

Juliet T. Johnston, PhD

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Pronouns: she/they

Education

Georgia Institute of Technology Postdoctoral Researcher Integrated Omics of Wastewater Nitrification Advisor: Dr. Ameet Pinto	2022 - Present
Lawrence Livermore National Laboratory Postdoctoral Researcher Impact of Climate Change on Wetland Microbial Communities Advisors: Xavier Mayali and Mari Winkler Extremophiles in Hotsprings Advisors: Xavier Mayali, Brian Hedlund	2020 - 2022
University of Minnesota, Twin Cities Doctor of Philosophy in Civil Engineering Seasonal Variations in the Wastewater Microbiome Advisor: Sebastian F. Behrens	2016 - 2020
University of Minnesota, Minnesota Master of Science in Civil Engineering Advisors: Timothy M. LaPara and Sebastian F. Behrens	2014 - 2016
Clemson University, South Carolina Bachelor of Science in Environmental Engineering & minor in Women's Studies Tungstate biodegradation, Phosphorous vivianite biomineralization Advisor: Kevin T. Finneran	2010 - 2014
Hillsborough Community College, Florida Associate Degree in Liberal Arts	2008 - 2010

Teaching Experience

Part-Time Lecturer

University of California, Berkeley 2022
CEE211B: Environmental Biological Processes

Adjunct Professor

University of St. Thomas, Minnesota 2019 - 2020
BIOL 207: Genetics, Ecology, and Evolution

Teaching Assistant

University of Minnesota, Minnesota 2014 -2015
CEGE 4502: Water and Wastewater Engineering
Held office hours, graded assignments, guest lectured several classes on wastewater microbiology

University of Minnesota, Minnesota 2014
CSE 1101: Environmental Issues and Solutions
Taught labs to 30 students, and guest lectured to 150 students.

Clemson University, South Carolina 2012 - 2013
Office of Diversity Education: Peer Dialogue Facilitator
Co-facilitated dialogues twice a week on complex campus issues to Incoming freshmen

Additional Teaching Experiences

Preparing Future Faculty Certificate 2019
University of Minnesota Certificate Program
Year-long active teaching development and mentorship with Dr. Carolyn Zeiner

Queer Science 2016 - Present
Facilitator and Organizer

Breakaway Test Prep 2016 - 2019
ACT, AP Calculus, and AP Physics Tutor
One-on-one tutoring and preparatory summer bootcamp instructor

Mu Alpha Theta 2005 - 2008
Mathlete and tutor

Honors, Awards, and Grants

Academic

[Invited] MIT “Future Leaders in Civil and Environmental Engineering.” Life and Activity of Ammonia Oxidizing Organisms in Engineered Environments	2023
Woodruff Academic Leadership Fellows Program Faculty workshop on promoting leadership and positive lab culture.	2023
ASEE eFellows Engineering Postdoctoral Fellowship Two years of funding to outstanding postdoctoral researchers	2022 - Present
National Science Foundation Graduate Research Fellowship Program Three years of funding to outstanding STEM graduate students	2015 - 2020
Council of Graduate Students Conference Travel Grant Travel Award for \$900 to present work with Queer Science	2020
NextProf Nexus 2019 Engineering Selected participant for a preparation of future faculty retreat	2019
Council of Graduate Students “Tim Salo” Leadership Award Leadership award for my work with Queer Science	2019
American Society for Microbiology Student and Postdoctoral Travel Award Travel Award for \$500 to attend ASM Microbe 2019	2019
[1st Place] 3-Minute Thesis Departmental “Grand Slam” Presentation “Seasonal Affective Disorder: For Microbes!”	2018
UMII Updraft Grant for Pilot Microbiome Project Authored and won a Grant for \$3,500 to perform a study as the Principal Investigator	2018
UMII MnDRIVE Graduate Assistantship One years’ worth of funding to an exceptional PhD Candidate	2018 - 2020
CU Boulder College of Engineering and Applied Science ACTIVE Faculty Development and Leadership Intensive Selected participant for a preparation of future faculty retreat	2018
[Finalist] Qiagen Microbiome Award, PhD Student Category	2018
University of Minnesota Biotechnology Institute Travel Grant	2018

