Introduction

Since I started in the role of interdisciplinary initiatives administrator in September 2014, we launched new academic programs in cybersecurity and leadership, and established a Center for Cybersecurity Education and Research. We continue to work on raising the visibility of the many other interdisciplinary academic offerings at the University including modeling and simulation! I am pleased to highlight this suite of new (and old) interdisciplinary initiatives in this edition of the Bulletin.

Cybersecurity is a pressing national issue and an exploding, interdisciplinary arena of study, research and practice. ODU is responding by adding two new academic programs to its already established cybersecurity training portfolio. ODU is poised to train the next generation of cybersecurity professionals (see page 3).

Another interdisciplinary “hot” topic in Hampton Roads is climate change! ODU continues to demonstrate strong leadership and coordination in the race to understand, prepare for and adapt to the effects of our changing climate including sea level rise (page 5).

In the last issue of the Bulletin we highlighted ODU’s unique strengths in modeling and simulation. In this issue we spotlight the successes of two recent M&S graduates who fully embrace their interdisciplinary interests in M&S for the health sciences and international studies. (page 4)

The Initiative has been working closely with ODU’s new College of Continuing Education and Professional Development to establish a new Interdisciplinary Studies BS major in leadership. This major is in the 2015-2016 Catalog and ready for students to enroll in fall 2015. We are also exploring an exciting series of graduate certificate programs in adaptive leadership.

ODU faculty are on the cutting edge of interdisciplinary research and scholarship. Reports contributed by D.E. Wittkower and Peter Schulman highlight this work.

Finally, to highlight all of the above, plus other programs, announcements and current events, we established a number of new web pages and even a Facebook page. We hope you will check them out, and send us your feedback and ideas for topics for future Bulletins:

www.odu.edu/academics/programs/multidisciplinary
www.odu.edu/ccser

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If you are involved in interdisciplinary teaching, research, or other scholarly endeavors, I would like to feature your or your students’ work in this Bulletin. Please contact me at exsmith@odu.edu
Interdisciplinary Studies

Professional Writing

Contributed by Virginia Tucker
ODU Director of Interdisciplinary Programs and Coordinator of IDS Professional Writing
vmtucker@odu.edu

Nineteen years ago the Interdisciplinary Studies (IDS) Bachelor of Science in Professional writing was developed in the College of Arts and Letters in order to respond to an increasing demand from students for a practical degree that emphasized rigorous writing in the workplace. Now that program has an average of 65 registered majors and can be taken completely at a distance. Students from Washington, California, Arizona, and even Germany have completed the degree and gone on to be technical writers and web writers.

The program first began as an IDS degree in professional communication. However, in 1996, it was revised to focus on core cognate areas and offer two tracks in either strategic communication or professional writing. The Professional Writing Program now offers students the ability to take courses in English and communication, as well as management, marketing, and psychology, among others. The program is designed for students who are interested in strengthening their professional and technical writing skills, but also teaches them how to market themselves for freelance work, running their own business, or earning promotions in their current workplace.

Leadership

ODU’s Interdisciplinary Studies (IDS) degree programs in the College of Arts and Letters are for students interested in combining fields of study that don’t easily fit into a traditional college department. The newest addition to the IDS portfolio of majors is a Bachelor of Science in leadership, which is coordinated with the College of Continuing Education and Professional Development.

This new BS is a flexible, interdisciplinary degree that focuses on characteristics and skills necessary to lead in organizational and social contexts, and will emphasize ethical leadership, legal issues, written and oral communication skills. A goal of this new program is to facilitate adult students to complete their degree and as such, there is inherent flexibility in transferring existing credit. A hybrid of online and traditional on-campus classes results in a very flexible curriculum. Courses are drawn from the disciplines of communications, criminal justice, engineering management, environmental health, finance, human services, management, public administration, and philosophy to examine the multifaceted nature of leadership. Seventy-five percent of courses in this major are offered online, and students are encouraged to integrate education and training with the application of problem-solving skills through a senior interdisciplinary project.

Graduates of this degree program will possess the core liberal arts skills and knowledge such as reasoning, communications and analysis that are crucial to the challenges employers, organizations and governments face. The academic and critical thinking skills taught through this leadership curriculum are valuable on the job as well as navigating modern changes and challenges.

