

Jeff Yule, Biological Sciences; Environmental Science Program Coordinator
Herbert McElveen Endowed Asst. Professor Biology and Environmental Science
Appointment: 75% Teaching, 25% Research, 5% Service

1. Courses taught and the overall teacher evaluation rating for each course

I teach in support of three undergraduate degree programs, Biology (**BISC**), English (**ENGL**), and Environmental Science (**ENSC**); the undergraduate Honors (**H**) program; and two graduate programs: BISC and Molecular Science and Nanotechnology (**MSNT**). My courses emphasize discussion, critical thinking, and writing, and they also usually involve a math or statistics component.

I give a three-day lecture on human-pathogen evolutionary ecology for David Mills's Medical Anthropology (BISC 466/566). I also supervise research through BISC 360, BISC 517, and BISC 530 (15+ times), direct and serve on the committees of BISC M.S. students, and served on one Math M.S. student's committee. With Computer Science Chair Per Kjeldaas, I'm co-directing two students taking CSC 490C, Applied Computing Project. I also teach University Seminar (UNIV 100) for BISC Honors Students. These activities aren't evaluated.

Introduction to Environmental Science, BISC 211: Fall 2008: 3.6; Fall 2008: 3.8

Introduction to Environmental Science, ENSC 211: Fall 2008: 3.6; Fall 2008: 4.0

Ecology (Lecture), BISC 313: Winter 2008: 3.8, 3.7; Spring 2008: 4.0, 3.9
Winter 2010: 3.7, 3.6

Ecology (Lecture), ENSC 313: Spring 2008: 4.0, 4.0; Winter 2010: 3.0

Ecology (Lab), BISC 313: Winter 2009: 3.5, 3.2

Ecology (Lab), ENSC 313: Spring 2009: 3.7, 2.0

Environmental Literature, BISC 450C / BISC 450C H11 / BISC 516C / ENGL 475:
Spring 2008: 4.0; Winter 2010: 4.0, 4.0, 4.0, 4.0

Research Methods in the Biological Sciences, BISC 502: Fall 2007: 3.2; Fall 2008: 3.5

Research Methods in the Biological Sciences, MSNT 502: Fall 2007: 4.0; Fall 2008: 3.2

Extinctions, BISC 535: Winter 2008: 3.8

Predator Paleobiology, BISC 450A H11/ BISC 535: Spring 2009: 4.0, 4.0

Cats and Dogs: The Ecology and Evolution of Felids and Canids, BISC 450A H11/ BISC 535: In Progress

2. A statement of your beliefs concerning the importance of teaching, research, and community/university service to the overall mission of the university.

Teaching, research, and service can overlap so much that the boundaries between them become blurred. For me, that's a good thing, because I'm trying to reproduce my own educational experience by helping to make the whole university (not just its classrooms and labs) a place of learning. That means regularly interacting with students and the general university community in all three contexts.

I suppose that we all work with similarly blurred boundaries. Sometimes it's just more obvious than others. For instance, my work with student researchers is as much about teaching as anything I do in the classroom. Students gain experience with and a perspective on writing, rhetoric, math, and biology as a dynamic discipline that they wouldn't otherwise gain. And, educationally speaking, it's a two-way street. These co-investigators give me perspective on a variety of issues (e.g., the concepts that are easy and difficult for them to understand) and allow me to better serve students in general.

Sometimes, though, we don't notice the overlap. For instance, teaching is an often overlooked form of service to the university community. The best teachers I had shared enthusiasm for their disciplines and responsibility for giving me broad training. My science teachers expected critical thinking, good writing, and, at least sometimes, solid math. But they didn't shy away from directing my attention to the details of writing or relevant literary texts either. When I make clear to students of all majors that I care about what they write and how they write it, how they analyze an equation or a novel, and whether they can explain a biological, environmental science, or critical theory concept, I'm (hopefully!) sending the same important message I got: Wherever we learn something, we should bring it along with us wherever we go next. In this way, I accept the shared responsibility of giving our students broad training, something I also do when I work with faculty to coordinate Environmental Science and Biology program course content or serve on graduate committees. Service can also involve informal teaching. The six invited on-campus presentations I've given were all teaching and discussion activities that just happened to be run outside of a classroom, where students got to see faculty involved in discussions about ideas that interest and engage them and to join in that activity.

