, College of Science and Engineering, Texas Christian University (Fall 2020 – Spring 2022)
- Member, Diversity, Equity and Inclusion Committee, College of Science and Engineering, Texas Christian University (Fall 2020 – Fall 2022)
- Special Issue Guest Editor, “Ecohydrological Response to Environmental Change.” *Water* (2022 – 2023)

Journal Refereeing

- Journal of the American Water Resources Association
- Journal of Hydrology
- Journal of Soil and Water Conservation
- Water
- Sustainability
- Environmental Management

- Environmental Monitoring and Assessment
- Environment and Natural Resources Research
- Environmental Management & Sustainable Development

Professional Memberships

- American Association of Geographers
- American Geophysical Union
- American Water Works Association
- American Water Resources Association
- International Environmental Modelling and Software Society

Relevant Services

- Session moderator, South-Central Section Meeting, Geological Society of America, Fort Worth, TX, 2020
- Evaluation panelist, Science Mathematics And Research for Transformation (SMART) Scholarship Program, US Department of Defense, 2020, 2021, 2022
- Panel member, *Panel on Culture*, International Student Services, Texas Christian University, 2019
- Panel member, *Panel on University Life*, International Student Services, Texas Christian University, 2019
- Judge, *oral and poster presentations*, 2017 Students Water Conference at Oklahoma State University, 2017
- Presenter, *Authentic Research Experience for Teachers (ARET)*. Provided a demonstration on the coupled natural-human systems integrated modeling to Oklahoma School teachers, 2016
- An integrated modeling platform for coupled nature-human system Workshop. Participation and training, 2016.
- Co-organizer, *Climate & Culture Festival*, University of North Dakota, 2015.
- Treasurer, *Nepalese Student Association*, the University of Texas at Arlington, 2009
- Vice President, *Environmental Club*, the University of Nebraska at Omaha, 2006

Awards

- Junior Faculty Summer Research Program Award • TCU Office of Sponsored Programs • \$6,000 • Summer 2021
 - 5th Summer School on Sustainable Climate Risk Management Fellowship • Penn State University • 2017.
 - Summer Doctoral Fellowship • the University of North Dakota • 2014
 - Summer School Fees Gratuity • Water and Society: Space-Time Framework for Integrated Studies, CAES-CNRS • 2014
 - Student Travel Grant • American Geophysical Union • Fall Meeting, California • 2014
 - Conference Travel Grant • University of North Dakota Graduate School • 2013/2014
 - Student Grant • International SWAT Conference and Workshops • EcoLab, France • 2013
 - Conference Travel Grant • School of Aerospace Science • the University of North Dakota • 2013
 - Texas Chapter American Planning Association Scholarship • the University of Texas at Arlington • 2009-2010
 - Graduate Fellowship • the University of Texas at Arlington • 2008-2010
-

BRENDAN L. LAVY, PhD

Assistant Professor of Sustainability Science
Department of Environmental and Sustainability Sciences
Texas Christian University
2800 South University Drive
Fort Worth, Texas 76129
b.lavy@tcu.edu

AREAS OF RESEARCH

- Urban Sustainability
- Urban Forestry
- Urban Environmental Management
- Disaster Recovery and Resilience
- Water Resources Governance
- Geographic Information Systems

EDUCATION

- 2017 **PhD, Geography**, Texas State University, San Marcos, TX
Dissertation: *Changing patterns of water, access, and public discourse in the lower Colorado River valley of Texas, 1970-2015*, Advisor: Ronald R. Hagelman, III
- 2013 **MS, Geography**, Texas State University, San Marcos, TX
Thesis: *A geography of permitted tree removals in Austin, Texas, 2002 to 2011*
- 1998 **BA, Anthropology**, University of North Texas, Denton, TX
Senior report: *The primer manual for community empowerment, public participation, and environmental justice*

ACADEMIC EXPERIENCE

- 2020-pres. **Assistant Professor**, Department of Environmental and Sustainability Sciences, Texas Christian University, Fort Worth, TX
- 2020-pres. **Affiliated Faculty**, The Institute for Environmental Studies, College of Science and Engineering, Texas Christian University, Fort Worth, TX
- 2018-2020 **Assistant Professor**, School of Earth, Environmental, and Marine Sciences, The University of Texas Rio Grande Valley, Edinburg, TX
- 2017-2018 **Visiting Assistant Professor (one-year appointment)**, Department of Geography, Binghamton University, State University of New York, Binghamton, NY
- 2014-2016 **Instructor of Record**, Department of Geography, Texas State University, San Marcos, TX
- 2013-2017 **Graduate Research Assistant**, Department of Geography, Texas State University, San Marcos, TX

ACADEMIC PROFILES

- [Google Scholar](#) | [ORCID iD](#) | [ResearchGate](#)

PROFESSIONAL EXPERIENCE (most recent)

- 2023-pres. **Consultant**, Weaver Consultants Group, Fort Worth, TX
- 2021-pres. **Consultant**, Darefield Consulting, LLC, Austin, TX
- 2019-2021 **Human Geography Advanced Placement (AP) Reader**, The College Board, Cincinnati, OH
- 2013 **Communications Director and Environmental Policy Analyst (interim)**, Texas Catholic Conference of Bishops, Austin, TX
- 2009-2010 **Personal Assistant to the Deputy Secretary of State**, U.S. Department of State, Washington, DC
- 2006-2008 **Chief of Staff to the Dean**, Lyndon B. Johnson School of Public Affairs, The University of Texas at Austin, Austin, TX
- 2002-2005 **Website and Outreach Manager**, Foreign Policy Studies, The Brookings Institution, Washington, DC

PUBLICATIONS**Refereed journal articles**

- 2023 **Lavy, B. L.**, E. M. Zavar, and S. Tamima². Heritage as businesses: COVID-19 disruptions to Texas museums, heritage sites, parks, and protected places, and their responses to evolving guidance. *International Journal of Geoheritage and Parks* 11(4): 652-668. <https://doi.org/10.1016/j.ijgeop.2023.11.004>
- 2023 **Lavy, B. L.**, and E. M. Zavar. Recovering the urban forest: The role of trees, tree culture, and place attachment before and after Hurricane Harvey. *Urban Forestry & Urban Greening* 84: 127949. <https://doi.org/10.1016/j.ufug.2023.127949>
- 2023 Maleki, S., R. R. Hagelman, III, and **B. L. Lavy**. Neighborhood child friendliness: A comparative analysis of parental landscape perceptions and geographic information systems-based urban planning indexes. *The Professional Geographer* 74(4): 604-617. <https://doi.org/10.1080/00330124.2022.2124180>
- 2022 **Lavy, B. L.**, R. C. Weaver, and R. R. Hagelman, III. Using the Change Point Model (CPM) framework to identify windows for water resource management action in the Lower Colorado River Basin of Texas, USA. *Water* 14(1): 18. <https://doi.org/10.3390/w14010018>
- 2020 **Lavy, B. L.** Cooperation, fragmentation and control: News media representations of changing water access from Austin to the Texas Rice Belt. *Water Alternatives* 13(3): 779-799.
- 2020 Zavar, E. M., **B. L. Lavy**, and R. R. Hagelman, III. Chain tourism in post-disaster recovery. *Tourist Studies* 20(4): 429-449. <https://doi.org/10.1177/1468797620939413>
- 2019 **Lavy, B. L.**, and R. R. Hagelman, III. Protecting the urban forest: Variations in standards and sustainability dimensions of municipal tree preservation ordinances. *Urban Forestry & Urban Greening* 44: 126394. <https://doi.org/10.1016/j.ufug.2019.126394>
- 2018 Massa, A.¹, E. M. Zavar, **B. L. Lavy**, and S. M. Graves. Fragmented forest: A case study examining historical land management and current urban forest health. *The Northeastern Geographer* 10: 27-45.
- 2017 **Lavy, B. L.**, and R. R. Hagelman, III. Spatial and temporal patterns associated with permitted tree removal in Austin, Texas, 2002-2011. *The Professional Geographer* 69(4): 539-552. <https://doi.org/10.1080/00330124.2016.1266953>
- 2017 Zavar, E. M., R. R. Hagelman, III, **B. L. Lavy**, and B. Prince. Land use change at temporary group-housing sites in post-Katrina Louisiana. *Natural Hazards Review* 18(3): 1-9. [https://doi.org/10.1061/\(ASCE\)NH.1527-6996.0000243](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000243)