Travel Grant for ISME 17 in Leipzig, Germany	
University of Minnesota Civil, Environmental, and Geo-Engineering Travel Grant Travel Grant for ASM Microbe in Atlanta, GA	2018
[Best Poster Award] American Society of Microbiology- NCB Conference <i>Quantification of Ammonia-oxidizing Microorganisms from Several Full-Scale Municipal Wastewater Treatment Facilities</i>	2015
GSC Summer Fellowship Departmental fellowship to cover summer work experience.	2015
President’s List, Clemson University	2014
Dean’s List, Clemson University	2013
<u>Community Organizer</u>	
National Organization for Gay and Lesbian Scientists, Teachers, and Professionals Queer Science- Organization of the Year	2020
American Geophysical Union LGBTQ+ STEM DAY Co-Authored and won a Grant for Queer Science - \$1,000	2019
Trans Justice Funding Project Grant Authored and won a Grant for Queer Science- \$2,500	2019
Minnesota Institute for the Environment Mini-Grant Authored and won a Grant for Queer Science- \$3,000	2019
Trans Justice Funding Project Grant Authored and won a Grant for Queer Science- \$2,500	2018
Minnesota Institute for the Environment Mini-Grant Authored and won a Grant for Queer Science- \$2,500	2018
Trans ‘Stellar’ Award for Innovative Services by Monarch Program of Hennepin County Recognition for creating Queer Science to inspire LGBT young people throughout county	2017
Lavender Award for Leadership and Services from University of Minnesota University recognition for excellence in the LGBT community	2017

Academic Publications and Presentations

Publications

[Accepted w/Minor Revisions] Vilardi K.J., Cotto I., **Johnston J.**, Huo L., Khan S., Tuttle E., Stubbins A., Pieper K., Pinto A. *Spatial distribution, and activity-based sorting of aerobic nitrifying bacteria as a function of nitrogen source, loading, and gradient concentration*. Microbiology Spectrum, 2024.

Qin W., Wei S., Zheng Y., Choi E., Li X., **Johnston J.**, Wan X., Abrahamson B., Flinkstrom Z., Wang B., Li H., Hou L., Sun X., Wells M., Ngo L., Hunt K., Urakawa H., Tao X., Wang D., Wang D., Pan C., Weber P., Jiang J., Zhou J., Zhang Y., Stahl D., Ward B., Mayali X., Martens-Habbena W., Winkler M., *Alternative nitrogen source preferences and transport-dependent ammonia oxidation in ammonia oxidizers*. Nature Microbiology, 2024.

[Accepted at Cell – Special Edition on Sex and Gender in March 2024] Cunningham A., Scheim A., Rajaraman B.*, Anderson B., Castellano B., Clune-Taylor C., Grijseels D.*, Guthman E., Dickinson E.*, Sancheznieto F.*, Titmuss D., Jayasinghe I., McLaughlin J., **Johnston J.*** Aghi K., von Diezmann L.^, Delano M., Miyagi M., Walsh R., Long S., Groh S., Simón(e) S.*, Forslund-Startceva S., Weinberg Z. *Supporting Transgender Scientists*. Cell, 2024.

Gregor R.*, **Johnston J.***, Coe L., Evans T., Forsythe D., Jones R., Muratore D., Francesco Rodrigues de Oliveira B., Szabo R., Wan Y., Williams J., Weissman J.L.*, *Building a Queer- and TransInclusive Microbiology Conference*. mSystems, 2023.

Palmer M., Covington J., Zhou E. Thomas S., Habib N., Seymour C., Lai D., **Johnston J.**, Jiao J., Muok A., Dodsworth J., Liu L., Xian W., Zhi X., Silva L., Bowen B., Louis K., Briegel A., Tocheva E., Woyke T., Northern T., Mayali X., Li W., Hedlund B., *Thermophilic Dehalococcidia with Unusual Traits Sheds Light on an Unexpected Past*, ISME Journal, 2023.

Johnston J., Du Z. Behrens S., *Ammonia-Oxidizing Bacteria Maintain Abundance but Lower amoA-Gene Expression during Cold Temperature Nitrification Failure in a Full-Scale Municipal Wastewater Treatment Plant*, Microbiology Spectrum, 2023.

Johnston J., Behrens S., *Seasonal Activity and Community Composition Shifts in Full-Scale Activated Sludge Sequencing Batch Reactors*, Applied and Environmental Microbiology, 2020.

Johnston J., LaPara T., Behrens S., *Composition and Dynamics of the Activated Sludge Microbiome during Seasonal Nitrification Failure*, Scientific Reports, 2019.

