

A Newsletter for IRREC Advisory Committee Members, Faculty, Staff and Students

University of Florida degrees available in Fort Pierce



Bachelor Degrees:

Environmental Management
Microbiology and Cell Science

Master Degrees:

Ecological Restoration
Environmental Sciences
Environmental Horticulture
Entomology and Nematology
Agricultural Education
and Communication

Certificates:

Undergraduate

Geomatics
Urban Pest Management
Landscape Pest Management
Pest Control Management

Graduate

Ecological Restoration
Non Profit Management
Sustainable Land Resource and
Nutrient Management
Soil Ecology Services
Wetland and Water Resource
Management

PRE-MED University of Florida Microbiology and Cell Science degree in Fort Pierce

- *A Bachelor of Science degree in Microbiology and Cell Science is the top degree choice for UF students pursuing medical school.*

- *Environmental Management bachelor's degrees prepare graduates for local environmental careers.*

- *IRREC graduates are hired for positions with the South Florida Water Management District, Syngenta Crop Protection, the U.S. Department of Agriculture, and private environmental and agricultural firms.*

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Graduate Eliza Duane, Bachelor of Science, Agribusiness Management



Eliza Duane

A position working as a laboratory assistant in Dr. Pasco Avery's lab was Eliza Duane's first introduction to IRREC. In Dr. Avery's lab she assisted with biological control methods for the control of invasive insects and for the sustainability of the area's legendary citrus industry.

Soon following her laboratory entrance, Eliza began coursework towards a Bachelor of Science degree in Agribusiness. The lab work brought about a realization for the high value of agricultural and natural resources research conducted at IRREC. Eliza's early work in the lab helped her to understand what research can do for agriculture and its interface with natural resources. Other coursework involved business operations, sales and environmental protection.

Eliza said every course she completed at IRREC has assisted her in some way with her internships and with her current position.

During her studies she completed two internships with Bayer Crop Science in Vero Beach: one in sales, a second with the company's crop protection products. Her current position is Customer Service Representative for Suburban Chevrolet of Stuart, where she is leading marketing efforts for customer appreciation special events, and public relations. She initiated conservation efforts at the dealership for a "green dealership" title.

Jane Bachelor's Entrepreneurship course proved phenomenal for Eliza, the result of which was a well-developed business plan for an online marketing business venture. "Coveting Couture," will supply niche consumers seeking affordable fashion constructed from designers who use organic cottons in the interests of sustainable business. Eliza uses the knowledge she gained in the entrepreneurship course, and other IRREC business courses to develop the online portal.

She grew up in Indiantown. While attending Martin County Schools and South Fork High School, Eliza participated in 4-H, raising livestock and entering them in county fair competitions. Eliza continues with her devotion to the Martin County Fair, serving as Chairperson for the Environmental Building Committee, with a mission to feature and promote businesses whose efforts are for sustainable business practices.

Eliza attended Indian River State College and earned an Associate in Arts degree in liberal Arts.

Eliza's ambition is to ensure the area she where she lives and grew up is sustainable for future generations. She has made a lifelong commitment to the promotion of green practices for Treasure Coast public facilities, parks, businesses, homes and implement ways for future generations to enjoy our beautiful region.



Sean Fromang

Graduate Sean Fromang, Master of Science, Environmental Sciences

abroad and do not understand the damage that can result from bringing foreign plant material to or from a foreign country or region.

In addition to his studies, he performed research under the direction of Soils and Water scientist Dr. Zhenli He and Environmental Horticulture expert Dr. Sandra Wilson, observing soils composition and plant propagation of native Florida plants. Under the direction Dr. Chris Wilson, he studied Atrazine, an herbicide used for broadleaf weeds, and in citrus and corn production, in addition to other crops. This chemical he determined, has been found in drinking water and is leeching in the environment. His research identified affects the material is having upon wildlife and that it transforms into new compounds. His work was valuable in that it recommends more studies for Atrazine's non-target affects.

Sean's career goal is to conduct environmental research for the U.S. Department of Agriculture, in his native land—Florida's Research Coast. He sees Florida as an environment unlike any other in that agriculture and tourism are its most important industries and the opportunity to become a scientist in Florida is exciting, certain to sow great challenges and rewards.

Sean earned a Bachelor of Science degree in Chemistry at Florida State University. There, in the biochemistry laboratory, he conducted research with Ribonucleic acid. A lifelong resident of Vero Beach, Sean is at this time instructing alternative high school courses for the St. Lucie County School Board.