- 2016 **Lavy, B. L.**, E. D. Dascher, and R. R. Hagelman, III. Media portrayal of gentrification and redevelopment on Rainey Street in Austin, Texas (USA), 2000-2014. *City, Culture and Society* 7(4): 197-207. <https://doi.org/10.1016/j.ccs.2016.08.001>
- 2016 **Lavy, B. L.**, J. P. Julian, and R. N. Jawarneh. The impact of past and future urban expansion on soil resources in central Arkansas, 1994-2030. *Papers in Applied Geography* 2(1): 25-39. <https://doi.org/10.1080/23754931.2015.1106972>
- 2014 Hiner, C. C., C. G. Townsend, and **B. L. Lavy**. Harm J. de Blij's 1983 *Wine: A Geographic Appreciation*. *Progress in Physical Geography* 38(5): 674-684. <https://doi.org/10.1177/0309133314540691>

Refereed journal articles in review

- de Oyarzabal Barba, M.², **B. L. Lavy**, and V. Bennett. Improving urban flyways for bats: The importance of tree canopy structure.
- Howe, K.² and **B. L. Lavy**. The influence of company characteristics and leadership motivations on the circular economy of small manufacturers.
- Tamima, S.², E. M. Zavar, **B. L. Lavy**, and R. L. Schumann III. A range of pandemic adjustments: Changes to Texas heritage site business operations during the COVID-19 pandemic.

Refereed book chapter

- 2020 Holtkamp, C., **B. L. Lavy**, and R. Weaver. Leaving the old Kentucky home: Emerging landscapes of bourbon production. In C. C. Myles, editor, *Fermented landscapes: Lively processes of socio-environmental transformation*. Lincoln, NE: University of Nebraska Press.

Refereed encyclopedia entry

- 2021 Zavar, E. M., and **B. L. Lavy**. Mitigation: Learning from and anticipating crises. In E. Stern, editor, *Oxford Research Encyclopedia of Politics*. Oxford: Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228637.013.1963>

Report

- 2019 Zavar, E. M., **B. L. Lavy**, and R. R. Hagelman, III. *Recovery of tourism-based economies on the Texas Gulf Coast after Hurricane Harvey*. QR 287. Boulder, CO: University of Colorado Natural Hazards Center.

Non-refereed article

- 2020 **Lavy, B. L.**, and R. R. Hagelman, III. Tree preservation ordinances in Texas: Opportunities and challenges for sustaining our urban forests. *Urban Tree Growth and Longevity Working Group Newsletter (International Society of Arboriculture)* Summer 2020.

In preparation

- Lavy, B. L.** Ecosystem services lost from permitted tree removals. Target Journal: *Urban Forestry & Urban Greening*.
- Lavy, B. L.**, S. Maleki, and R. R. Hagelman III. An assessment of urban forest canopy cover and walkability in Austin, Texas. Target Journal: *Urban Forestry & Urban Greening*.
- Lavy, B. L.**, and J. Brush. Species preferences of birdwatchers in the Lower Rio Grande Valley. Target Journal: *Urban Ecosystems*.

¹undergraduate student; ²graduate student

RESEARCH GRANTS, FUNDING, AND FELLOWSHIPS

Awarded

- 2023 **Lavy, B. L.** PI. An equity analysis of ecosystem services loss related to permitted urban tree removal. Junior Faculty Summer Research Program, Texas Christian University (2023-2024; \$6,000)
- 2020 **Lavy, B. L.** Fellow, Enabling the Next Generation of Hazards and Disasters Fellowship Program, University of Colorado Natural Hazards Center (funded by the National Science Foundation grant number CMMI1921157) (2020-2021)
- 2018 **Lavy, B. L.** Co-PI. Recovery of tourism-based economies along the Texas Gulf Coast after Hurricane Harvey (PI: E. Zavar and Co-PI: R. R. Hagelman, III). University of Colorado Natural Hazards Center Quick Response Research Grant Program (funded by National Science Foundation grant number CMMI1333610) (\$2,000)
- 2017 Hagelman, III, R. R., E. M. Zavar, and **B. L. Lavy**. Hurricane Harvey's impacts on businesses in Texas's central Gulf Coast region. Departmental Research Enhancement Funds, Department of Geography, Texas State University (\$5,000)
- 2016 **Lavy, B. L.** Fellow, Joseph E. Pryor Graduate Fellowship, Alpha Chi National College Honor Society (2016-2017; \$5,000)

Pending

- 2023 Julian, J. P., PI, M. Steele, and **B. L. Lavy**, Co-PIs. Cool Spots - The distribution, vulnerability, and future potential of green and blue heat refuges. National Science Foundation Dynamics of Integrated Socio-Environmental Systems (DISES) (\$1,780,835)

Unfunded

- 2023 **Lavy, B. L.**, and G. Kharel. Co-PIs. Modeling trees as urban green infrastructure to mitigate heat stress and enhance environmental justice in low-income neighborhoods, Dean's Opportunity Fund, College of Science and Engineering, Texas Christian University
- 2023 **Lavy, B. L.** PI. Using park trees to mitigate heat stress and address environmental justice (Co-PIs: G. Kharel and G. K. Alexander), 2023 Community Forestry Grant Program, Texas A&M Forest Service
- 2022 **Lavy, B. L.** PI. Modeling trees as urban green infrastructure to mitigate heat stress and enhance environmental justice outcomes in low-income neighborhoods (Co-PIs: G. Kharel and G. K. Alexander), Bob Skiera Memorial Fund Building Bridges Initiative Grant Program, Tree Fund
- 2021 **Lavy, B. L.** PI. Ecosystem services loss related to permitted urban tree removal in Austin, Texas, Junior Faculty Summer Research Program (JFSRP) and Research and Creative Activities Fund (RCAF), Texas Christian University
- 2019 **Lavy, B. L.** Co-PI. STEM collaborations and opportunities through cross-sector partnerships and experiential education: Earth and environmental sciences (SCOPE) (PI: E. Pereira; Co-PIs: C. Cheng, A. Raysoni, and M. Lu) National Science Foundation Improving Undergraduate STEM Education: Hispanic-Serving Institutions (IUSE-HIS)
- 2018 **Lavy, B. L.** PI. 2018 Hurricane Season: Understanding the long-term recovery of small businesses & heritage sites in coastal communities (Co-PIs: E. Zavar and R. R. Hagelman, III). Rapid Response Research (RAPID), National Science Foundation Humans, Disasters, and the Built Environment
- 2017 Loftus, T. T., R. Weaver, and **B. L. Lavy** (as PhD student). Use and effectiveness of municipal irrigation restrictions during drought. Outdoor Water Savings Initiative, Phase 2, Alliance for Water Efficiency