The coordinator for this IDS bachelor’s degree major in Leadership is Dr. Jeanie Kline, Academic Affairs (jkline@odu.edu).

For more information please see: http://www.odu.edu/ids
Cybersecurity

According to two global studies (Pricewaterhouse and Kapersky Lab), the number of detected cyber attacks skyrocketed in 2014 – up 48 percent from 2013. These attacks are costly: an average data security incident may cost a company upwards of $700,000 and a successful attack could cost $2.5 million. The need for cybersecurity professionals is large and growing.

ODU is responding to this need by offering several training options for students. At the undergraduate level, a new Interdisciplinary Studies bachelor’s degree with a major in cybersecurity is now being offered through the College of Arts & Letters. This four-year program of study will integrate education and training with the application of real-world problem-solving skills in the lab. Courses are drawn from philosophy, computer science, computer engineering, information technology, criminal justice and philosophy to examine the multifaceted nature of cybersecurity. Students from any major can choose an interdisciplinary minor in Cybersecurity. Two graduate certificates are also offered at ODU. One is through the Department of Computer Science and Distance Learning and is entirely online. The other is an advanced engineering certificate in cyber systems security offered through the Frank Batten College of Engineering and Technology. Learn more about all of these programs at the Center for Cybersecurity Education and Research website: www.odu.edu/ccser.

Center for Cybersecurity Education and Research

In March 2015, Old Dominion University launched a new Center for Cybersecurity Education and Research (CCSER) that will serve as a multiple-discipline hub of expertise in the international fight against Internet-based crimes. The CCSER is unique in its interdisciplinary approach that brings together experts from across the University. This includes faculty and staff from the College of Arts and Letters, Strome College of Business, Darden College of Education, College of Sciences and Batten College of Engineering and Technology as well as staff from three administrative units - Information Technology Services, the Tri-Cities Higher Education Center and Military Affairs. www.odu.edu/ccser

Spotlight on Programs

ODU Offers Certificate in GIScience

The graduate certificate in Geographic Information Science is offered through the Department of Political Science and Geography in the College of Arts and Letters, and provides a program for students and professionals pursuing careers in geographic information systems (GIS) and related spatial technologies (remote sensing, global positioning systems, cartography, and spatial data handling and analysis).

Since 2007, more than 100 GIScience certificates have been awarded. This program attracts students from diverse backgrounds such as geography, oceanoigrapy, geology, biology, engineering, computer science, history, and criminal justice. For more information, visit www.odu.edu/pols-geog/academics and click on Geographic Information Systems or contact Dr. Hua Liu (hxliu@odu.edu).

ODU’s MonarchTeach: A Unique Collaboration

The interdisciplinary collaboration between Old Dominion’s College of Sciences and the Darden College of Education, in its second year, is aimed at producing more Science, Technology, Engineering and Mathematics (STEM) teachers for secondary schools. MonarchTeach is the only program of its kind in Virginia.

MonarchTeach is a replication of the UTeach model out of the University of Texas at Austin and gives prospective STEM teachers practical classroom experience as early as the first semester of their freshman year. Learn more about MonarchTeach. Contact monarchteach@odu.edu.
Modeling & Simulation Programs Launches New Website

Check out the new website highlighting “Modeling and Simulation Across the Breadth of the University.”

Modeling & Simulation – Interdisciplinary Students Succeed!

