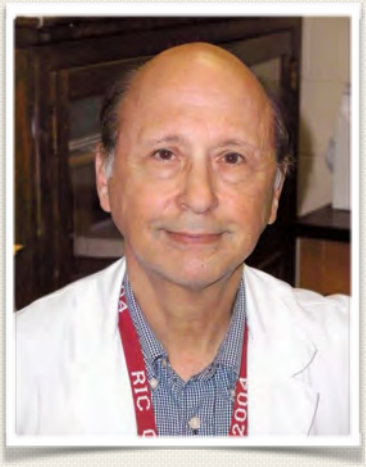
ADVISING NEWSLETTER

Dr. Neil Gonsalves and Dr. Thomas Meedel to Retire

Two beloved faculty members will retire at the end of this semester. We all wish them well!



Professor Meedel was at the Marine Biological Laboratories in Wood Hole, MA before he joined the RIC faculty in 1992. He has been teaching Developmental Biology, Introductory Biology, Anatomy Lab, (and more) and mentoring students in his ascidian muscle development lab ever since.

Professor Gonsalves came to RI College in 1969 after receiving his B.S. degree from Georgetown University and a PhD followed by a postdoctoral experience at Brown University. He came to RI College where he established his mouse colony to study anopthalmia but his interest in biology focused on the mammalian skin from the growth of follicles and hair to the reaction of the skin exposure to irradiation. He was principally hired to be a geneticist within the Biology Department but he developed and taught in about twelve courses in addition to developing courses with a genetics component to them, for example, Cell and Molecular Biology, Radiation Biology, Human Genetics, Radiation-Genetics and Man, Genetics and Society, and Basic Radiation Protection.

He chaired many college-wide committees and served as department chair from 1981 until 1983. He was one of the founding members of the American Federation of Teachers at RI College and served as Vice President of the organization for twenty years.

Dr. Gonsalves…continued on page 6

"I am immensely grateful to Dr. Meedel for nurturing my scientific curiosity and for training, supporting and advising me throughout my education. I strive to emulate his dedication to teaching and mentorship in my own career."
Stephanie Izzi BA '07, MA '10

"Most go through life searching for that one person who shares their knowledge and expertise, who is willing to spend countless hours on their mentees, and who pushes their mentees to exceed against all odds. I found all these qualities in Dr. Thomas Meedel from the time I met him in my first Biology course at RIC and through working in his lab. There is no doubt in my mind that I would not be where I am today without the guidance and help from Dr. Meedel and I wish him nothing but the best in his post-retirement endeavors."
Emmanuel Asiedu BS '15

"Dr. Meedel opened my eyes and mind to the unique world of biology, research, and other incredible opportunities. His intelligence, warm heart, and passion has made working along-side him an honor and an experience and I will never forget."
Taylor Ferrare BSN '16

"Tom gets my MVC award, Most Valuable Colleague. All through my first years as a professor at RIC, I spent hours every week in his office getting valuable advice on teaching biology majors in 101 and 102. I appreciate his unwavering patience and support, and treasure his friendship." Suzanne Conklin

Dr. Meedel... continued on page 5

Biology Course Information

To help you with your planning, here is the list of biology "electives" (upper-level courses not offered every semester) that are tentatively scheduled for the upcoming year.

Fall 2016

BIOL 261	The World's Forests	Dr. de Gouvenain
BIOL 321	[1]Invertebrate Zoology	Dr. Govenar
BIOL 421	Biochemistry of Energy and Metabolism	Dr. Holmes
BIOL 435	Comparative Animal Physiology	Dr. Hall
BIOL 533	Research Methods in Molecular Biology	Drs. Spinette & Roberts
BIOL 535	Advanced Physiology I	Dr. Hall

Spring 2017

BIOL 300	[1]Developmental Biology	New Hire
BIOL 329	Comparative Vertebrate Anatomy	Drs. Hall & Kinsey
BIOL 429	Medical Microbiology	Dr. Britt
BIOL 450/550	Topics: Advanced Genetics	Dr. Stilwell
BIOL 450/550	Topics: Ecosystems Ecology	New Hire
BIOL 536	Advanced Physiology II	Dr. Hall

[1] **Organismal elective** for Biology BS.

