CCU’s Office of Research Services Supports Faculty Seeking Grants

Karen Fletcher, Pre-Award Services Manager, Office of Research Services

Coastal Carolina University strives to provide a rich, textured environment of creativity and discovery for faculty and students. Research is a primary mission of the University in order to open new pathways to interpret and understand our world. Scientists, scholars, educators, visual and performing artists, and others engaged in research, innovation and performance have the opportunity to work side-by-side with undergraduate and graduate students in the classroom, the laboratory, on the stage or in the field.

On campus, the Office of Research Services offers support to faculty to generate increased interest in grants supporting research, training and public service opportunities. The Office of Research Services personnel provide faculty with information on grant and funding opportunities. We assist faculty and staff with preparation and submission of proposals and ensure compliance with all federal and state regulations pertinent to grant eligibility and grant transactions. Office of Research Services personnel are available to host grantsmanship workshops, meet with faculty one-on-one and assist with post-award requirements and tracking.

Each year our office offers training sessions and workshops on finding funding, proposal development, budget development and compliance. Register for our sessions through the CeTEAL website: coastal.edu/ceital. To learn more about the services offered by the Office of Research Services, visit our website: coastal.edu/research/ors and consider contributing to research in your field next year.

Research is being conducted all over campus. The most active area for grants is the sciences, followed by education. Grant activity in the 2014 fiscal year totaled $1.7 million. The following charts provide a summary of grants...
Examining Children’s Interests in Science

Contributor: Catherine Scott, Assistant Professor of Elementary Education, Spadoni College of Education

One area of concern for both the education and scientific communities is the declining number of students, particularly minority students, interested in studying science. As I am interested in science education, one of my research areas focuses on the ways in which teachers, instructors and others influence student interest in science.

Through research examining children in science, I’ve found that the way instructors interact with students and the activities in which children engage impact what children perceive as “doing science.” For example, I examined the normative scientific practices (Carlone, Haun-Frank, & Webb, 2011), or what it means to be scientific in a particular context, that children associated with participation in summer science programs (Scott, 2013; Scott, under review). I followed two herpetology programs for children. Both were advertised as hands-on experiences to get children ages seven to eleven engaged with animals. In one program, children looked for reptiles and amphibians, set traps and designed experiments to learn about the organisms. At the end, participants shared that being a scientist meant using tools, working with animals, collecting data and using evidence to support findings.

Conversely, in the second program, children were presented information on reptiles and amphibians in a classroom. Unlike the first camp, they were not allowed to handle the animals or freely explore the outdoors to look for evidence of wildlife. After this program, when asked the same question, participants noted that scientists know facts and follow procedures. Although these are traits typically associated with scientists, the latter group’s limited perception of science was concerning, particularly when compared to perceptions of the first group.

Of course, informal settings are not the only place that children come to understand what it means to do science – the classroom matters a great deal too. In a longitudinal study starting in fourth grade, we found that all children could perform scientifically when provided opportunities to do so. The students’ teacher provided multiple entry points for students to engage in science, and used individual strengths and interests as building blocks on which to build the curriculum. Sadly, as these students progressed from fourth to sixth grade, we found that fewer performed scientifically because their teachers limited what counted as science. For instance, in fourth grade, a student’s need to take up space and share answers served her well as a group leader; by sixth grade, these same behaviors were viewed as “bossy” and “disruptive” (Carlone, Scott, & Lowder, 2014). As teachers limited the ways in which one could be viewed as a science student, fewer students viewed themselves as individuals who could do science.

“As teachers limited the ways in which one could be viewed as a science student, fewer students viewed themselves as individuals who could do science.”

--Catherine Scott

What are the implications for those of us working in science and teaching others about science? First, our actions matter a great deal, not just our words. It is important that we model a wide variety of behaviors for students and that we provide them opportunities to try authentic scientific practices. We must also recognize and celebrate the diverse skills that our students can bring to the classroom, so more students recognize that they too can be a “science person.” As educators, we are the ones who enable and constrain opportunities for our students!