Universities should be places of learning that challenge all of us—to develop existing and new skills and new perspectives. While teaching might be the most obvious way that we do that, it's only one of the main three. A university education shouldn't be intellectually "easy" or single-tracked—for any of the involved parties. We challenge our students in the same ways that we challenge ourselves. As educators with expertise in our disciplines of choice, we implicitly tell our students, "We care about these subjects. Come hear about why." But we educate ourselves, our colleagues, and our students as much through research and service as teaching, and we offer the same implicit invitation when we do: Come hear about and discuss the things we care about. And if there are things you want to discuss, we can talk about them too.

3. A selected list of publications, grants, and similar activities

Publications

Yule, J.V., W.C. Wolf, and **N. Young***. Emphasizing “literacy” in “scientific literacy”: Integrating writing into life science classes. Accepted pending revisions by *Bioscene*, a college biology education journal.

Yule, J.V., C. X. J. Jensen, A. Joseph, **J. Goode****. 2009. The puzzle of North America’s Late Pleistocene megafaunal extinction patterns: Test of new explanation yields unexpected results. *Ecological Modelling* 220: 533-544.

Yule, J.V. 2009. “Extinctions and Mass Extinctions.” *Encyclopedia of Global Warming*. Pasadena, CA: Salem Press. 413-416.

Yule, J.V. and **J. Goode****. 2009. Review of Helmut van Emden, *Statistics for Terrified Biologists*. *Quarterly Review of Biology* 84.1: 85.

Ginzburg, L.R., C.X.J. Jensen, and **J.V. Yule**. 2007. Aiming the “unreasonable effectiveness of mathematics” at ecology. *Ecological Modelling* 207: 356-362.

H. Vicedomini***, **J. Goode****, and **J.V. Yule**. Assessing patterns of late Pleistocene megafaunal extinctions in a sample Australian community: Preliminary model reveals potential shortcomings of overkill as a single-cause explanation. In preparation.

K. Brown, S. Carroll, J. Hajagos, R. Harnett, C. Jensen, J. Stanton, K. Tran, and **J.V. Yule**. 2008. *Laboratory Course Pack: Applied Population Ecology and Conservation Biology: Principles and Computer Exercises*, 2nd Edition. Applied Biomathematics, Setauket, NY. (Authors listed alphabetically)

Nine book reviews (e.g., in *Evolutionary Anthropology*, *Journal of Mammalogy*)

*** N. Young is a Tech biology graduate currently working on a Master’s degree in education at Tech.**

**** J. Goode is a Tech graduate (Mathematics major, Biology minor) who completed a Master’s in Mathematics at Tech and went on to pursue an Applied Mathematics Ph.D. at SUNY Stony Brook.**

***** H. Vicedomini is a Tech senior (Mathematics major, Biology minor).**

National and Regional Presentations

Yule, J.V. and W.C. Wolf. 2009. Emphasizing “literacy” in “environmental literacy”: Integrating writing into life science classes. Association for Environmental Studies and Science, Madison, WI.

Yule, J.V. 2008. Simple ecological modeling for indirect effects: a terrestrial predator-competition case study with implications for coastal protection. MidSouth Society for Environmental Toxicology and Chemistry Meeting, Vicksburg, MS.

Yule, J.V. 2008. Ecological and mathematical models: Leading environmental science/ studies students from settling for a black box approach to an engaged attitude. National Environmental Studies and Science Summit, Jonesboro, AR.

Yule, J.V., C.X.J. Jensen, A. Joseph, **J. Goode****. 2008. A new human predation model for late Pleistocene megafaunal extinction patterns in North America. Ecological Society of America Meeting, Milwaukee, WI.

Yule, J.V. 2007. Pleistocene canids, extinction, and intraguild competition: a paleoecological perspective for conservation biology. Ecological Society of America Meeting, San Jose, CA.