Always check prerequisites! Most BIOL courses numbered 200 or above require Biology 111 and Biology 112 (with a grade of C or better) as prerequisites. Some classes (like BIOL 300 and courses in biochemistry) require additional prerequisites.

500-level courses are open to graduate students, and advanced undergraduate students (senior status) with permission from the instructor and the Dean's office.

If you are using a **cross-listed biochemistry course** toward a minor in Chemistry, it is advised that you register as CHEM. If you are using it as a Biology elective, it is advised that you register as BIOL.

Both BIOL 241 (**Biology Colloquium** 0.5 credits) and BIOL 460 (**Senior Seminar**, 3 credits) are offered every Fall and Spring semester. Consider taking one session of BIOL 241 concurrently with BIOL 460; attendance at some seminars is a requirement for Senior Seminar anyway.

Contact a faculty member if you are interested in doing a research project (BIOL 49X). **Independent study proposals** are due **April 15** for the Fall semester.

SENIOR SEMINAR

To secure a seat in **BIOL 460** you must pre-register. See Sharon Rogers, Biology Department Secretary or your advisor for details. Register EARLY to ensure that sections run.

STATISTICS

BIOL 240, Biostatistics, is offered every Spring semester. You may use this course, or Math 240, to satisfy the Biology BS statistics requirement.

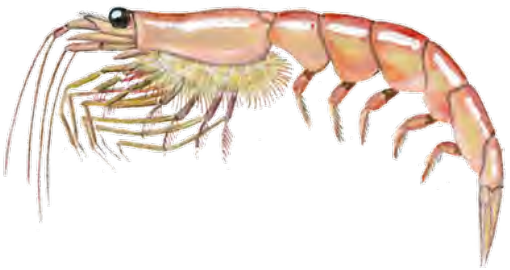
BIOL 213

Introductory Physiology of Plants and Animals is required of all students who entered RIC in the Fall 2015, or later. It will be offered every Spring semester.

Featured Biology Courses
Fall 2016

BIOL 261 - The World's Forests
This General Education **Connections** course is open to all students, biology majors or not, and as with all Connections courses, it will be reading- and writing-intensive, with emphasis on critical thinking and communication. We will survey the three different forest types of the world (boreal, temperate, and tropical), their ecology, their inhabitants, as well as the social, political and cultural forces that have shaped these forests over time, and that now are influencing their future. Student projects will include a poster, three papers, and four short oral presentations. If you like trees and are interested in learning about forests, come and join us! Email Dr. de Gouvenain at rdegouvenain@ric.edu for details. 4 credits.

BIOL 321 -Invertebrate Zoology
Invertebrate Zoology will consist of a study of invertebrates living in marine, freshwater, and terrestrial habitats from ecological and evolutionary perspectives. Laboratory activities will include observation of living and preserved specimens, some dissection, and local field trips. 4 credits. Prerequisites: required - BIOL 111/112. Offered by Dr. Breea Govenar.



BIOL 421 - Biochemistry of Energy and Metabolism
In Biochemistry (BIOL/CHEM 421), we will study organic molecules and chemical reactions in a biological context. This course will focus on metabolism, specifically how a cell can transfer energy from the environment in order to do work. We will focus on detailed macromolecular structures, enzyme mechanism, and the breakdown of carbohydrates and lipids to produce ATP. In studying the chemical details of these molecules and reactions, we can further our understanding of basic biological processes that determine a cell's specific function. BIOL 421 satisfies the Biochemistry requirements of most graduate and professional programs. Lecture only. 3 credits. Prerequisite: BIOL 320 or CHEM 310 and CHEM 206 (co-requisite upon instructor approval). Offered by Dr. William Holmes.