Lydia Wigglesworth-Ballard is all smiles on a sunny, March day for this interview about her inspiring academic journey. Lydia recently graduated from ODU with a PhD in health services research with a concentration in modeling and simulation in infection control. A student of ODU Biological Sciences Professor Holly Gaff, Lydia was one of the first recipients of ODU’s Modeling and Simulation Graduate Fellowships and successfully completed her research in health services while pursuing an interdisciplinary graduate certificate in modeling and simulation in the health sciences. Lydia’s research was interdisciplinary and highly collaborative, and she embraced this innovative and rewarding approach although it was challenging. The focus of Lydia’s dissertation research is the use of modeling and simulation techniques to enhance and improve training in infection control. She was one of only seven students selected to represent Old Dominion University at the seventh annual Virginia Council of Graduate Schools’ (VCGS) Graduate Student Research Forum in 2012. Lydia credits her enthusiasm and success to strong mentoring and support from her academic advisor, Dr. Gaff, and from the other members of her committee especially Dr. Ginger Watson-Papelis, a professor of STEM education and professional studies. Lydia’s advice to students interested in interdisciplinary research: “Be willing to step out of your comfort zone and don’t be afraid to ask for help. The most important lessons I learned were to keep an open mind, to be prepared to gather as much information on my own as I could in my disciplines of interest, to lay out a plan, but be ready to have some flexibility.”

Erika Frydenlund is a senior project scientist at VMASC who was an M&S Fellowship recipient through the College of Arts and Letters and recently completed her PhD from ODU in international studies with an emphasis on International political economy and development and modeling and simulation. Erika, like Lydia, also completed an interdisciplinary M&S graduate certificate. Erika’s scholarship was recognized recently when she was accepted into the prestigious, 21st annual Graduate Workshop in Computational Social Science Modeling and Complexity in Sante Fe, N.M., this summer. Her project for the workshop will center on the Pedestrian Agent-based Model that she has been performing for ODU’s Center for Innovative Transportation Solutions, where she will investigate how the model changes when one explores spatial and temporal changes in refugee flows. Frydenlund is interested in using the modeling techniques to influence humanitarian policies concerning refugee populations. Her PhD committee was comprised of Dr. Jennifer Fish (ODU Women’s Studies), Dr. David Earnest (ODU Graduate Program in International Studies, and associate dean of arts and letters) and Dr. Dorian Crosby (Spelman College, political science). Erika’s advice: “Don’t limit yourself to one particular discipline. Keep your mind open to collaboration, and keep your eyes open for opportunities to get your work out into the world. M&S is catching on in many different fields, and the things I learn from my transportation modeling work at VMASC often relate to my interests in social science. As an example, the pedestrian model I work on for VMASC informed the refugee forced migration model that I’m working on here at the Santa Fe Institute. We have so much to gain from engaging in the full spectrum of scholars working in modeling and simulation.”

Congratulations to ODU’s new Modeling and Simulation Scholars (2015-2016)

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Interdisciplinary Course Offerings

Engineering Management (ENMA) 670 – Cyber Systems Engineering  To illustrate the degree to which cybersecurity is an interdisciplinary field, Professor Adrian Georghe shared his students’ presentations from Engineering Management 670 – Cyber Systems Engineering. This course provides an overview of cyber systems including how a computer interacts with the outside world. The students’ projects looked at interactions of systems that are complicated and impactful. One examined the economics of cyber attacks on airport air traffic control systems. Another studied how to make computers and other devices “smarter” so they can make and manage complex decisions. The presentation is available on the CCSER website.

Civil & Environmental Engineering (CEE) 404 – Environmental Engineering Design Project and Professional Practice and CEE 458/558 Sustainable Development  Last semester, Professor Mujde Erten-Unal’s civil engineering senior design students entered into a unique collaboration with Wetlands Watch, Hampton University Architecture Department, several local engineering firms, the city of Norfolk engineers/planners, and scientists from the Virginia Institute of Marine Science to discuss design options for an historic Norfolk neighborhood that is particularly vulnerable to flooding. The ODU and Hampton students and faculty met regularly with city architects, engineers and planners to analyze and plan innovative approaches to adaptation. Early in the process, the students got the community involved by attending their civic league meetings, walking through the flood-prone streets and talking one-on-one to residents of Chesterfield Heights about their experiences with water. The students’ commitment to combining their engineering skills in a unique service-learning project gained attention from ODU and also from local radio show host Cathy Lewis (hearsay.org), who interviewed them for her noon radio show called “HearSay.” Dr. Erten-Unal will again be teaching a hands-on, collaborative approach to civil and environmental engineering in her Sustainable Development course this fall. The goal is to expand the students’ design work to a new neighborhood and to solidify the service-learning component of their work.