AWARDS AND HONORS

- 2023 Environmental Sustainability Hero, Scenic Fort Worth
- 2016 Outstanding Doctoral Student Award, College of Liberal Arts, Texas State University
- 2016 “Favorite Professor” Award (as PhD instructor), Texas Iota Chapter, Alpha Chi National College Honor Society
- 2016 Pearson Graduate Student Teaching Award, Department of Geography, Texas State University
- 2016 Graduating Student Recognition of Campus Support (as PhD instructor), Office of Retention Management and Planning, Texas State University
- 2014 Transfer Student Appreciation of Campus Support (as PhD instructor), Office of Retention Management and Planning, Texas State University
- 2010 Superior Honor Award, U.S. Department of State

INVITED SPEAKER AND GUEST LECTURER

- 2022 Sustaining environmental resources and strengthening communities: Lessons from urban forest governance. Greater Fort Worth Sierra Club, 20 Apr.
- 2022 Plenary Panel: Coping with Chronic Hazards and Crises. Disaster Preparedness, Response, Innovation, Mitigation and Recovery (PRIMR) Conference, 7 Mar.
- 2019 Whose responsibility? Business recovery along the Texas Coastal Bend following Hurricane Harvey. Department of Emergency Management and Disaster Science Colloquium Series, University of North Texas, 9 Oct.
- 2019 Business recovery along the central Texas coast following Hurricane Harvey. School of Earth, Environmental, and Marine Sciences Seminar Series, 22 Feb.
- 2017 Moving communities forward: Challenges and opportunities for urban sustainability. Sustainable Communities Program Colloquium, Binghamton University, State University of New York, 19 Oct.
- 2017 Austin’s urban forest: Geographic patterns of permitted tree removals, 2002-2011. City of Austin’s Urban Forestry Department, 11 Aug.
- 2017 Analyzing human-environment interactions using a geographic information system (GIS). GIS Day 2016, Texas State University, 17 Nov.

CONFERENCE PRESENTATIONS

- 2024 Dascher, E. D.*, and **B. L. Lavy***. Proximity and regionality: Recognizing Wild and Scenic River gateway communities. American Association of Geographers, Honolulu, HI
- 2023 Buckmeier, A.^{1,*}, M. de Oyarzabal Barba², and **B. L. Lavy**. An equity analysis of tree canopy in Tarrant County, Texas. Southwestern Division of the American Association of Geographers, Laredo, TX. (poster presentation)
- 2023 de Oyarzabal Barba, M.^{2,*}, **B. L. Lavy**, and V. Bennett. Improving urban flyways for bats: The importance of tree canopy structure. Southwestern Division of the American Association of Geographers, Laredo, TX
- 2023 Maleki, S., R. R. Hagelman, and **B. L. Lavy***. Neighborhood child friendliness: A comparative analysis of parental landscape perceptions and geographic information systems-based urban planning indexes. American Association of Geographers, Denver, CO

- 2023 Dascher, E. D.* , and **Lavy, B. L.** Take me down to the river: An investigation of Wild and Scenic River gateway communities. River Management Symposium. San Antonio, Texas.
- 2022 **Lavy, B. L.*** , E. M. Zavar, and S. Tamima.² Texas museums, heritage sites, parks, and protected places responses to the COVID-19 pandemic. American Association of Geographers, Virtual and New York, NY
- 2022 Howe, K.^{2,*} , and **B. L. Lavy**. Sustainability practices of food, beverage, and textile manufacturers in Texas’s four largest metropolitan areas. American Association of Geographers, Virtual and New York, NY
- 2021 **Lavy, B. L.*** , and E. M. Zavar. Trees, tree cultures, and disasters: Implications for urban forest management. American Association of Geographers, Virtual and Seattle, WA
- 2020 Zavar, E. M.* , **B. L. Lavy**, and R. R. Hagelman, III. Chain tourism: The role of social networks and place attachments in disaster recovery. Fifth International Conference on Tourism & Leisure Studies, Dubrovnik, Croatia
- 2019 **Lavy, B. L.***, and R. R. Hagelman, III. Protecting the urban forest: Variations in standards and sustainability dimensions of municipal tree preservation ordinances. Southwestern Division of the American Association of Geographers, Fort Worth, TX
- 2019 Zavar, E. M.* , **B. L. Lavy**, and R. R. Hagelman, III. The role of chain tourism in Hurricane Harvey recovery. Natural Hazards Workshop Researchers Meeting, Broomfield, CO
- 2019 **Lavy, B. L.***, E. M. Zavar, and R. R. Hagelman, III. Business recovery along the Central Texas Coast following Hurricane Harvey. American Association of Geographers, Washington, DC
- 2019 Holtkamp, C.* , **B. L. Lavy**, and R. Weaver. Leaving the old Kentucky home: Emerging landscapes of bourbon production. American Association of Geographers, Washington, DC
- 2019 **Lavy, B. L.*** Panelist: “Fermented landscapes”: Perspectives on landscape, fermentation, and their material and figurative linkages. American Association of Geographers, Washington, DC
- 2018 **Lavy, B. L.*** Co-Organizer and Panelist: The intersection of disaster with race, ethnicity, and place. Race, Ethnicity, and Place Conference, Austin, TX
- 2018 **Lavy, B. L.***, E. M. Zavar, and R. R. Hagelman, III. Chain tourism in post-disaster recovery. Southwestern Division of the American Association of Geographers, Baton Rouge, LA
- 2018 **Lavy, B. L.***, R. Weaver, and R. R. Hagelman, III. Changes in urban and agricultural water use in the lower Colorado River valley of Texas. American Association of Geographers, New Orleans, LA
- 2017 Hagelman, III, R. R.* , **B. L. Lavy**, and S. Maleki. Geographic patterns of children in FEMA disaster declarations, 1990-2012. American Association of Geographers, Boston, MA
- 2016 **Lavy, B. L.*** , and R. R. Hagelman, III. Socio-spatial and temporal patterns associated with permitted tree removal in Austin, Texas. Southwestern Division of the American Association of Geographers, Denton, TX
- 2016 **Lavy, B. L.*** , and R. R. Hagelman, III. Visualizing conceptual pillars supporting urban sustainability ordinances. American Association of Geographers, San Francisco, CA (poster presentation)
- 2015 **Lavy, B. L.*** , J. P. Julian, and R. N. Jawarneh. The impact of past and future urban expansion on soil resources in central Arkansas (USA), 1994-2030. Southwestern Division of the Association of American Geographers and Applied Geography Conference Joint Meeting, San Antonio, TX
- 2015 Zavar, E. M.* , R. R. Hagelman, III, **B. L. Lavy**, and B. Prince. Temporary group housing sites as a catalyst for landscape change and development in post-Katrina Louisiana. Southwestern Division of the Association of American Geographers and Applied Geography Conference Joint Meeting, San Antonio, TX
- 2015 **Lavy, B. L.*** , E. D. Dascher, and R. R. Hagelman, III. The shifting landscape of Rainey Street, Austin, TX: An analysis of the news media’s portrayal of an urban renewal effort. Association of American Geographers, Chicago, IL