Invited Presentations

Yule, J.V. 2009. "Extinction, predators, and ecological models: Using paleobiology to inform conservation biology." LSUS Health Sciences Center, Department of Biochemistry and Molecular Biology Seminar Series.

Grant Applications

DeCoster, M., Lvov, Y., **J. Yule**. 2009. Board of Regents (BoR) Nanomaterials Safety Lab: Research Integrated with Service and Education Enhancement Grant. \$64,965. Not funded.

H. Ji, R. Selmic, S. Dua, D. Mainardi, P. Derosa, A. Paun, V. Phoha, B. Ramachandran, W. Dai, **J. Yule**, J. Carpenter, J. Palmer, B. Choi, L. Que, P. O'Neal. 2008. Program in Biomimetic Systems Integration, Modeling Biosensor Systems/ Biomimetic Processes. National Science Foundation. \$3.2 million. Not funded.

Zumwalt, G., Hunt, H., White, J., **Yule, J.V.** 2007. Updates for Biological Sciences Computer Lab. Louisiana Tech Student Technology Fee Board. \$37,200. Funded.

Two BoR Research Competitiveness Subprogram: 2009 (\$90,226), 2008 (\$148,733)

Two Louisiana Applied Oil Spill Research and Development Program with SBS Colleagues as Co-PIs: 2007 (\$42,086, \$161,643)

4. A selected list of community/university service activities

School of Biological Sciences (SBS)/Applied and Natural Sciences(ANS)

Coordinator, Environmental Science Program. 2008-present. Took responsibility for a program that had been without a coordinator for two years. **See below for details.**

Member, SBS Graduate Studies Committee. 2007-present.

Member, SBS Recruiting Committee. 2008-present.

Member, SBS Director Search Committee. 2008-2009

Faculty Advisor, Tech Green Action (Newly Founded Student Environmental Organization). 2008 to present.

Key Achievements as Environmental Science (ENSC) Program Coordinator

- Via a full committee vote, revised ENSC curriculum
- Updated ENSC web presence, restructuring navigation options, linking all pages to the admission's office "apply now" option, and adding pages on careers and promoting options for ENSC graduate study via the BISC M.S. program
- As an alternative to expensive glossy brochures, designed a "business card" to promote the degree by directing prospective students to the program's webpage; this ENSC recruiting tool is now available for general use
- Surveyed ENSC graduates to quantify employment and graduate study success. 100% of respondents report employment and/or graduate study in the area of environmental science.
- Regularly meet with prospective ENSC students and their parents
- Arranged a presentation on working in the federal government by U.S. Fish and Wildlife biologist Dr. Creed Clayton of the Glenwood Springs, CO USFWS Office

Invited Campus Presentations/Demonstrations

"The 'New Jersey' pearl rush, California crawfish cuisine, and other market economy improbabilities: A conservation biology perspective on sustainability." Louisiana Tech University's "Shaping the 21st Century: Stability and Sustainability in Global Context" Series. April 14, 2010.

"Late Pleistocene megafaunal extinctions: A research overview." Louisiana Tech GK-12 and NERO Program Workshop. July 1, 2009.

"Predation and parasitism: Large vertebrates to small invertebrates." Region 2 Louisiana Science and Engineering Fair. Demonstration/Discussion. March 24, 2009.

"Writing: Improving your own and your ability to assess others'—a practical overview." Louisiana Tech GK-12 and NERO Program Workshop. September 27, 2008.

"Extinction and (and in) evolution: An overview from Darwin to the present." Darwin Day Event. February 12, 2008.

"Global warming, biodiversity, and species extinction," Global Climate Change Symposium Teach-In. January 31, 2008.

Regional/National/International Service

Judge, Region 2 Louisiana Science and Engineering Fair: 2010 (Chemistry); 2009 (Environmental Science), 2008 (Animal Science and Cell and Molecular Biology).

Judge, Graduate Student Poster Presentations. MidSouth Society for Environmental Toxicology and Chemistry Meeting. March 14-16, 2008.

Test Administrator (Environmental Science), North Louisiana High School Rally. 2009, 2008.

Manuscript Reviewer, Journal of Science Education and Technology, 2010