Studying Bacteriophages with Student Researchers

Contributor: Paul Richardson, Associate Professor of Biochemistry, College of Science

Bacteriophages, also referred to as phages, are a class of viruses that only infect bacteria. It is estimated that they are most abundant living entity on this planet with estimates of their number between $10^{30}$ to $10^{32}$ viruses. Every location on the planet that contains bacteria contains bacteriophages. Bacteriophages are critical to the control of bacterial populations and to the maintenance of a diverse bacterial population.

To understand the dynamics of a bacterial system, detailed understanding of phages is a necessity. Studies have shown that bacteria and phages have a co-evolutionary relationship – an arms race – as one evolves so does the other. It is important that we understand the role that bacteriophages play in our environment. The health of an ecosystem—including our coastal estuaries and human populations – is often tied to the viral population that it supports.

My lab has been interested in developing tests to detect the presence and abundance of these phages in our community. Currently our lab has four projects that CCU students are working on, all with the focus of developing techniques that could be used to prevent bacterial diseases or bacterial contamination.

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Faculty Focus on Research

Studying Bacteriophages with Student Researchers
Continued from page 2

Derek Pride (biology major) and Amy Powers (biochemistry major) are involved in a project collecting samples from volunteers on campus and determining if they have bacteriophages that are lytic against Staphylococcus aureus. The purpose is to collect a library of phages that might have the potential to be used to treat Staph skin infections.

Biochemistry major Amy Powers is running a plague assay to detect if samples collected from CCLU students are positive for bacteriophages.

Biology major Derek Pride Powers is checking viral amplification cultures in a shaking incubator.

Another project is led by Joe Cannon (marine science and biochemistry double major). He has been collecting water samples from the local estuaries and testing to see if there is fecal contamination using a test that detects phages specific for coliform bacteria (bacteria specific to fecal matter). The third project is led by Jordan Wesel (biochemistry major) who is determining if d-amino acids can be used as a therapeutic agent to slow the growth of bacteria.

Our final project is the molecular testing and fingerprinting project conducted by Nick Thurn (biochemistry major), Jakob Martin (biology major) and Joshua Cooper (biochemistry major). These students are developing molecular techniques to identify bacteriophages and a means to isolate the genetic fingerprints to distinguish between these microscopic agents. These students show a passion for science and a yearning for greater understanding of the world around them, as evidenced by all the extra time they spend in the lab doing research and helping in the battle against bacterial threats.

Studying Multiracial Identity

Contributor: Hephzibah Strmic-Pawl, Assistant Professor of Sociology, College of Science

My research investigates how multiracials (people who self-identify with two or more races) understand their racial identity and how they navigate their racial identity in the context of current racial dynamics. When I speak about my research, the first question I usually receive is: “Are you multiracial?” After I respond “No,” the next question quickly comes: “Then why study multiracial identity?” This question, seemingly straightforward and simple, actually has a complex answer that is difficult to communicate. People usually do not understand my desire to study the racial hierarchy and racial oppression, particularly as I am a White woman. The shortest response I can provide is that I see racism as the most significant barrier to progress – progress as individuals, as communities, as a nation and as a global community.

The idea that we, at least the United States, are “post-racial” is a seductive notion that any of us would like to believe. The election of our first Black President (or multiracial, depending on your classification), the decisions by the Supreme Court to weaken affirmative action and the Voting Rights Act and the general increase in racial integration are cues to society that we are “past-race.” These cues, however, are merely mirages on the landscape of society. When we look at important institutional arrangements (education, judicial system, health), a different story emerges: one of continued racial segregation and racial oppression.