- 2015 Townsend, C. G.*, C. C. Hiner, and **B. L. Lavy**. The impact and legacy of Harm J. de Blij's 1983 Wine: A Geographic Appreciation. Association of American Geographers, Chicago, IL
- 2015 **Lavy, B. L.***, E. D. Dascher, and R. R. Hagelman, III. Putting gentrification in context: News media coverage and neighborhood transformation. Alpha Chi National Convention, Chicago, IL
- 2014 **Lavy, B. L.***, and R. R. Hagelman, III. The regulatory landscape of urban forestry in Texas. Association of American Geographers, Tampa, FL
- 2014 **Lavy, B. L.*** Preserving trees in Texas: An exploratory evaluation of environmental policies. Alpha Chi National Convention, St. Louis, MO
- 2013 **Lavy, B. L.*** A geography of permitted tree removals in Austin, Texas, 2002-2011. Association of American Geographers, Los Angeles, CA
- 2012 **Lavy, B. L.*** The social equity of public parks and park access in Austin, Texas. Association of American Geographers, New York, NY (poster presentation)
- 1999 **Lavy, B. L.*** Environmental justice, community empowerment, and public participation: A case in eastern Oklahoma. Society for Applied Anthropology, Tucson, AZ
- *presenter; ¹undergraduate student; ²graduate student*

ENVIRONMENTAL AND URBAN SUSTAINABILITY FIELDTRIPS

- 2014 San Antonio urban design and river restoration. Fieldtrip with R. R. Hagelman, III, Texas State University, 18 Apr.
- 2014 New Urbanism and sustainable neighborhood developments in Central Texas. Fieldtrip, Texas State University, 22 Feb.

TEACHING

Texas Christian University

Contemporary Environmental Issues ENSC 10143
Introduction to Sustainability Science ENSC 30134
Field Experience ENSC 30403
Environmental Impact Statements ENSC 50743
Environmental Sustainability ENSC 50793
Environmental Issues ENSC 60203
Publication Writing ENSC 70357
Research in Sustainability Science ENSC 70970
Sustainable Urban Systems ENSC 40790 / 70970

The University of Texas Rio Grande Valley, Edinburg, TX

Environment and Society ENVR 2302
Natural Resources Conservation ENVR 3301
Environmental Sciences Research Project ENVR 4303
Urban Sustainability ENVR 4357 / EEMS 6357
Ecosystem Management and Social-Ecological Resiliency EEMS 6300

Binghamton University, State University of New York, Binghamton, NY

Introduction to Geography GEOG 101
Environmental Planning and Policy GEOG 239 / ENVI 239

Natural Hazards GEOG 330
Water Resources Planning and Management GEOG 341

Texas State University, San Marcos, TX

Introduction to Environmental Geography GEO 2310
Urban Geography GEO 3310

Lab instructor:

Physical Geology Laboratory GEOL 1410
Physical Geography Laboratory GEO 2110

Instructional assistant:

Physical Geology GEOL 1410
Cities and Urban Design GEO 4321
Interpretive Environmental Geography (online course) GEO 4322 / 5322
Environmental Management GEO 5313

MENTORING

Graduate thesis committee chair

In progress Buckhalter, H. The impact of tree removal on land surface temperature. (2023)
In progress Rzucidlo, M. Habitat connectivity for pollinators in a rapidly growing urban area. (2023)
In progress Butterworth, C. Conservation education managers' perceptions of short- and long-term learning strategies. (2022)
In progress Fahey, P. Ecosystem services of property acquisition landscapes in Arlington, Texas. (2021)
2023 Dec. de Oyarzabal Barba, M. Improving urban flyways for bats: The importance of tree canopy structure.
2022 Dec. Howe, K. The influence of company characteristics and leadership motivations on the circular economy of small manufacturers.

Graduate dissertation/thesis committee member

In progress Ayejoto, D. Modeling the impact of climate change on the hydrology of Eagle Mountain Lake, Texas (TCU, thesis)
In progress Hussein, M. A. A. Exploring Social Vulnerability in Austin and San Antonio Metro Areas (2005-2020) through Spatial and Temporal Analysis (Texas State University, dissertation)
2023 Dec. Scott, I. Water quality can impact water resources use by bats in urban areas. (TCU, thesis)
2022 Aug. Tamima, S. COVID-19 impact on museums, parks, and protected places. (UNT, thesis)
2022 May McGee, J. The use of swimming pools by bats in a game reserve in South Africa. (TCU, thesis)

Undergraduate honors thesis chair

In progress Suasnovar, Z. (B.S. Hon.) Urban forestry management practices in the DFW metroplex. (TCU)
In progress O'Connor, R. (B.S. Hon.) Sustainability practices of Texas universities. (TCU)

Undergraduate honors thesis committee member

2018 Rusinko, K. A. (B.S. Hon.) The geography of Detroit city's post-industrial feelings and its development. (Binghamton University)

Supervised undergraduate research

- 2023 Mollendor, K. Assessing biodiversity and climate resiliency of trees in a floodplain buyout. Research Poster Presentation, The Michael and Sally McCracken Annual Student Research Symposium, College of Science and Engineering, Texas Christian University
- 2023 Buckmeier, A., M. de Oyarzabal Barba, and P. Fahey. An equity analysis of tree canopy in Fort Worth, Texas. Research Poster Presentation, The Michael and Sally McCracken Annual Student Research Symposium, College of Science and Engineering, Texas Christian University
- 2023 de Oyarzabal Barba, M. Improving urban flyways for bats: The importance of tree canopy structure. Research Poster Presentation, The Michael and Sally McCracken Annual Student Research Symposium, College of Science and Engineering, Texas Christian University
- 2023 Klosak, K., A. Morrill, C. Price, and O. Sottile. Identifying opportunities and challenges for food recovery in Fort Worth, Texas. Research Poster Presentation, The Michael and Sally McCracken Annual Student Research Symposium, College of Science and Engineering, Texas Christian University
- 2022 Morrill, A., C. Price, E. LeBlanc, and G. Serrano. Fighting food waste through community composting. Research Poster Presentation, The Michael and Sally McCracken Annual Student Research Symposium, College of Science and Engineering, Texas Christian University
- 2022 Baskerville, C. and L. Trotter. Using open source software to quantify the ecosystem services of campus trees. Research Poster Presentation, The Michael and Sally McCracken Annual Student Research Symposium, College of Science and Engineering, Texas Christian University
- 2020 Ballesteros, L. Tree species associated with permitted tree removals. (UTRGV)
- 2020 Barbosa, M. Models of urban form in the Lower Rio Grande Valley. (UTRGV)
- 2020 Guerra, E. Drought and the urban forest. (UTRGV)
- 2020 Lindgren, E. Hurricane Harvey's impact on vegetation in Rockport-Fulton, Texas.
- 2018 Warner, R. The effects of tree removal on neighborhood canopy cover. GIS and remote sensing undergraduate research project presented at 2018 Binghamton Research Days, Binghamton, NY (poster presentation) (Binghamton University)
- 2017 Yanes-Garcia, A. The effect of surgical and ambulatory centers on underprivileged women in Texas. GIS-based undergraduate research project presented at the 2017 Alpha Chi National Convention, Louisville, KY (poster presentation) (Texas State University)
- 2016 Ross, S. Exploring the relationship between gas price and U.S. National Park Service Unit annual attendance. GIS-based undergraduate research project presented at the 2016 American Association of Geographers Annual Meeting, San Francisco, CA (poster presentation) (Texas State University)

COMMUNITY-ENGAGED LEARNING EXPERIENCES

- 2024 Urban Forest Benefits and Values, Botanic Research Institute of Texas and Fort Worth Botanic Gardens
- 2019 Commercial Photography and Ecosystem Management, Santa Ana National Wildlife Refuge, US Fish and Wildlife Service
- 2019 Park Visitorship and Community Outreach Plan, Estero Llano Grande State Park, Texas Parks and Wildlife Department

SERVICE

Manuscript Review

Forests
Sustainability
Urban Forestry and Urban Greening
Journal of Sustainable Forestry
Annals of the American Association of Geographers
Papers in Applied Geography

Textbook Review

Getis, A., M. D. Bjelland, and V. Getis. *Introduction to Geography, Sixteenth edition*. New York, NY: McGraw-Hill Education.