Ocean, Earth and Atmospheric Science (OEAS) 495/595 – Introduction to the Science of Mitigation and Adaptation  Offered for the first time at ODU this fall 2015, the Introduction to the Science of Mitigation and Adaptation has been developed by Professor Hans-Peter Plag (OEAS and director of ODU’s Mitigation and Adaptation Research Institute) and aims to introduce the science underpinning mitigation of human-induced changes in the Earth system, including climate change and sea level rise.
**Scholarship & Service**

**JENIFER ALONZO CHOSEN FOR INTERDISCIPLINARITY AWARD**

On April 29, Old Dominion University’s College of Arts and Letters held its annual awards reception at the Goode Theatre.

During the event, Dean Charles Wilson presented the award for Outstanding Contributions to Interdisciplinarity to Jenifer Alonzo, associate professor of communication and theatre arts. Congratulations, Jenifer!

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**Internet Research at ODU Gains International Prominence**

Contributed by D. E. Wittkower  
Philosophy & Religious Studies  
dwittkow@odu.edu

With recent hires and emerging scholars, ODU is developing a new prominence in the interdisciplinary field of Internet studies. Seven different ODU scholars from seven different departments have had papers accepted by blind peer review for the 2015 annual meeting of the Association of Internet Researchers (AoIR).

The annual AoIR conference is a premier international conference in the cross-disciplinary field of Internet studies, held this year in Phoenix; last year in Daegu, South Korea; and next year in Berlin. The conference draws top scholars in the field each year, but, with attendees in the low-to-mid-hundreds, is small enough to provide significant contact between junior and senior researchers.

PhD student Brendan O’Hallarn said, “Being in the company of researchers whose work I have cited in my writing will be a tremendous experience, and I fully expect to form relationships that lead to future research collaborations.” Few, if any institutions will be better represented at this year’s Internet Research conference than ODU; our strong presence will put us on the map, internationally, as a place where significant and multidisciplinary work in Internet studies is happening.

Professors Jenifer Alonzo (associate professor of communication and theatre arts) and D.E. Wittkower (assistant professor of philosophy) will be running a half-day preconference workshop on the use of techniques from Theatre of the Oppressed in teaching new media theory.

Sarah Florini (assistant professor of communication and humanities) will present a an ethnographic study of how the independent digital media company This Week in Blackness leveraged its existing digital networks in order to support agile and effective on-location citizen journalism in Ferguson, MO.

David Z. Gehring (MA student, humanities) will present a research paper on the political use of crowdfunding campaigns, such as the controversial GoFundMe campaign to support Ferguson, MO, police officer Darren Wilson.

Roderick Graham (assistant professor of sociology and criminal justice) will present a research paper on shifts of law and policy starting in the late 1990s which sought to support commercial use of the Internet but simultaneously reduced the public and democratic potentials of the Internet.

Brendan O’Hallarn (PhD student, sports management) will present a research paper arguing that Twitter can be seen to exhibit the kind of rational-critical discourse needed for deliberative democracy in public debate on sports, using examples like Ray Rice and the #whyistayed hashtag.

Sarah Spangler (PhD student, English) will present a research paper investigating how gender performance on Facebook is subject to feedback loops enforcing conformity through the influence of algorithms controlling which of our posts are visible, and to whom, and which posts and advertisements are algorithmically selected to appear in our own News Feeds.

Professor D.E. Wittkower will present a research paper using feminist ethics of care to develop a theory of information exchange between friends that can suggest novel and helpful ways of thinking and talking about privacy in the larger contexts of corporate and governmental use of personal data.

Roderick Graham, Brendan O’Hallarn, and D.E. Wittkower will also be participating in a roundtable discussing economies of the Internet falling outside of the dominant interpretations focusing on commerce and user activity as unpaid labor, including moral economies, cultural economies, affective economies, and libidinal economies.