Millerick K., **Johnston J.**, and Finneran K. *Photobiological Transformation of Hexahydro-1,3,5-Trinotriazole-1,3,5-Triazine (RDX) using Rhodobacter sphaeroides*, Chemosphere, 2016.

[Submitted to Nature Communications] Nou N. Covington J., Lai D., Mayali X., Seymour C., **Johnston J.**, Jian J., Buesseker S., Mosier D., Muok A., Torosian N., Cook A., Sleezer S., Briegel A., Woyke T., Eloë-Fadrosch E., Sharpiro N., Bryan S., Hess M., Carlson R., Mewalal R., Harmon-Smith M., Blaby I., Chen J., Weber P., Li W., Dekas A., Pett-Ridge J., Dodsworth J., Palmer M., Hedlund B. *Genome-enabled isolation of Feravidibacter sacchari, an aerobic hyperthermophilic polysaccharide-degrading specialist.*

[Submitted to ISME Communications] **Johnston J.**, Nguyen B., Abrahamson B., Candry P., Ramon C., Cash K., Saccomano S., Samo T., Ye C., Weber P., Winkler M., Mayali X., *Impact of aggregate size on single cell carbon incorporation by wetland bacteria using hydrogel beads as soil surrogates.*

[Submitted to ES&T] **Johnston J.**, Vilardi K., Cotto I., Sudarshan A., Klaus S., Bachmann M., Parsons M., Wilson C., Bott C., Pinto A. *Transcriptomic analysis reveals symbiotic relationship between anammox bacteria and comammox Nitrospira in an IFAS wastewater treatment facility.*

Academic Presentations

Johnston, J., Vilardi, K., Cotto, I., Sridhar Sudarshan, A., Gabrielli, M., Klaus, S., Bachman, M., Parsons, M., Wilson, C., Bott, C., Pinto, A. *Dissolved oxygen's impact on nitrifying bacteria transcriptomic expression in a fully-scale attached growth wastewater treatment system.* International Conference on Nitrification and Related Processes 8, Princeton NJ, 2023

Johnston, J., Vilardi, K., Cotto, I., Sridhar Sudarshan, A., Gabrielli, M., Klaus, S., Bachman, M., Parsons, M., Wilson, C., Bott, C., Pinto, A. *Transcriptomic responses of complex nitrifying communities to changes in dissolved oxygen in a full-scale attached growth wastewater treatment system.* Association of Environmental Engineers and Science Professors 2023. Boston, MA, 2023

[Workshop] Ling, F.***Johnston, J.***, Kantor, R.*, Lawson, C., Ziels, R., Anderson, C., Price, J., Pinto, A.* *Leveraging Microbiome Research in Environmental Engineering and Science.* Association of Environmental Engineers and Science Professors 2022. St. Louis, MO. 2022

[Invited Speaker] **Johnston, J.** *Life and Activity of Ammonia Oxidizing Organisms in Engineered Environments.* Massachusetts Institute of Technology Civil and Environmental Engineering Future Leaders Seminar. Boston, MA. 2023

Johnston, J., Ramon, C., Weber, P., Nuccio, E., Samo, T., Saccomano, S., Cash, K., Pan, C., Chistoserdova, L., Stahl, D., Winkler, M., Mayali, X. *NanoSIMS Analysis to Investigate how Particle Size Impacts Wetland Microbial Carbon Cycling.* International Society for Microbial Ecology- ISME 18, Lausanne, Switzerland. 2022

Johnston, J., Ramon, C., Weber, P., Nuccio, E., Samo, T., Saccomano, S., Cash, K., Pan, C., Chistoserdova, L., Stahl, D., Winkler, M., Mayali, X. *NanoSIMS Analysis to Investigate how Particle Size Impacts Wetland Microbial Carbon Cycling*. Association of Environmental Engineers and Science Professors 2022. St. Louis, MO. 2022

[Workshop] Ling, F.*, **Johnston, J.***, Lawson, C., Ziels, R., Anderson, C., Price, J., Pinto, A.* *Leveraging Microbiome Research in Environmental Engineering and Science*. Association of Environmental Engineers and Science Professors 2022. St. Louis, MO. 2022