Texas Christian University

2023-pres. Member, Search Committee, Assistant Professor of Sustainability, John V. Roach Honors College, Texas Christian University
2023-pres. Member, Search Committee, Instructor, Department of Environmental and Sustainability Sciences, Texas Christian University
2021-pres. Coordinator, Departmental Advisory Committee, Department of Environmental and Sustainability Sciences, Texas Christian University
2021-pres. Member, Tree Advisory Committee, Texas Christian University
2020-pres. Volunteer, University Sustainability Committee, Texas Christian University
2022 Member, Search Committee, Professor of Professional Practice, Department of Environmental and Sustainability Sciences, Texas Christian University

The University of Texas Rio Grande Valley

2018-2020 Member, Graduate Degree Program Committee, Agricultural, Environmental, and Sustainability Sciences, School of Earth, Environmental, and Marine Sciences, The University of Texas Rio Grande Valley
2018-2020 Member, Evaluation Standards Revision Committee, School of Earth, Environmental, and Marine Sciences, The University of Texas Rio Grande Valley
2018-2019 Member, Search Committee, 3-Year Lecturer in Geology, School of Earth, Environmental, and Marine Sciences, The University of Texas Rio Grande Valley
2019-2020 Member, Planning Committee, Bachelor of Arts in Interdisciplinary Studies (Public Heritage), The University of Texas Rio Grande Valley
2019-2020 Co-organizer, (First) Annual GIS Day, The University of Texas Rio Grande Valley

Texas State University

2015-2016 Co-President, and Vice President, Graduate Student Forum, Department of Geography, Texas State University
2015-2016 Member, Colloquium Committee, Department of Geography, Texas State University
2014-2016 Student Government Graduate House Representative, Texas State University.
2014-2015 Member, Presidential Award for Excellence in Teaching Selection Committee, Texas State University
2014-2015 Member, Mariel M. Muir Excellence in Mentoring Award Selection Committee, Texas State University
2013-2017 Mentor, Bobcat Bond Program, Texas State University

2011-2012 Member, Texas Geography Student Research Symposium Planning Committee, Department of Geography, Texas State University

Organizations

2015-2017 Student Sponsor Alpha Chi National College Honor Society, Texas Iota Chapter
2014-2015 Vice President, Alpha Chi National College Honor Society, Texas Iota Chapter
Spr. 2014 Treasurer, Alpha Chi National College Honor Society, Texas Iota Chapter

Community

2024-pres. Member, Riparian Area Initiative, City of Fort Worth
2021-pres. Member, Research Working Group, North Texas Food Policy Alliance
2022-2023 Member, Steering Committee, Fort Worth Urban Forest Master Plan, City of Fort Worth, Texas
2021-2022 Member, Project Advisory Group for the North Central Texas Organic Waste to Fuel Feasibility Study, North Central Texas Council of Governments (NCTCOG) and University of Texas at Arlington (UTA)
2019-2020 Member and Secretary, Tree Advisory Board, City of Edinburg, TX

MEMBERSHIPS

2011-pres. Member, American Association of Geographers (AAG)
Hazards, Risks and Disasters Specialty Group
Urban Geography Specialty Group
Water Resources Specialty Group
Cultural & Political Ecology Specialty Group
2014-pres. Member, Phi Kappa Phi Honor Society
2012-pres. Member, Alpha Chi National College Honor Society
1997-pres. Member, Golden Key International Honour Society

TRAININGS AND WORKSHOPS

Fall 2023 GRI Reporting Standards for GRI Certified Sustainability Professional Certification, Global Reporting Initiative
Fall 2022 Migrating from ArcMap to ArcGIS Pro, Esri Training Seminar, Environmental Systems Research Institute, Inc.
Fall 2022 Op-Ed Workshop, Office of Communications, Texas Christian University
Fall 2020 Mitigating Unconscious Bias Training, Office of Diversity and Inclusion, Texas Christian University
Sum. 2020 Fall 2020 Hybrid Design and Delivery Training, Texas Christian University
Fall 2019 DREAM Zone Advocate Training in support of undocumented or DACAmented students, Center for Diversity and Inclusion, The University of Texas Rio Grande Valley
Spr. 2019 Community Engagement and Culturally Relevant Pedagogy, College of Sciences, The University of Texas Rio Grande Valley
Spr. 2017 Ally Training in support of LGBTQiA+ community, Office of Student Diversity and Inclusion, Texas State University

SKILLS

ESRI ArcGIS Desktop, Pro, and Online; QGIS; ERDAS Imagine; SPSS; R; Atlas.ti; Microsoft Office Suite; learning management systems (e.g., myCourses, Blackboard); Windows and Macintosh systems

MICHELE LIRA BIRMINGHAM

FORT WORTH, TEXAS | 817-821-8175 | LIRA.MICHELE81@GMAIL.COM

SUMMARY

Fifteen years of environmental work including teaching, environmental training, consulting, field work, regulatory compliance, and government. Experience writing regulatory documents, presenting at national conferences, and composing communications. Seeking to leverage this professional experience and community mindset in creating a classroom where the next generation of environmental professionals can learn and grow.

EDUCATION

Texas Christian University, 2005

Master of Science, Environmental Science

Texas Christian University, 2003

Bachelor of Science, Environmental Science

TEACHING EXPERIENCE

Assistant Professor of Professional Practice, TCU, 2023- Present

Courses include, Environmental Compliance, Earth Materials, Water and Wastewater Treatment Technology, Contemporary Environmental Issues, and Environmental Issues. Additional responsibilities include mentoring, advising, professional development, and managing the internship program.

Presenter & Program Designer, City of Dallas Stormwater and City of Fort Worth Water Department, 2014-Present

City educational outreach teacher/presenter for local schools and adult associations on stormwater, water conservation and water treatment. Developed presentations and activities. Presented information in a variety of formats including schools-elementary through High School, summer camps, after school programs, civics groups.

Environmental Consultant, Environmental Trainers Inc., 2009-2012

Environmental consultant. Adult education and training. Topics included: Hazwoper 8hr and 40 hr, Hazcom, environmental regulations.

Teacher, King High School, 2007 - 2008

Developed syllabus and overall course structure for Astronomy, Physics I and biology classes including hands-on labs, handouts quizzes and tests. Classroom Management. Grading and reporting.

Teaching Assistant – Environmental Science, Geology, Texas Christian University, 2003-2005

Developed presentations and taught material based on lab book supporting freshman level environmental science and geology courses. Collaborated with Professors on course content. Classroom management. Grading and reporting.