The continuing significance of race and racism, in contrast to our ideas of post-racialism, led me to my current research on multiracials. Multiracials and multiracial organizations often herald multiracialism as a sign of racial reconciliation as interracial families and multiracial individuals are seen as the biggest sign of racial progress. Multiracial organizations project that the United States is moving toward a future where all people will be “mixed” and racism will naturally decrease because there will no longer be any clear distinctions among races. To evaluate these claims and to juxtapose evidence of enduring racism next to a rise in multiracialism, I used in-depth interview guides and racialized vignettes to evaluate how Asian-Whites and Black-Whites navigate race and racism. I find that Asian-Whites, who are accepted as closer to Whites and Whiteness, experience less racism and adopt, like Whites, post-racial and color-blind ideologies. In stark contrast, Black-Whites, who are accepted as closer to Blacks and Blackness, experience racism on a daily level and, like Blacks, see racism as a predominant problem in society. This research reveals that despite the fact that both Asian-Whites and Black-Whites claim a multiracial identity, they do not have the same experiences or perceptions of race and racism. Asian-Whites are able to climb the racial hierarchy and move toward Whites; moreover, as they move upward they are able to attain the benefits of Whiteness. Black-Whites are not seen as equals and their racialized experiences reflect this fact. The significance of these findings reveals that the U.S. is not past race; it is not moving toward a harmonious future where everyone is “mixed” and racism falls to the wayside. Thus, when people ask me why I study multiracials, or racism in particular, I point them toward the results of my research and that of other critical race scholars: the racial hierarchy is a reality.

Studying the Expression of Shared Attitudes and Values

Contributor: Amanda Brian, Assistant Professor of History, College of Humanities and Fine Arts

As a cultural historian, I find myself fascinated by attitudes and values people in the past shared and the expressions of those shared attitudes and values in objects and texts. I hope to demonstrate in my research and my teaching how we think about our world and how that thinking is fundamentally shaped by the historical production of culture. One example of this goal is a new direction of scholarly inquiry that I began here at Coastal with funding.

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Local Economic Study Can Inform or Benefit from Broader Research

Contributor: Robert Salvo, Research Economist/Associate Professor of Finance and Economics, Wall College of Business

I am involved in two distinct types of research at CCU. As the research economist for the Center for Economic and Community Development, I focus on aspects of our local economy that concern our community stakeholders in the private and public sectors. Much of this research requires periodic, ongoing analysis of the labor market and key industries including banking, real estate, construction and tourism. Business leaders have an interest in how developments in and beyond our region might ultimately affect their industry. For example, how much does our housing market resemble the national housing market, and do developments in the national housing market necessarily predict developments in our local market? As the nation’s or state’s economy undergoes adjustments, we would like to be able to have a better understanding of how various aspects of our local economy might adjust.

As an associate professor of economics in the Wall College of Business, I maintain a research program that is concerned with broader aspects of economic policy. Often this research either informs or benefits from my research for the local economy. Much of this research came together in my first book, Entrepreneurial Action, Public Policy, and Economic Outcomes, an edited volume published this year. I am interested in how economic policies come to be, and to the extent that they differ across locations or across time, I am interested in how policies affect economic outcomes.

As an example, one chapter in the book extends my research on eminent domain and economic growth. The 2005 U.S. Supreme Court decision in Kelo v. City of New London, Conn., expanded the takings clause of the Fifth Amendment from a “public use” doctrine to a “public purpose” doctrine. The decision upheld the use of eminent domain for private economic development. States’ responses to this interpretation varied, with some states expressly allowing this use of eminent domain and others expressly forbidding it. My research looks at how this use of eminent domain affects the broader notion of economic development.

This example suggests how local applied economic research can either inform or benefit from broader scholarly economic research. Local governments and their citizens have varying opinions on the use of eminent domain, as they do on many aspects of regulation, public goods provision, school funding and more. Often economic research makes use of outcomes observed in other places or in other time periods, controlling for various factors, and the results can help us understand how seemingly similar policies or actions might result in very different outcomes when applied in a different setting.

Distance Learning Institute Certificate

If you are interested in learning more about teaching online, consider attending CeTEAL’s Distance Learning Institute in December. At the request of faculty, we are offering the DL Institute in a condensed format that covers the most important aspects of teaching online while allowing participants the flexibility to choose the sessions they need.