Sean Fromang has earned a Master of Science in Soil and Water Science with a minor in horticulture. His graduate work was supervised by Dr. Chris Wilson. Throughout the course of Sean's graduate studies he has worked simultaneously towards a Doctorate in Plant Medicine, the University of Florida's innovative, sought-after plant health program. Sean's ambitious work with this degree program will continue.

A resident of Vero Beach, Sean was a recipient of the Garden Club of Indian River County Scholarship Award. His interests are within a wide range but are equally related to Plant Pathology, Integrated Pest Management, Biocontrol and education.

While an IRREC student, Sean carried out a prestigious internship with the U.S.D.A., working in Miami conducting Animal Plant Health Inspections. His work there was to inspect cut flower and other plant cutting imports. Sean learned the majority of the country's fresh cut flower supply enters the U.S. through this port and is examined thoroughly for invasive species or invasive plant material or insects, which could potentially harm our country's agricultural industry. An interesting point he learned was the vast majority of invasive species and diseases are brought to the country by individuals who travel

Ruben Koch, Master of Science, Environmental Sciences



Ruben Koch at his business showroom



Ruben and Sandy Koch

Vero Beach resident Ruben Koch was recently recognized for completion of a Master of Science degree in Environmental Science at the UF/IFAS Indian River Research and Education near Fort Pierce.

Koch is co-owner of Irrigation Consultants Unlimited, Inc. in Vero Beach. Along with his wife Sandy, the two have operated the successful firm for more than 26 years.

Irrigation Consultants Unlimited, Inc. comprises three separate divisions: Irrigation Consultants Unlimited, Inc., for irrigation engineering design, a second division, Homeland Irrigation, for irrigation and water supplies; and a third, Rainforest Irrigation Inc., for irrigation system maintenance.

The Kochs designs irrigation systems for large companies, they provide consultation for special problems and sometimes they maintain systems.

Together they designed more than 35,000 acres of citrus groves throughout Florida; in the 1980s they helped move the citrus industry from the northern part of the state to the south.

Ruben earned a Bachelor of Science degree from the University of Florida and an Associate in Arts degree in Soils and Water Engineering, with a minor in Citriculture, from Ruppin Institute.

Melissa Sangster, Bachelor of Science, Environmental Management



Melissa Sangster



Melissa Sangster joins classmates
for a field trip

Melissa Sangster has earned a Bachelor of Science degree in Environmental Sciences. Melissa said what she liked most about her course work at IRREC is people: The teachers and the staff were friendly and inspired a “family-like” camaraderie among themselves and among her fellow students. She also enjoyed field trips to Gainesville for a laboratory-safety segment, and a trip to Fairchild Tropical Botanic Garden in Palm Beach Gardens.

During her academic tenure she was a recipient of the Florida Rural Rehabilitation Corporation Off-Campus Scholarship through the UF College of Agricultural and Life Sciences. She intends to pursue a Master of Science degree in Biology and continue with her position for the St. Lucie County Sheriff’s Office.

A longtime employee with the St. Lucie County Sheriff office, she has since 1997 served as the office’s sole Uniformed Crime Report Coordinator. All of the county’s local crime reports

are quantified and cataloged by Melissa. She compiles the reports which are then submitted to the Florida Department of Law Enforcement and are then used by national statisticians.

A Florida native, Melissa was born in Lakeland, and grew up in Martin County. She graduated Martin County High School in 1995, and from Indian River State College 2004, Phi Beta Kappa, graduating with honors. She ranked on the Dean’s List her entire time at the local college.

Melissa said the Treasure Coast is rapidly advancing to the “Research Coast.” She believes a new era of research in life sciences will usher in new jobs and careers for all of the area’s residents and along with its promises, local crime will decrease significantly. Melissa is excited about her opportunities to further her education and is looking forward to assisting young students as they prepare for their future careers along the Research Coast.



Lindsay Onjukka

Lindsay Onjukka earned a Master of Science in Fisheries and Aquatic Sciences, working under the direction of Dr. Cortney Ohs in IRREC's Fisheries and Aquatics Research Laboratory and at the Aquaculture Demonstration site. Her thesis research topic, "Evaluation of the Seminole Killifish, *Fundulus Seminolis*, as a Candidate Species for Marine Baitfish Aquaculture."