Wang, D., Flinkstrom, Z., Candry, P., Godfrey, B., Abrahamson, B., **Johnston, J.**, Bryson, S., Chistoserdova, L., Stahl, D., Pan, C., Mayali, X., Winkler, M. *Experimental Models Bridging Single Cell to Ecosystem Scales to Evaluate Climate-Wetland Feedback Mechanisms*. Department of Energy PI Meeting. (Virtual). 2022

Johnston, J., Abrahamson, B., Flinkstrom, Z., Wei, S., Li, X., Li, H., Wells, M., Ngo, L., Choi, E., Wan, X., Sun, X., Stahl, D., Weber, P., Mayali, X., Pan, C., Qin, W., Martens-Habben, W., Ward, B., Winkler, M. *N₂O Formation and Organic Nitrogen Utilization in Wetland Microbial Communities* Department of Energy PI Meeting. (Virtual). 2022

Johnston, J., Godfrey, B. Ye, C., Candry, P., Abrahamson, B., Bryson, S., Stahl, D., Chistoserdova, L., Mayali, X., Winkler, M. *Hydrogel Beads to Encapsulate Sediment Microbes as a Strategy to Quantify Climate Impacts on Microscale Biogeochemical Activity*. Department of Energy PI Meeting. (Virtual). 2021.

Johnston, J. Behrens, S. *Community Composition and Activity of the Activated Sludge Microbiome During Seasonal Nitrification Failure*. EAWAG, Switzerland (Virtual). 2020

Johnston, J. Behrens, S. *Community Composition and Activity of the Activated Sludge Microbiome During Seasonal Nitrification Failure*. Minneapolis, MN. 2020

(Cancelled due to COVID-19) Johnston, J. *Everybody Poops; Therefore, Everybody Creates Waste*. Café Scientifique at the Bryant Lake Bowl & Theater. Minneapolis, MN. 2020

Johnston, J. Scholder, L. Fuller, C. *Graduate Student Mental Health Seminar*. University of Minnesota Department of Plant Pathology. St. Paul, MN. 2020

Johnston, J., Behrens, S. *Seasonal Shifts in Community Composition and amoA Transcript Abundance in Full-Scale Activated Sludge Sequencing Batch Reactors*. American Society for Microbiology Microbe. San Francisco, CA. 2019

Johnston, J., Behrens, S. *Seasonal Shifts in Community Composition and amoA Transcript Abundance in Full-Scale Activated Sludge Sequencing Batch Reactors*. Association of Environmental Engineers and Science Professors 2019. Phoenix, AZ. 2019

[Invited Speaker] Johnston, J. *An Evening with Juliet Johnston* The STEM Success Initiative at the College of Wooster. Wooster, OH. 2019

Johnston, J., *Seasonal Affective Disorder: For Microbes!* CECE Departmental 3-Minute Thesis “Grand Slam.” Minneapolis, MN. 2018

Johnston, J., and LaPara, T., and Behrens, S., *Seasonal Shifts in amoA Transcript Abundance in Wastewater Sequencing Batch Reactors.* International Society for Microbial Ecology- ISME 17. Leipzig, Germany. 2018

Johnston, J., and LaPara, T., and Behrens, S., *Seasonal Shifts in the Activated Sludge Microbiome and Ammonia Oxidation Performance.* American Society of Microbiology Microbe Conference. Atlanta, GA. 2018

Johnston, J., *Seasonal Shifts in the Activated Sludge Microbiome & Nitrification Performance.* North-Central Minnesota Wastewater Operators Association Annual Conference. St. Cloud, MN. 2018

Johnston, J., *Nitrogen Cycle Seasonal Variation in Activated Sludge.* North-Central Minnesota Wastewater Operators Association Annual Conference. Brainerd, MN. 2017

Johnston, J., *Nitrogen Cycle Seasonal Variation in Activated Sludge.* Civil, Environmental and Geo-Engineering Departmental Seminar. Minneapolis, MN. 2017

Johnston, J., and Behrens, S., and LaPara, T. *Characterizing and Quantifying Bacterial Populations Associated with Nutrient Removal in Full-Scale Sequencing Batch Reactors.* American Society for Microbiology Microbe Conference. Boston, MA. 2016

Johnston, J., and Behrens, S., and LaPara, T. *Characterizing and Quantifying Bacterial Populations Associated with Nutrient Removal in Full-Scale Sequencing Batch Reactors.* MnDrive Symposium. St. Paul, Minnesota. 2016.