To complete the DL Institute and receive a certificate, faculty will attend three required sessions on the first morning of the Institute, choose five additional sessions (some previously attended sessions may count) and then complete a short follow-up session in January.

Distance Learning Institute

Dec. 15 - Dec. 18

The December Distance Learning Institute will be followed by a faculty roundtable discussion: “A Conversation About Teaching Online”
Library Resources
To find the resources described below, go to the Kimbel Library web page and click the “Database Finder” link below the main search box in the middle of the page. Use the alphabetical index to locate the resource by title.

Points of View Reference Center
Looking for interesting topics for your online or in-class discussions? Take a look at the Points of View (POV) Reference Center in the Kimbel Library databases. The POV Reference Center is a collection of articles on oft-debated topics such as stem cell research, complementary medicine, coastal drilling, genetically modified organisms and many others. Most topics on the site include point and counterpoint arguments, a guide to critical analysis and links to related library resources. The information provided can provide a starting point for engaging and educational class discussions.

Journal of Visualized Experiments
Journal of Visualized Experiments (JoVE) is a peer-reviewed video journal that shows lab and field procedures for all areas of science. Currently, full video viewing is available for biology.

Films on Demand
Films on Demand (FOD) is an excellent resource for science videos. The FOD database contains a wide variety of videos from many science disciplines, and most videos have transcripts and closed-captioning. With the increase in concern over the accessibility of online course content, FOD videos are a great alternative to narrated PowerPoints. In addition, FOD videos are divided into easy-to-watch segments that can be accessed directly. Instead of having students watch a 60-minute video, you can link them directly to the most important segments.

Build a Science Lesson in Moodle
The Lesson tool in Moodle allows instructors to build a structured online lesson including text, images, video clips, simulations and assessments. Students can read and view content and answer related questions as they move through the lesson at their own pace. Instructors can design the lesson to redirect students to prior information if they are unsuccessful at answering related questions.

Videos & Simulations
The websites listed below are great sources for videos and simulations to help students understand various science topics. Many of these resources can be easily added to your Moodle course or shared in the classroom.

U.S. Geological Survey Educational Videos and Animations
(http://education.usgs.gov/videos.html)
Topics include astrogeology, biology, climate change, earthquakes, tsunamis and more.

Khan Academy
(https://www.khanacademy.org/library)
Topics include math, physics, chemistry, probability and statistics, biology, computing and more.

National Science Foundation’s Multimedia Gallery
Topics include psychology, physics, chemistry, biology and more. Search the videos using the “Search Multimedia” link above the list.

National Science Foundation Science 360 Videos
(http://science360.gov/files/)
Topics include social and life sciences, chemistry, biology astronomy, math, engineering and more. (iPad app available)

Crash Course on YouTube
(https://www.youtube.com/user/crashcourse)
Topics include biology, ecology and general chemistry.

SciShow on YouTube
(https://www.youtube.com/user/scishow)
SciShow answers all kinds of questions and makes “curiosity contagious.”

Astronomy Education at the University of Nebraska-Lincoln
(http://astro.unl.edu/animationsLinks.html)
Topics include astronomy.

BioInteractive (Howard Hughes Medical Institute)
(http://www.hhmi.org/biointeractive)
Topics include physiology, scientific method, biochemistry, earth science, medicine, statistics and more.

Cool Apps for Science

Solve the Outbreak
Centers for Disease Control and Prevention’s “Solve the Outbreak” app allows you to become a disease detective. The app is great for showing the process of epidemiology through simulated outbreaks. (For iPad and Android)

Earth Now
From NASA’s Jet Propulsion Laboratory, the Earth Now app visualizes data sets from NASA’s Earth Science satellite. Swipe the screen to rotate a 3D model of the earth showing global climate characteristics. (For iPad and Android)