Internet studies itself has no degree program, no research center, no positions, and no funding at ODU, but these scholars in their respective departmental homes show the depth and breadth of cross-disciplinary research in the field already taking place at ODU. Perhaps a more formal organization of Internet studies scholars is on the horizon.
Green Humanities

Contributed by Peter Schulman
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http://greenhumanities.org/

When my colleague, Dr. Josh Weinstein, an English professor who specializes in eco-criticism at Virginia Wesleyan College, and I decided to start our new journal, called Green Humanities: A Journal of Ecological Thought in Literature, Philosophy & the Arts, surprisingly there were only three similar journals worldwide: a journal in Australia; ISLE, the publication arm of ASLE (the Association for the Study of Literature and Environment); and an online journal published by the University of Nebraska. We wanted a venue that would combine our love of nature with our concerns for ecological emergencies such as global warming and rising sea levels, which concerned us greatly living in Hampton Roads. We also wanted to highlight ways in which literature, philosophy and art could also play a role not only within eco-criticism, a burgeoning field in the humanities, but also as partners with the sciences. We too could help to influence public opinion and inspire engagement with ecological issues and causes.

The choice of having an online venue was the perfect one for our venture as it was in tune with the immediacy of the environmental crises that surround us (hence our first issue devoted to the topic of “Eco-gencies”) and allowed us more flexibility and creativity with our inclusion of photography, artwork and a special poetry section. Moreover, by having an online presence we could reach out to so many more readers and scholars worldwide. That is why we carefully collected an Editorial Board and an Advisory Board made up of specialists in environmental humanities, not only from throughout the United States, but from the four corners of the world. On our boards, we have specialists from France, the U.K., Japan, Korea, Belgium, and Canada; in our first issue we included articles from scholars from Singapore, Australia and Italy.

Our next issue will focus on “Food and Sustainability.” We plan on including video-streamed interviews in our volume and are planning local events with Hampton Roads farmers and chefs, as well as events in New York and Los Angeles with topical authors and speakers. Our goal is indeed to work closely with community, make connections and bridges between the College of Arts and Letters and the science departments of ODU as well as to create a worldwide conversation among a large range of readers.

Vulnerability Studies Attract Federal HUD

Professors Joshua Behr and Rafael Diaz, both research associate professors at VMASC, have received funding from the U.S. Department of Housing and Urban Development (HUD) to fulfill its mission to help inform local housing planning practices by employing models and simulations that will help identify best practices to facilitate housing recovery following a natural disaster such as a severe storm. They will study housing recovery in the wake of a natural disaster as a supply chain issue with the express aim of identifying practices that can go into place now to optimize post-disaster recovery.
Events

Mitigation and Adaptation Research Institute (MARI) Leads First Assessment Report Workshop

MARI led a workshop on Aug. 11-13, 2015, to develop the First Assessment Report of the State of Knowledge on Climate Change and Sea Level Rise Mitigation and Adaptation in Virginia.

For a report, go to http://www.odu.edu/news/2015/6/mari_symposium#.VYCPI6Z3QRI

MARI also convened monthly faculty networking meetings centered around the following topics:

- **February 2015**  Education Activities (courses taught, etc.)
- **March 2015**  Civil Engineering 458/558 students present their design project (see page 5)
- **April 2015**  Publications related to MARI themes
- **May 2015**  What are the Key Messages in Climate Change and Sea Level Rise?

**Fall 2015 MARI Faculty Networking Meetings**

- **August 28, 2015**  October 29, 2015
- **September 29, 2015**  November 17, 2015

The Importance of Being Interdisciplinary

Brian K. Payne, Vice Provost

Excerpt from Presidential Keynote Address, 2015 Academy of Criminal Justice Sciences

The college or university also benefits from interdisciplinary efforts. On one level, research funding and other forms of federal funding are likely easier to attain when higher education institutions can demonstrate that they are responding to societal demands. On another level, these efforts, because they are responsive to societal demands, produce more marketable graduates. ...

There may be a tendency to discredit the marketability benefit of interdisciplinary programs, especially for our graduate students. Such wisdom is shortsighted. ...

A recent study considered the influence of interdisciplinary dissertation projects for doctoral recipients between 2004 and 2007. Focusing on 4,599 dissertations, ... the author found that

“the odds of working in an academic position are 26% higher for interdisciplinary researchers than for non-interdisciplinary researchers” (p. 1158) and

“interdisciplinary research does have a significant, positive effect on publication productivity” (p. 1162).