[Best Poster Award] Johnston, J., Hite, M., Behrens, S., LaPara, T. *Quantification of Ammonia-oxidizing Microorganisms from Several Full-Scale Municipal Wastewater Treatment Facilities.* American Society for Microbiology- North Central Branch Conference. LaCrosse, Wisconsin. 2015

Community Organizer Presentations

Johnston, J. et al. Open Letter to ISME on LGBTQ+ Gatherings. International Society for Microbial Ecology. 2022.

Johnston, J. *Binning Singletons: LGBTQ+*. World Microbe Forum hosted by American Society for Microbiology and the Federation for European Microbiological Societies. Virtual 2021

Johnston, J. Dean, E. Desphande, N., Sparrows, J., Manion-Fischer, D., Tyler, E., Mueller, T., *Engaging Queer Students in STEM Fields with Queer Science*. The National Gay and Lesbian Task Force: Creating Change Conference. Dallas, TX 2020

Johnston, J. *Engaging LGBTQ+ Youth in Environmentalism with Queer Science Events*. American Geophysical Union Fall Meeting. San Francisco, CA. 2019

Johnston, J. Dean, E. Myers, C. Tenney, R. *Engaging Queer Students in STEM Fields with Queer Science*. Out in STEM National Conference. Detroit, MI. 2019

[Invited Speaker] Johnston, J. *Effective Youth Engagement*. Trans Day of Remembrance Twitter Takeover @AcademicChatter. 2019

Johnston, J., Queer Science Team. *Engaging Queer and Transgender Youth in STEM Research and Mentorship through Queer Science Day Events*. American Society for Microbiology. San Francisco, CA. 2019

[Invited Speaker] Johnston, J. *Jumping into Higher Education*. Youth Summit by OUTFront Minnesota. St. Paul, Minnesota. 2019

Johnston, J., Yakub, M., Tenney, R., Venkatachalam, E., Tyler, E., *Queer Science! Experiences of Being LGBTQ+ in STEM*. Q-Quest, Woodbury, MN. 2018

Johnston, J., *Queer Science Pride! Lab Olympics*. Minnesota Science Museum's Pride 'Social Science'. St. Paul, MN, 2018

Johnston, J., Manion-Fischer, D., *Queer Science*. Youth Summit by OUTFront Minnesota. St. Paul, MN. 2017

Press

Featured Articles

Heidt, A., *Counted at Last: US Federal Agency to Pilot PhD Survey with Questions of LGBTQ+ Scientists*. Nature Article. May 12, 2023

Sci on the Fly Podcast *Careers in STEM Diversity, Equity, and Inclusion* AAAS. April 19, 2023

Severance J., *“By Us, For Us”*: First Queer Science Conference Creates Connections. UConn Today. June 13, 2022

Vassell, S., *Building Community: Spotlight on Dr. Juliet Johnston*. American Society for Microbiology Article. November 15, 2022

Sills J., et al, *Pandemic Inspired Policies*: NextGen Voices, Science Magazine Vol 377, Issue 6601. June 30, 2022

TalkingCrap Blog. *Dr. Juliet Johnston on Being an Environmentalist, sanitation expert and trans woman in STEM*. Who Gives a Crap. March 3, 2022

Sills J., et al, *Defining Events: 2020 in Hindsight*, NextGen Voices, Science Magazine Vol 371, Issue 6524. January 1, 2021

Sills J., et al, *Making Science Accessible*, NextGen Voices, Science Magazine Vol 367, Issue 6473. January 3, 2020

Whitley, J. *The Unstoppable Wasp: Issue 10 (2018)*. Marvel Comics. Interview Pages 23-24. July 17, 2019

Johnston, J., *What it’s like to be a Trans Scientist with Imposter Syndrome*. Lady Science. Online Essay (ladyscience.com). June 17, 2019.