SimpleMind
SimpleMind is a mind-mapping tool you can use for brainstorming or for structuring related ideas. The interface is easy to use, allowing you to add, link and rearrange topics in a variety of visual styles. (For iPad and Android)

iTunes U
iTunes U allows you to create and view courses on your iPad. Features include opportunities for online discussion, free courses on a wide variety of subjects and a large catalog of free educational content. (For iPad and iPhone)
Creating a Multimedia Experience in Moodle

In a recent training session at CeTEAL, a faculty member demonstrated how she uses the Book tool in Moodle to deliver course content to her students. For each unit of her course, she has created a book containing text, images, audio files, and videos related to the course topics. Students can read through course notes related to a topic and click on embedded video or audio examples to augment their reading. The variety of media types helps make the material more engaging and satisfying to those students who consider themselves visual or auditory learners.

For more information on creating a Moodle Book, check the CeTEAL faculty development site for upcoming Moodle sessions.

Common Moodle Quiz Questions

How can I review a student’s quiz attempt?

If you want to see exactly how a student answered the questions in a quiz in Moodle, follow these steps:

1. In the course content area, click the name of the quiz.
2. On the quiz information screen, click the Attempts link. This will display a list of all quiz attempts.
3. Under the student’s name, click the Review attempt link to display the student’s quiz. From this screen, you can override a grade or add a comment to individual questions.

How can I reset a student’s quiz attempt?

If you need to reset (delete) a student’s quiz attempt, follow these steps:

1. In the course content area, click the name of the quiz.
2. On the quiz information screen, click the Attempts link. This will display a list of all quiz attempts.
3. Check the box to the left of the student’s name.
4. Click the Delete selected attempts button at the bottom of the list.

Why is the quiz grade hidden from students?

If students are not able to see the grade for a quiz, check the following settings:

- Under Review options on the Edit settings screen, check the Points (Marks) box in each of the last three columns to ensure the grade is visible after the test has been completed.
- In the main content area of the course, make sure the “eye” for the quiz is not set to hide the quiz. If the quiz is hidden, the grade will be hidden.

For the answers to more common Moodle questions, visit: libguides.coastal.edu/moodlefaculty.
CeTEAL Training Schedule

To see our complete training schedule, visit coastal.edu/ceteal.

**Assessment & Evaluation**

Stopping Plagiarism at the Source: Why Assignments Matter Webcast  
Nov. 6, 1 p.m.

Creating Effective Assignments  
Nov. 10, 11 a.m.  
Nov. 18, 1:40 p.m.

Classroom Assessment Techniques: Affective Domain (Values, Attitudes and Appreciation)  
Nov. 11, 1:40 p.m.

Giving Tests: Strategies Before, During and After the Test  
Nov. 14, 1 p.m.

To Share or Not to Share? Building Effective Peer Review Assignments Webcast  
Nov. 20, 4 p.m.

**Innovative Technology**

Camtasia Studio for Video/Screen Capture  
Nov. 12, 2 p.m.

Advanced Prezi: Going Beyond the Basics  
Nov. 20, 10 a.m.

Online Turnitin Training – Recorded Webinar  
Register for the class, and we will send you access information

**Rubrics Simplified**  
Dec. 8, 9:30 a.m.

Moodle Rubrics  
Dec. 8, 11 a.m.

**Distance Learning**

Using Peer Review in an Online Course – New!  
Nov. 6, 9:25 a.m.  
Nov. 17, 2 p.m.

Distance Learning Institute – Conclusion  
Dec. 9, 1 p.m.

**Teaching Effectiveness**

Using Just-in-Time Teaching to Increase Student Preparedness  
Nov. 13, 1:40 p.m.

Best Practices for Using Clickers in the Classroom  
Nov. 14, 10 a.m.

**Roundtables**

A Conversation About Teaching Online – What Worked and What Didn’t  
Dec. 10, noon

**Moodle**

Respondus Quiz Builder  
Nov. 7, 1 p.m.

Moodle Gradebook Workshop (Drop-in)  
Nov. 20, 1 p.m.  
Nov. 21, noon

Moodle Q&A  
Dec. 5, 1 p.m.