Under the auspices of Dr. Ohs, Lindsay's research to evaluate the possible baitfish is one that will improve the availability of baitfish for aquaculture. Florida's sport fishing industry is valuable to the state's economy, contributing more than \$9 billion annually.

Her research identified valuable aspects for the fish as a possible baitfish aquaculture product, contributing to the body of knowledge available for this leading new industry. Specifically, she determined the fish must be stocked at lower densities to produce more eggs, a finding that will immediately reduce production costs and possible disease outbreaks. Her research also produced a foundation for the species' diet research.

Lindsay Onjukka, Master of Science, Fisheries and Aquatic Sciences

Upon her graduation this past August, moved to Texas. To the benefit of Mr. Aquarium, a full-service fish sales outlet, and the only saltwater reef supplier within a 500-mile radius, Lindsay is now the aquarium's expert in fish behavior and many other important aspects of aquarium fish life and marketing. At the location, Lindsay is responsible for coral propagation and the identification and treatment of fish disease.

Lindsay's career plan is to pursue a doctorate in aquaculture. Her love for aquaculture was spawned from a single course during her undergraduate studies. She said she became fascinated with the idea of aquaculture and its potential to reduce man's impact on wild fish stocks. She continues with a fascination of biology behind fish reproduction and growth, two things she said that are very important to aquaculture.

A native of Orlando, Florida, Lindsay attended the University of West Florida in Pensacola where she earned two Bachelor of Science degrees, one in Marine Biology; a second in Psychology. She then undertook a post-baccalaureate internship at Waddell Mariculture Center in Bluffton, South Carolina where she studied the diets of young cobia fish, an important aquaculture product.

Her IRREC experience was wonderful she said, because she was able to participate in multiple research projects and learn many new techniques working with Dr. Ohs and his research team performing cutting-edge research.



Andrew Stygar

Microbiology Student Andrew Stygar Named to UF Upper Division Honors Program

or pharmacy at UF in Gainesville, upon completion of a bachelor's degree. To enhance his course work, he is working as an intern at the UF/IFAS Florida Medical Entomology Laboratory under the direction of Dr. Smartt, whose expertise is with molecular genetics.

"I'm interested in the diversity and complexity of immunology and how innate it is—how the body develops immunological memory," he said.

Andrew has for five years been employed at Indian River Estates in Vero Beach. There he held positions with increasing roles of responsibility: from food runner, then server, to host and cashier, and trainer. He is a member of Crossroads Fellowship in Sebastian where he participated in a mission trip to Mexico. As a volunteer, he served a Christian Outreach program, Campus Life, at Storm Grove Middle School in Vero Beach.

Andrew was earlier this year honored with the Treasure Coast Gator Club Scholarship Award. He graduated Summa Cum Laude from Indian River State College (IRSC) in spring of 2011 with an Associate in Arts degree in General Studies. During his tenure at IRSC he was recipient of the Bright Futures Medallion Scholarship, and the Daryl C. Jacobs Memorial Scholarship Fund. He was also recipient of five student scholarships presented to him by his employer, Indian River Estates in Vero Beach. He

Andrew Stygar, who is pursuing a Bachelor's degree at UF/IRREC, has been named to the UF upper division Honors Program through the university's College of Agricultural and Life Sciences.

According to UF officials at the Gainesville campus, Stygar is the first distance-education student to represent the UF College of Agricultural and Life Sciences in its upper division honors program. Dr. Peter Stoffella, professor and director at the UF/IFAS Indian River Research and Education Center in Fort Pierce, said Stygar, along with his fellow students who are pursuing a new Bachelor of Science degree in Microbiology and Cell Science, are outstanding scholars who are able to participate in unique laboratory internships along the Research Coast, in addition to their studies.

A resident of Sebastian, Stygar intends to further his education and pursue a medical degree in immunology

Undergraduate Course Offerings:

Principles in Microbiology with Lab
Florida Native Landscaping
Human Resources Management
Agriculture and Environmental Quality
Principles in Agribusiness Management
Fundamentals of Biochemistry
Principles of Entomology and Lab

For Graduate
Course Offerings check
the UF/IRREC website:

www.irrec.ifas.ufl.edu

For full listing of UF courses visit: <http://www.register.ufl.edu/soc/>

Important Dates:

Registration.....until January 6
Classes Begin.....January 9
Drop/Add.....January 9 through 13
Martin Luther King Jr. Day.....January 16
Spring Break.....March 3-10
Final Exams.....April 23, 25-29

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