WORK EXPERIENCE

City of Fort Worth, Water, 2014 - Present

Public Education Specialist, 2014-2016

Conservation Specialist, 2016-Present

Developed and presented to school levels elementary through high school, and adult associations on topics of water conservation and water treatment. Coordinated Waterama, a two-day water educational seminar for 4th grade Fort Worth ISD Students. Managed Sewer Science, a High School level lab including coordinating with local teachers, assisting with presentations, ordering and maintaining lab gear. Developed and coordinated water department's social media content from 2014-2016.

Program coordinator of Water Departments conservation programs including SmartFlush Toilet Voucher Program, Industrial, Commercial and Institutional water audits, SmartRepair, a customer assistant leak repair program and an irrigation audit program called SmartIrrigation. Coordination includes program design, analysis, marketing, budgeting, communication, contracts, and customer service. Instrumental in writing five-year conservation plan. Collaborates with other departments and regional EPA office on various projects including an environmental 5K and the nationally recognized Loteria outreach that targets the Hispanic community across the United States. Conservation lead for new MyH2O program, Fort Worth's transition to automated metering infrastructure, implementing the first data driven communications and program strategy.

City of Dallas, Stormwater, 2012-2014

Environmental and Outreach Coordinator

Storm Water Pollution Prevention Plan and site reviews for construction sites. Industry education and presentations on stormwater compliance. School outreach and education including developing content and presentations. Marketing and budgeting for environmental communications.

Environmental Trainers Inc., 2009-2012

Environmental Consultant, Manager

Phase I and II environmental reports, lead, asbestos and surface and groundwater water sampling, Environmental Assessments, hazard classification. Technical report writing. Project management. Collaborating with other consultants. Environmental Training for Hazcom and Hazwoper.

Elizabeth Anna's Garden – Fort Worth, Texas, 2008-2009

Non-profit coordinator, Gardner

Coordinated urban gardening program including outreach, marketing, and managing events. Assisted in managing garden shop including customer service, cash register, identifying native and adaptive plants, vegetable gardening.

King High School – Tampa, Florida, 2007-2008

Teacher

Developed syllabus and overall course structure for Astronomy, Physics I and biology classes including hands-on labs, handouts quizzes and tests. Classroom Management. Grading and reporting.

Bureau Veritas – Tampa, Florida, 2005 - 2007

Environmental Consultant

Executed field work and composed Phase I and II environmental reports throughout the Southeastern United States and Puerto Rico. Technical report writing. Groundwater and surface water sampling. Surveying. Budgeting and client acquisition.

Mickey Leland Internship with TXU/Oncor Electric, Summers 2002 & 2003

Assisted with permit management and data entry. Identification of Endangered Species habitat.

AWARDS

Mickey Leland Internship Scholarship with Oncor Electric Company, 2002

Mickey Leland Internship Scholarship with Oncor Electric Company, 2003

United States Environmental Protection Agency, 2016

2016 WaterSense Excellence Award in Education and Outreach

United States Environmental Protection Agency, 2018

2018 WaterSense Promotional Partner of the Year for Outstanding Contributions

PROFESSIONAL ACTIVITIES

Society of Environmental Professionals, 2009-2012

Water Efficiency Network of North Texas, 2016-Present

United States Environmental Protection Agency, WaterSense Conference, 2017—2019

North Texas Water Regional Water Conservation Symposium, 2014—Present

Texas Water Conference, 2016, 2019

American Water Works Association, 2016- Present

Alliance for Water Efficiency, 2016-Present

Water Environment Association of Texas, 2014-2016

PRESENTATIONS

“Influence of Soil Type on Soil Moisture on a Hillslope Hollow”- Poster Presentation, 2005

Water Conservation Plan, City of Fort Worth, 2019

First year discoveries. Using AMI data to change our Conservation Programs -

American Water Works Association, Sustainable Water Management Conference 2022

EPA WaterSense Partner Webinar, *Focus on Drought*, July 2022

CERTIFICATIONS

40 hour HAZWOPER, 2005-2012, 2018

Texas Water Development Board, Water Audit Loss, 2020

Approved by Texas Board of Professional Geoscientists to sit for PG exam

VOLUNTEER EXPERIENCE

Kids Hope USA, Mentor, 2017-Present

Campaign Manager for State Office Candidate, 2018

Teaching Assistant, Sunday school at Fort Worth United Methodist Church, Fall 2019

LANGUAGES

English, *Native*

Spanish, *Working knowledge*

- I. CVs for support faculty
N/A; no support faculty required

J. Articulation agreements with partner institutions
N/A

K. List of support
N/A

L. Letters of support

Supporting material and correspondence from chairs, equivalents, or faculty in departments with classes listed as possible electives within the 4-1 program.

Outlook interface showing an email from Meier, William to Slattery, Michael. The subject is "Re: Sustainability". The email content discusses the offering of HIST 40853 and the 4:1 program.

From: "Slattery, Michael" <m.slattery@tcu.edu>
Date: Friday, September 29, 2023 at 1:18 PM
To: "Meier, William" <w.meier@tcu.edu>
Subject: <no subject>

Hi William

I hope this email finds you well!

We are putting the finishing touches on a 4:1 program – a BS Environmental Sciences/MS Sustainability. We are looking at classes across campus that would be relevant both as electives in the undergraduate section as well as 5000-level classes that students could take for dual credit in departments that offer those courses. I noticed the following classes in your department that I think would be a really good fit:

HIST 40853 American Environmental History

My questions are: (1) is this still being offered in your department with some regularity, and (2) what would the implications be to having a handful of ENSC students enroll – as in, would there be space?

Also, if there are other classes I may have missed, please feel free to add!

Kind regards,
 Mike

Dr. Mike Slattery
 Professor and Chair, Department of Environmental and Sustainability Sciences
 Director: Institute for Environmental Studies
 Fellow: Ralph Lowe Energy Institute

Outlook interface showing a reply email from Fortenberry, Sally to Slattery, Michael. The subject is "RE: Sustainability". The email content discusses the offering of HIST 40853 and the 4:1 program.

From: Slattery, Michael <m.slattery@tcu.edu>
Sent: Friday, September 29, 2023 1:17 PM
To: Fortenberry, Sally <s.fortenberry@tcu.edu>
Subject:

Good afternoon, Mike,

This is exciting to hear. I wish we had more classes to add to the list of those which might be considered, but unfortunately, FAME 30223 is the only one which is designated a non-required class for our majors – which keeps increasing in number. We are offering this course every semester, both fall and spring. We are also in the process of putting it through the Curriculum Committee to change the course number to a 3000 level since it is now not only a CSV for the CORE but the Finding Ourselves in Community (FSC) attribute has been added to it this fall. Shweta Reddy, who developed the course, went through the training last spring for the FSC program.

Since this course is open to all students across campus without any pre-requisites, there should be no reason for someone in the 4:1 program not to be able to take it. So please add it to the list.

Thank you for checking!
 Sally

Sally L. Fortenberry, Ph.D., CFCI
 Professor and Department Chair
 Director, Center for Merchandising Education and Research
 Merchandising Internship Director
 Phi Upsilon Omicron National Honor Society TCU Chapter Advisor
 The Department of Fashion Merchandising
 Texas Christian University
 Box 298630
 Fort Worth, TX 76129-0001
 817.257.6752 office phone
 817.729.8618 cell
s.fortenberry@tcu.edu

Physical address:
 The Fine Arts Building
 2900 Pricketts Street
 Fort Worth, Texas 76109

Outlook interface showing an email from Ashley Coles, Ph.D., Associate Professor of Geography, Texas Christian University. The email is titled "RE: Environment and Society" and is dated 9/29/2023. The sender's address is ACOLESA@tcu.edu.