BIOL 435 - Comparative Animal Physiology
Evolution results in a diverse array of adaptations to different environments. This course is an opportunity to learn about some of the physiological processes that have resulted from the evolution of a large variety of species in different climates. This course can be used as an organismal elective for the Biology major. Offered by Dr. Hall.

BIOL 533 - Research Methods in Molecular Biology
This course is likely to be different than any you may have taken at RIC thus far. It is designed to allow students to practice the skills that are necessary to take a real experiment from beginning to end using both fundamental techniques learned in previous classes as well as more advanced molecular methods. While the instructors will supply the basic experimental design, students will run many aspects of the project, including preparing reagents, deciding what controls to include, doing basic calculations and dealing with any problems that arise during the experiment. While much of the work in BIO 533 will be hands on, at the culmination of the course students will submit a paper in the form of a primary scientific manuscript describing and discussing the experiments that were performed and the results that were obtained. 4 credits. Open to graduate students and undergraduates with senior status. Offered by Drs. Sarah Spinette and Eric Roberts.

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BIOL 535-536 Advanced Physiology I and II

This two semester course (both semesters are not required) is equivalent to a first year medical school Human Physiology course. Basic cellular physiology and systems physiology are explored with emphasis on current knowledge of human function at the cellular and organ system levels. Open to graduate students and graduating undergraduates. BIOL 535 offered Fall 2016, BIOL 536 offered Spring 2017. 4 credits each. Please see Dr. Hall for more information.

Student Organization News

Mystic Aquarium Internships for Rhode Island College Undergraduates

- Animal Husbandry
- Education
- Safety & Security
- Water Quality

Application for the Fall 2016 semester due: **May 31, 2016**
For more information contact Dr. Merson (rmerson@ric.edu).

Future Teacher Group Selfie!

The RIC Student Chapter of the National Science Teachers Association is shown here in Nashville TN at the NSTA National Conference. L-R: Maggie Lopes, Nick Andreozzi, Gemma Travis, Dori Furtado, Alisha Iafrate, Jenna Sicuranza and Emily King. If you see one of these hard-working students, ask them about their trip!

Did you catch the RIC-NSTA sponsored webcast of the HHMI Holiday Lecture Series this past October? In Nashville, RIC Student Chapter officer Maggie Lopes, met and posed with the scientists featured in those presentations: Drs. Robert Pringle and Corina Tarnita, both from Princeton University.

FLS 060 Renovation to be Dedicated to Dr. Matsumoto

The FLS 060 (the Biology 111 Lab) will be renovated starting this summer. The new and improved space will open for the Spring 2017 semester. Join us in dedicating the new space to Dr. Lloyd Matsumoto, Biology Department Chair.

Thursday, April 28 in FLS 060: Open House 4:30-5:00 & Ceremony 5:00 pm
Refreshments following in the Biology Lounge

Medical Microbiology

BIOL 429

Spring 2017

How can an organism so tiny you need a microscope to see it be powerful enough to kill a human being? If you've ever pondered a question like this, then Med Micro is the class for you. We'll focus mainly on bacteria, taking a detailed look at the mechanisms that pathogens use to infect and establish disease in human hosts. If you're interested, you need to take Intro Microbiology (Biol 348) first. The other pre-req is Organic Chem (Chem 205, 206), but it may be possible to waive that with permission of the instructor. For more information about the class, see Dr. Britt.

Advanced Genetics

BIOL 450

Spring 2017

Advanced Genetics will explore current ways to analyze and engineer genomes and explore complex relationships between genotypes and phenotypes. We will read and discuss scientific articles and draw material from advanced textbooks.

Prerequisites: BIOL 221 (Genetics) and any additional 300+ level Biology class.

Dr. Stilwell

SENIOR SEMINAR PRESENTATIONS

(FLS 050, WED@12:30, THUR@4:00PM)

Come support our graduating seniors!