Sills J., et al, *Science-Inspired sustainable behavior*. Science Magazine Vol 364, Issue 6443. May 31, 2019

Sills J., et al, *Unique Identities*, NextGen Voices, Science Magazine Vol 364, Issue 6435. April 5, 2019

Shadel, Jon. them. *The Scientists Fighting to Make the Future of STEM more Queer*. them.us. January 9, 2019

Cartier, K. EOS Earth and Space News. *Outreach Events Engage Queer and Transgender Youth in STEM*. EOS.org, December 10, 2018

Piscitelli, P. Greenie Guide. *Episode 9- Queer Science*. GreenieGuide.com, November 21, 2018

LGBT Scientists, Elevate Science K-5 Textbook, Pearson Education, CA, 2018- Biography representing achievements LGBT engineers

Manion-Fischer, D., *Queer Science*. Gateway by BioTechnology Institute. Minneapolis, MN. 2016

Mentoring, Extracurricular, and Volunteer Experience

Graduate Research Mentor	
Rachel Tenney, Environmental Engineer, LGBTQ+	2018 - Present
Gloria Thomas, Water Resource Science, WoC	2017 - 2020
Undergraduate Research Mentor	
Ananya Kumar, Environmental Engineering, WoC	2022 - Present
Austin Wessel, Computer Science	2022
Niko Deshpande, Environmental Engineering, QPoC	2021
Michael Brown, Mechanical Engineer	2017 - 2018
Amelia McClure, Environmental Engineer, LGBTQ+	2016
Alexander Rogier, Environmental Engineer, LGBTQ+	2013 - 2014
Alexandra McIntyre, Environmental Engineer	2013 - 2014
Women in Science and Engineering (WISE) Mentor	
Olivia Torbin, Physics, LGBTQ+	2018
Laurel Hunt, Mechanical Engineering, LGBTQ+	2017 - 2018
Out in STEM (oSTEM) Mentor	
Sydney Smith, Civil Engineering, LGBTQ+	2018 - 2019
Queer Science (Atlanta, GA)	2022 - Present
Founder, Outreach Coordinator, and Facilitator	
Queer Science (Minneapolis, MN)	
Founder, Outreach Coordinator, and Facilitator	2016 - 2020
Queer Science Day!	
College Prep Day!	
Q-Quest	
Institute of the Environment	
Twin Cities Pride	
Youth Summit	
Creating Change Conference (Washington, DC)	
Youth Science Day by KAYSC Minnesota Science Museum	
Transforming Families (Minneapolis, MN)	2014 - 2017
Transgender Support Group Youth Facilitator	
Youth Facilitator / Chaperone to Creating Change'16 (Chicago, IL)	
Birthright (Israel Jewish Heritage Trip w/LGBTQ Group) (Israel)	2014
Clemson Delegate to Creating Change 2014 (Houston, TX)	2014
Students for Environmental Action (Clemson, SC)	2011 - 2014

Professional Affiliations

American Association for the Advancement of Science	2019 - Present
Association of Environmental Engineering & Science Professors	2018 - Present
International Society of Microbial Ecology	2017 - Present
American Society for Microbiology	2015 - Present
Minnesota Wastewater Operators Association	2017 - 2019
American Water Works Association	
Minnesota Chapter	2015 - 2020
Florida Chapter	2013 - 2019

Skills

Computer Languages	R- Statistical Computing Qiime- Amplicon Sequence Analysis Unix- Metatranscriptomics and Metagenomic Analysis Perl- Scripting
Molecular Biology	NanoSIMS and L'Image Analysis Genomic and Transcriptomic Analysis Quantitative Polymerase Chain Reaction BONCAT Labeling Flow Cytometry Reverse Transcription Nucleic Acid Extraction and Purification Culture Enrichments
Chemical Analysis	Spectrophotometry Assays Gas Isotopic Concentration Analysis
Community Organizer	Organizing and Leading Youth Programs Creating Intensive Workshops Grant Writing Fundraising

Volunteer Recruitment

Selected Graduate Coursework

GRAD 8200: Practicum for Future Faculty Mentorship with Dr. Carolyn Zeiner at the University of St. Thomas	2019
GRAD 8101: Teaching in Higher Education Active learning techniques, education theory, and communication	2018
LAAS 5621: Soil and Environmental Genomics PERL scripting techniques for genomic data	2016
MICE 8992: Discovering Patterns in the Microbiome Computer programs (R and Qiime) to analyze sequencing data	2016
CEGE 8551: Environmental Microbiology: Molecular Theory and Methods Molecular techniques to examine microbial ecologies	2015
BIOC 5361: Microbial Genomics Foundational Course on bioinformatic programs and sequencing	2015
ESCI 8801: Geomicrobiology Microbial role in biogeochemical interactions throughout ecosystems	2015
CEGE 8505: Biological Processes Mathematical modeling of microbial kinetics	2015
CEGE 5561: Environmental Microbiology Foundation on microbiology and bioremediation	2014