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**Students Engaged in Naval STEM Research (SENSR)**

**Office of Naval Research (ONR)**

**The goal of the ONR-funded SENSR project is to give first research opportunities to Freshmen and Sophomore Science, Technology, Engineering, and Mathematics majors. This low-stakes research opportunity provides a modest stipend for part-time research during the semester. If successful, this first research experience could lead to additional full-time summer or part-time year-long internships.**

**Eligibility:** Freshmen or Sophomore standing (< 60 credit hours); Science, Technology, Engineering, or Mathematics (STEM) major in the College of Science and Technology (COST), Homeland Security and Emergency Management major in College of Liberal Arts and Social Sciences (CLASS), or other field conducting relevant Naval STEM research; Minimum 2.5 GPA for freshmen, 2.75 GPA for sophomores.

**Mentors:** Regardless of academic background, must be conducting Navy-relevant STEM research.

**Requirements:**

1. (Semester-long) Conduct research with mentor for 5-7 hours per week for 10 weeks. (Summer-long) Conduct research with mentor for 40 hours per week for 8 weeks.

2. Bi-monthly meetings with Program Directors (Drs. Hintz and Hayder) to discuss research and listen to project-specific presentations by Program Directors, outside guests, and fellow students.

3. Participate in field trip (one per semester) to Naval Military Installation or ONR-funded Research Laboratory

4. Participate in >5 hours of community service or outreach for a local K-12 students

5. Presentation of research to Program Directors and fellow students.

**Stipends:** (Semester-long) $600, paid in three installments of $200 each. (Summer-long) $4,000, paid in three installments of $1,500, $1,500, and $1,000. Supply money is available to support projects. Travel costs/reimbursements are also provided.

**Questions:** Contact Drs. Christopher Hintz (hintzc@savannahstate.edu) or
Mir Hayder (hayderm@savannahstate.edu)

**Students Engaged in Naval STEM Research (SENSR) Scholarship Application**

**Spring 2015 – Due by 5:00p.m. January 14, 2015**

**Applications may be received earlier and be accepted prior to this date**

**Office of Naval Research (ONR)**

**PERSONAL INFORMATION**

First name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Middle initial: \_\_\_\_\_\_ Last name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SSU ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mailing address:

Street: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

City: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ State: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Zip: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Home phone: ( ) \_\_\_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_ Cell phone: ( ) \_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_\_

E-mail: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gender: Male Female

U. S. citizen? Yes No

Race/Ethnicity: African American/Black

 Caucasian/White

 Native American/American Indian

 Asian

 Native Hawaiian or Other Pacific Islander

 Hispanic

 Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian:

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Contact number: ( ) \_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_

**ACADEMIC INFORMATION**

Major: ­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Year: ­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Total credit hours completed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ GPA: ­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Attach a copy of your unofficial transcript with this application***.

Do you hold any other scholarship from SSU right now? \_\_\_\_\_\_\_\_

(If yes) What is that? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

List all other academic scholarships/awards/achievements/special recognitions:

Add any other information that you think may support your application:

Where did you hear about SENSR scholarship? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What area of naval research you are interested in and why? (See last page for possible research descriptions)

Preferred research mentor and area (if you have any):

State briefly how the research experience under SENSR scholarship will enhance your education and help to accomplish your career goals:

Signature of applicant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please send the completed application to:

Dr. Christopher J. Hintz

Marine Sciences Program

Savannah State University

Savannah, GA 31404

Phone: (912) 358-4096

E-mail: hintzc@savnnahstate.edu

OR

Dr. Mir M. Hayder

Department of Engineering Technology & Mathematics

Savannah State University

Savannah, GA 31404

Phone: (912) 358-3282

hayderm@savannahstate.edu

Possible projects include:

C. Hintz (MSCI) – 1) Development of Remotely Operated Vehicle using microcontroller technologies 2) Development of remote monitoring chemical sensor suites for long-term unattended environmental measurement.

M. Hayder (ENGT) –

A. Adeyemo (CHEM) – "Synthesis and Characterization of Potential Anticancer Drugs."  Student interns will be involved with the preparation, purification, isolation and characterization of potential anticancer drugs.

T. Cox (MSCI) – The Savannah State University Dolphin Science lab conducts research on the local bottlenose dolphin population.  This project would be in collaboration with University of South Carolina-Beaufort, in which we will monitor fish and dolphin sounds locally and attempt to determine a location for long-term passive detection systems.

Q. Chen (CSCI ) – autonomic computing technology to self-protect web applications and industrial control systems from both know and unknown cyber attacks. The research covers several topics: risk assessment, intrusion estimation, intrusion detection, network forensic analysis, and intrusion responses.

A. Kaltenberg (MSCI) – Tidally-driven saltmarshes are among the highest productive ecosystems at the land-sea interface and are important in the flux of carbon input to the continental shelves. In this project, we will be looking at temporal patterns of variability of the biological community within a saltmarsh creek to help understand the role of key physical drivers on biology. To measure biological variability, we will use a continuously recording bio-acoustic echosounder (Simrad EK15 200kHz) in combination with ground-truthing net samples for plankton biomass calibration and organism identification to look at the daily to seasonal factors influencing creek biomass.