The email content includes:

Hi Kyle and Mike,

I currently offer Env and Soc every other year. However, if I add another upper division it would move to every third year. If that works for Mike's purposes, it would totally be fine to include that in their curriculum. There should be room for ENSC students (I already get a handful anyway).

It's probably too soon for Mike's purposes, but I was thinking the next class I develop could be Animal Geographies, probably to offer for the first time during Spring 2025. That would probably fit the curriculum as well. I could be talked into making it a co-convened grad/undergrad course.

Ashley

Ashley Coles, Ph.D.
Associate Professor of Geography
Department of Geography
Texas Christian University
TCU Box 297280
Scharbauer Hall 2004 H
Fort Worth, TX 76129
Phone: 817-257-4370

From: Walker, Kyle <kyle.walker@tcu.edu>
Sent: Friday, September 29, 2023 1:24 PM
To: Coles, Ashley <ACOLESA@tcu.edu>
Subject: Fw: Environment and Society

Hi Ashley,

I just got this email from Michael Slattery. Any thoughts?

Kyle

Kyle E. Walker, Ph.D.
Associate Professor and Chair
Department of Geography
Texas Christian University
Fort Worth, TX 76129

Outlook interface showing an email from Gina Jarman, Ph.D., RD, LD, Associate Professor, Texas Christian University. The email is titled "RE:" and is dated 9/29/2023. The sender's address is gjarman@tcu.edu.

The email content includes:

Hi Mike, Congrats on finalizing your 4-1. That is exciting!

I do think NTDT 60453 would be appropriate for students in your 4-1. I have one non-nutrition graduate student this year and it has been nice to have her there. She is doing well and shared that it has been valuable for her as a Geology grad student. Having "5" or so of your students in the course each year should not be a problem at all. In fact, I think it would actually be a nice addition to add a different perspective for our NTDT students.

This is the second time that I've taught this class. Both times it was offered from 8:00-10:30 a.m. on Mondays. I think that the class will likely stay at this time slot for a while because our CDP students are only on campus on Mondays in the fall semester. I'm not sure if that works for your program schedule or not, but if so, you're welcome to include us as an elective.

Hope you have a good weekend.

Thanks, Gina

Gina Jarman Hill, PhD, RD, LD
Texas Christian University
Department of Nutritional Sciences
Department Chair
Associate Professor
817 257-7309
gjarman@tcu.edu

From: Slattery, Michael <m.slattery@tcu.edu>
Sent: Friday, September 29, 2023 1:31 PM
To: Hill, Gina <gjarman@tcu.edu>
Subject:

Hi Gina

I hope this email finds you well!

We are putting the finishing touches on a 4:1 program - a BS Environmental Sciences/MS Sustainability. We are looking at classes across campus that would be relevant both as electives in the undergraduate section as well as 5000-level classes that students could take for dual credit in departments that offer those courses. I noticed the following classes in your department that I think would be a really good fit:

NTDT: 60453 Nutrition Ecology, Food & Sustainability (I know this class!)

My questions are: (1) is this still being offered in your department with some regularity; (2) what would the implications be to having a handful of ENSC students enroll - as in, would there be space; and (3) are they appropriate?

Also, if there are other classes I may have missed, please feel free to add!

Outlook interface showing an email thread. The selected email is from Carrie Liu Currier, Ph.D., dated 9/29/2023. The subject is "Mike We have two globalization classes." The email body contains the following text:

Mike

We have two globalization classes, I'd have to ask Dr. Dorraj (who teaches the class you noted) if he would be amenable. I also teach a globalization & political economy class 33113 that usually has room and would probably be a fit. It hasn't been offered frequently because I've been chair but it will be offered more frequently after this next year. I would not be opposed to having ENSC students enroll in my course. Let me check with Dorraj but my guess is he will also say yes.

Carrie

Carrie Liu Currier, Ph.D.
Department Chair and Associate Professor of Political Science
Texas Christian University
TCU Box 297021
Fort Worth, TX 76129
817-257-8853

On Sep 29, 2023, at 1:20 PM, Slattery, Michael <m.slattery@tcu.edu> wrote:

Hi Carrie

I hope this email finds you well!

We are putting the finishing touches on a 4:1 program -- a BS Environmental Sciences/MS Sustainability. We are looking at classes across campus that would be relevant both as electives in the undergraduate section as well as 5000-level classes that students could take for dual credit in departments that offer those courses. I noticed the following classes in your department that I think would be a really good fit:

POSC 33123 Globalization

My questions are: (1) is this still being offered in your department with some regularity, and (2) what would the implications be to having a handful of ENSC students enroll -- as in, would there be space?

Also, if there are other classes I may have missed, please feel free to add!

Kind regards,

M.L.S.

Outlook interface showing a different email thread. The selected email is from Carrie Liu Currier, Ph.D., dated 9/29/2023. The subject is "Mike, Dorraj is good with his globalization class included as well." The email body contains the following text:

Mike,

Dorraj is good with his globalization class included as well. Hope that helps you, and we do have spaces so shouldn't be too difficult for your program.

Enjoy the weekend!

Carrie

Carrie Liu Currier, Ph.D.
Department Chair and Associate Professor of Political Science
Texas Christian University
TCU Box 297021
Fort Worth, TX 76129
817-257-8853

On Sep 29, 2023, at 1:20 PM, Slattery, Michael <m.slattery@tcu.edu> wrote:

Hi Carrie

I hope this email finds you well!

We are putting the finishing touches on a 4:1 program -- a BS Environmental Sciences/MS Sustainability. We are looking at classes across campus that would be relevant both as electives in the undergraduate section as well as 5000-level classes that students could take for dual credit in departments that offer those courses. I noticed the following classes in your department that I think would be a really good fit:

POSC 33123 Globalization

My questions are: (1) is this still being offered in your department with some regularity, and (2) what would the implications be to having a handful of ENSC students enroll -- as in, would there be space?

Also, if there are other classes I may have missed, please feel free to add!

Kind regards,

M.L.S.

Outlook interface showing an email thread. The selected email is from Weis, Stephen, dated 9/29/2023, with the subject "Re: TCU Engage".

From: Slattery, Michael <m.slattery@tcu.edu>
Date: Friday, September 29, 2023 at 1:13 PM
To: Weis, Stephen <s.weis@tcu.edu>
Subject: <no subject>

Hi Mike,

I think there is certainly room for your students in ENGR 30113. I think your students might also be interested in reservoir management and simulation classes for CO2 sequestration? The faculty member who teaches those classes, John Fanchi, is retiring in May so we are going to start a search soon but I hope for a continuous offering.

Thanks,
 Steve

From: Slattery, Michael <m.slattery@tcu.edu>
Date: Friday, September 29, 2023 at 1:13 PM
To: Weis, Stephen <s.weis@tcu.edu>
Subject: <no subject>

Hi Steve

I hope this email finds you well!

We are putting the finishing touches on a 4+1 program - a BS Environmental Sciences/MS Sustainability. We are looking at classes across campus that would be relevant both as electives in the undergraduate section as well as 5000-level classes that students could take for dual credit in departments that offer those courses. I noticed the following classes in your department that I think would be a really good fit:

ENGR 30113 Energy in Society

My questions are: (1) is this still being offered in your department with some regularity, and (2) what would the implications be to having a handful of ENSC students enroll - as in, would there be space?

Also, if there are other classes I may have missed, please feel free to add (I am sure I have!)