Moodle Gradebook  
Dec. 8, 11 a.m.

Moodle Q&A – Getting Ready for Next Semester  
Dec. 11, 10 a.m.  
Dec. 12, 1 p.m.

Moodle Organization  
Dec. 15, noon

**Blackboard Learn**

Downloading and Archiving Content and Essential Student Data from Your Blackboard Classes  
Nov. 10, 2 p.m.  
Nov. 13, 10:50 a.m.  
Dec. 11, 2 p.m.  
Dec. 15, 1 p.m.

**Distance Learning Institute**

CeTEAL is offering a condensed version of the Distance Learning Institute in December. Sessions will be scheduled on Dec. 15 – Dec. 18. To see the complete schedule and register for the DL Institute, visit the CeTEAL website coastal.edu/ceteal.

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**A Conversation about...**

Some of the most effective and engaging sessions in CeTEAL have resulted from the willingness of faculty and staff to share their stories and ideas. CeTEAL is developing a series of roundtable discussion opportunities, and we would appreciate your input. The first roundtable, “A Conversation about Teaching Online – What Worked and What Didn’t,” will be held on Dec. 10 at noon. The discussion will be based on sharing what we learned this semester as we taught online. We hope this will be an opportunity for faculty to learn from each other’s experiences and get some new ideas for the spring semester. Everyone is welcome, even if you have never taught online but would like to learn more about it.

Starting in January 2015, we hope to have at least one “Conversation” each semester, and we are looking for topics of interest to you. If you have an idea for a “Conversation” roundtable, please email Tracy Gaskin at tgaskin@coastal.edu.
From the Director

Dodi Hodges, Ph.D., Director of CeTEAL

This issue of the CeTEAL News is about research. Our faculty are expected to complete more research than ever before. Most of us are grateful we are not at an R-1, because we love teaching our students. We also understand that research informs our teaching and our service.

CeTEAL is committed to helping our faculty achieve and become better instructors, researchers and leaders through service. We work with several programs on campus to help faculty complete their research requirements, get involved in study abroad courses and obtain grant funding on and off campus. Our writing circles are excellent resources to get more information about grants and get the kind of accountability for completing papers to turn into articles that faculty need in order to balance their hectic schedules.

Our faculty are excellent at completing searches for supporting documentation for their research. To support this process, Kimbel Library has expanded the number of databases available and changed the search mechanism. Because the University has a new copyright policy, it is more important than ever to use the services of the library for videos and documentation. If you haven’t attended a library session in CeTEAL for more than a year, be sure to check out the library sessions offered this in the upcoming semester.

Contingency Instruction Resources

With flu season and winter weather headed our way, CeTEAL staff would like to remind everyone about the Contingency Instruction website. The website was developed to provide faculty with guidance for teaching from off campus when teaching on campus may be difficult or impossible due to weather or illness. The website provides information on alternate course delivery methods and resources for developing a plan of action.

Visit the Contingency Instruction site at: libguides.coastal.edu/contingency

Associated Faculty Orientation

The Associated Faculty Orientation website is a resource for part-time faculty who may need orientation and procedural information for teaching at CCU. The site includes a checklist of basic activities to help incoming faculty obtain resources such as parking passes, room keys, email access, etc. The site provides additional information on first week of class procedures, midterm and final grading and general knowledge about the University.

Visit the Associated Faculty Orientation site at: libguides.coastal.edu/afo

Are you interested in teaching a session for CeTEAL?

We are always looking for faculty and staff to share their expertise. If you are interested in sharing a new technology, successful teaching strategy, quality online course design, or other topic of faculty interest, please contact Tracy Gaskin at tgaskin@coastal.edu or Jenn Shinaberger at jshinabe@coastal.edu.

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CeTEAL Online Resources

* coastal.edu/ceteal
* libguides.coastal.edu/moodlefaculty
* libguides.coastal.edu/afo
* libguides.coastal.edu/contingency