WED 30 MAR: Adam Jacques, Andrei Davis, Mansi Patel

WED 6 APR: Nevan Valente, Tom McDonald, Alexis Bollwage

THUR 7 APR: Vincent Cipriano, Ken Salhany, Katarina Ezikovich

WED 13 APR: Libby Lazar, Maeghan Sullivan, Ami Fields

THUR 14 APR: Kate Sollecito, Erika Pino

WED 20 APR: Leslie Herrera, Ken Hughes, Emely Gonzalez

THUR 21 APR: Brian Quigley, Jenn Zalatores, Esohe Irabor

THUR 28 APR: Joanna Cataldo, Saman Nayyab, Sara Santos

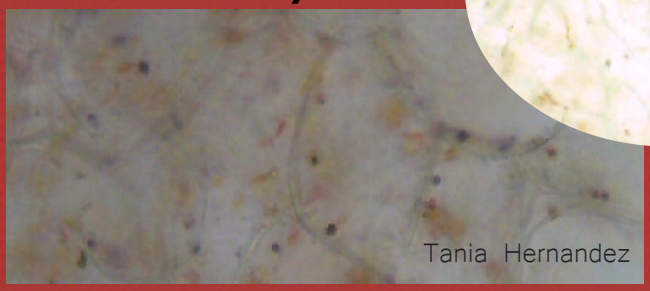
I would like to extend my sincerest gratitude to Dr. Meedel for cultivating my love for scientific research. Without his mentorship, my achievements in graduate school at Tufts University would not have been possible. "Our lives are not measured in years, but are measured in the lives of people we touch around us." (author Suzanne Collins)
Kelly Sullivan

Dr. Meedel taught me everything I could possibly know about Ciona intestinalis and MRFs...but he also taught me about perseverance, hard work and the importance of believing in yourself.
Meg Warburton '15

"I am honored to have had the privilege of learning from Dr. Meedel and working in his laboratory. His passion for knowledge and genuine care and dedication toward student success has had a profound impact on not only my studies, but my personal philosophies."
Lindsay Ratcliffe '17

"Dr. Meedel's course in animal development was the finest I experienced, and working in his lab played a critical role in launching my own scientific career. As scientist and mentor, Dr. Meedel is positively emulable."
CJ Pickett '13

Biology 213 Photo Gallery



Students in Biology 213 this semester learned about the cell (above) and tissue (lower right) level localization of starch (black) in carrot tissue. Students also visualized how lignin reinforces vessel element cell walls of xylem tissue in a carrot (oval and upper right).

Chew through some primary literature as the temperatures drop.

Not as famous as the big blue bug, but this termite was the subject of experiments in the Fall 2015 section of BIOL 112!

Consider taking **Biology Senior Seminar** in the **Fall** semester if you're eligible! Prerequisites for **BIOL 460** are 111, 112, Genetics, Ecology and Cell/Molec. See Sharon Rogers for a pre-registration form! It is important that we can anticipate enrollments each semester so that we open enough sections. Typically, there is less demand for seats in BIOL 460 in the Fall than the Spring. Take advantage! Register early!

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His course, Basic Radiation Protection received accolades and kudos from the RI State Department of Health, which asked him to develop a course for educational television. His research and other interests and his election to chair the biology department the next year prevented him from pursuing a state initiated course in Basic Radiation Safety.

Over his 47 years at RI College Professor Gonsalves has educated an impressive array of graduate students in addition to receiving praise from many students who took one or more courses from him. Even as a professor he found the time to coach a soccer team at a local church school for many years. He is an accomplished saxophone player and has played in bands or jazz groups. Don't you think that he should give us all a talk about the saxophone and play a few jazz pieces for us?

Dr. Lloyd Matsumoto

Come support fellow Biology majors who will present their research at the campus-wide poster session (Monday, April 25) or who may be participating in other events of the

2016 SPRING EXPO OF RESEARCH AND CREATIVE ACTIVITY!

For more information, please visit the website: http://www.ric.edu/crca/expo.php

REGISTRATION OPENS APRIL 4

Meet with your advisor to make sure you are thoughtfully planning your degree progress!

Remember:

- Biology Senior Seminar (BIOL 460) now requires pre-registration. See secretary Sharon Rogers for details.
- Independent study proposals due April 15.