Kind regards,
 Mike

Dr. Mike Slattery
 Professor and Chair, Department of Environmental and Sustainability Sciences
 Director: Institute for Environmental Studies

Outlook interface showing a reply email from Coleman, Catherine, dated 9/30/2023, with the subject "Re: TCU Engage".

From: Coleman, Catherine
Date: Saturday, September 30, 2023 at 2:37 PM
To: Slattery, Michael
Subject: Re: TCU Engage

Hi, Mike,

So nice to hear from you.

I'd be happy to see if there are ways that we can work with you on this. In fact, we also offer a couple of classes for the Digital Culture and Data Analytics program. However, I also want to be transparent about the problems we may face and that may pose challenges for your plan. There are two main ones that come to mind:

1. We currently are understaffed and most of our classes are filling with waitlists and/or we are overenrolling them (based on the numbers that make most sense to us for course objectives).
2. Both of those are upper-level (as you can see) and may require some basis in strategic communication in order to level into them in meaningful ways. Undergraduates cannot take the 6000-level courses, but once they have formally graduated and are in the MS leg of the journey, that course might work. The 5000-level one we often end up having to run as a cross-listed undergrad-grad class in order to meet class demands between our undergraduate and graduate classes. We've been trying to reduce the use of that option as much as possible because we don't want to bring down the graduate program as we try to bring up our undergraduates in terms of their experience.

With that being said, here are my answers to your questions:

1. Yes, with some regularity, but not on a strong rotation.
2. That one is hard for me to tell. We are hiring 2 new faculty and so I hope the situation will be better in the future. I think it would probably be ok once we are able to get some of our new faculty in?
3. It depends on what your objectives are. The Social Responsibility one probably is. The Advertising and the Consumer might be, but that is if you are trying to give students exposure to understanding consumer behavior and consumer culture.

I'm sorry if this is not as concrete as you may need, but we are in a stage of reshoring. We are filling a vacated line (so we are short-handed at the moment) and then trying to add one more line to get us closer to meeting demand.

Happy to catch up on phone or in person for a chat if you would like. Otherwise, if you would like to move forward with including these classes, I'd like to talk with our graduate director and maybe our faculty (we have a faculty meeting on Wednesday where I could raise the question). We ran a 4+1 program for a bit that we ultimately dissolved, so I would want to get their thoughts on whether any of the challenges we faced in doing that might also still stand in connecting into your program. However, I'd also like to say that it is our philosophy to be able to have these kinds of collaborations and I know we could benefit from having some of your students in our classes. It's just some of the pesky logistics, really 😊

Catherine

Catherine A. Coleman, PhD
 Professor and Chair
 Department of Strategic Communication
 Bob Schieffer College of Communication
 Texas Christian University

Outlook interface showing an email from UHI-Bien, Mary to Michaelides, Ffstathios. The email subject is "Re: UHI-Bien, Mary" and the content discusses a proposal for a course. A table lists several course options with their status.

MANA 60023 Legal and Social Environment of Business	Not currently being offered
MANA 65160 Leadership in a Complex World (1.5)	No because EMBA program
MANA 70770 Nonprofit Management (1.5)	Not currently being offered
MANA 70803 White Collar Crime (1.5)	Taught in Winteression
MANA 75980 Managing & Leading People (1.5)	No because EMBA program

The email also mentions suggesting MANA 70620 Energy Legal and Regulatory Issues and checking with the Entrepreneurship Department or INSC for Supply Chain types of courses.

Outlook interface showing an email from Stratman, Jeff to Slattery, Michael. The email subject is "RE: Stratman, Jeff" and the content discusses a proposal for a course. The email includes a list of points and contact information for Jeff K. Stratman, Ph.D.

- INSC 60011 is regularly offered as a summer class. The 70970 class is now [INSC 70680 Sustainable Supply Chain Management](#). It has not been offered in the past year or so, but may be in the future. Prof Laura Meade would like to offer it again, but has other teaching commitments that keep getting in the way.
- I don't see a problem adding some of your students.
- Are they appropriate? INSC 70680 seems very appropriate provided we can offer it on a regular basis. INSC 60011 is an intro survey course on a wide range of supply chain topics. I'm not sure all topics will be of interest to your students, but it would give a good grounding for INSC 70680 (it is not a pre-requisite). Both of these courses are taken by MBA and MS Supply Chain students who usually have several years of business experience. Undergrads might feel a little out of place.

We are in the early planning stages of developing an undergrad certificate in supply chain sustainability (we have "permission to plan"). We should have a few more classes that might work for your program once that launches.

Jeff
 Jeff K. Stratman, Ph.D.
 Professor of Supply Chain Management
 Chair, Department of Information Systems & Supply Chain Management
 Neelley School of Business
 Texas Christian University
 TCU Box 298530
 Fort Worth, Texas 76129
 (817) 257-7545

From: Slattery, Michael <m.slattery@tcu.edu>
Sent: Friday, September 29, 2023 1:29 PM
To: Stratman, Jeff <jstratman@tcu.edu>
Subject:

Hi Jeff

I hope this email finds you well!

We are putting the finishing touches on a 4:1 program – a BS Environmental Sciences/MS Sustainability. We are looking at classes across campus that would be relevant both as electives in the undergraduate section as well as 5000-level classes that students could take for dual credit in departments that offer those courses. I noticed the following classes in your department that I think would be a really good fit:

Outlook interface showing an email thread. The selected email is from Dawn Elliott to John Slattery, dated 10/11/2023, with the subject "Econ 30543 and 30523".

From: Elliott, Dawn
To: Slattery, John (Professor); Li, Weiwei; Slattery, Michael
Date: 10/11/2023
Subject: Econ 30543 and 30523

Hi, John. I visited with Weiwei yesterday about her interest in teaching Econ 30543 Environmental Economics and Policy more frequently than in the recent past. She indicates that not only will she resume this offering, but she is excited to offer both classes, 30543 and 30523, Resource and Energy Economics.

I shared with Mike Slattery this wonderful news as these impact their program planning. Just sharing it with you – our Resident Scheduler- as you plan out classes in the future.

Thanks so much for all your hard work on this,
Dawn

Dawn R. Elliott
Dawn Richards Elliott
Associate Professor and Chair
Department of Economics
Scharbauer Hall, 4111
(817) 257-6238
d.elliott@tcu.edu

Previous emails in the thread:

- McQuary, Tess** (10/12/2023): Roxo Payment Reminder
- Hnatek, Jack** (10/12/2023): Website components
- Hnatek, Jack** (10/12/2023): Re: Schedule a Meeting
- Texas Christian University** (10/12/2023): TCU Online Compliance Training - Cour... [EXTERNAL EMAIL WARNING] DO NOT
- Heather** (10/11/2023): PEI Pack [EXTERNAL EMAIL WARNING] DO NOT
- Knapp, Sophia** (10/11/2023): Re: Roxo and TCU Dept. of Environmen... Just to confirm, did you want to go with
- Bennett, Tory** (10/11/2023): RE: Bennett, Victoria DOF Fall2023 Perfect... will attach and send!!!!
- Elliott, Dawn** (10/11/2023): Econ 30543 and 30523
- Elliott, Dawn** (10/11/2023): Re: Environmental Econ Mike, I think that is a safe thing to do,
- Elliott, Dawn** (10/11/2023): Environmental Econ Mike, I will defiantly be pittering away on
- Dixon, Colin** (10/11/2023): Re: Eedctic Questions 110367733 I'll have to think on what
- Bennett, Tory**