2014

CReSIS REU/RET Program

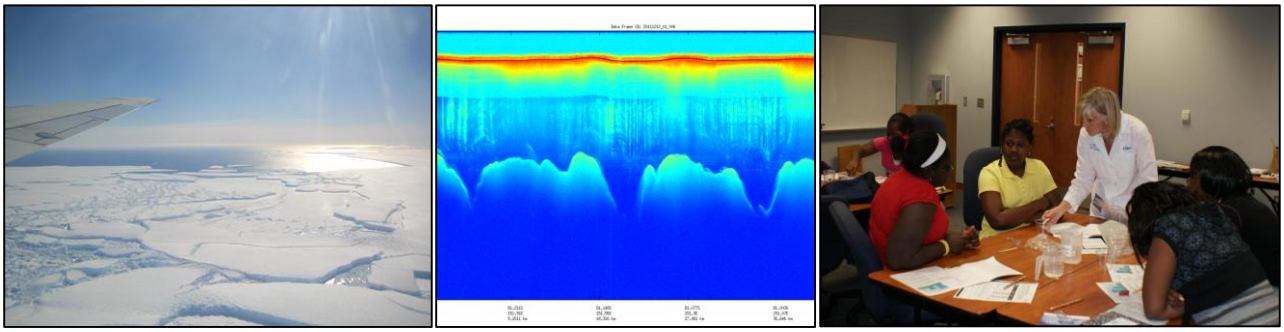
Student Handbook

About CReSIS

The Center for Remote Sensing of Ice Sheets (CReSIS) is a Science and Technology Center established by the National Science Foundation (NSF) in 2005, with the mission of developing new technologies and computer models to measure and predict the response of sea level change to the mass balance of ice sheets in Greenland and Antarctica. The NSF's Science and Technology Center (STC) program combines the efforts of scientists and engineers to respond to problems of global significance, supporting the intense, sustained, collaborative work that is required to achieve progress in these areas. CReSIS provides students and faculty with opportunities to pursue exciting research in a variety of disciplines; to collaborate with world-class scientists and engineers in the US and abroad; and to make meaningful contributions to the ongoing, urgent work of addressing the impact of climate change.

The University of Kansas serves as the lead institution for CReSIS, which is comprised of six additional partner institutions: Elizabeth City State University, Indiana University, University of Washington, The Pennsylvania State University, Los Alamos National Laboratory, and the Association of Computer and Information Science Engineering Departments at Minority Institutions. In addition to this core group, CReSIS collaborates with several international institutions and industry partners.

(Source: https://www.cresis.ku.edu/about)



From left to right: DC-8, Antarctica 2011: photo courtesy of 2011 Antarctica OIB team; This echogram displays a vertical slice of Byrd Glacier's upstream trunk and was compiled from data procured by CReSIS radar systems during the Winter 2011 NSF Antarctica Deployment.; and Middle school students collaborate to devise an experimental design.

2014 CReSIS REU Program

This summer internship provides the opportunity for undergraduate students to conduct research on topics of global significance. Students work closely with faculty advisors and other student researchers.

Elizabeth City State University leads these opportunities through the CyberInfrastructure for Remote Sensing of Ice Sheets REU site, co-funded by the Deparment of Defense. ESCU serves as a launching point for 20 undergraduate students to study with research teams at Elizabeth City State University, the University of Kansas, Indiana University, and Pennsylvania State University.

Highly motivated undergraduates who can successfully complete independent work and have a strong interest in climate-related studies and polar science are encouraged to apply. Students must have a minimum GPA of 3.0. Preference will be given to students completing their sophomore or junior year. Students majoring in **physics, engineering (electrical, aeronautical or mechanical), geography, atmospheric science, geology, geophysics, computer science or mathematics** are eligible. Women and minorities are especially encouraged to apply.

CReSIS REU students can spend the summer at the University of Kansas (Lawrence, KS), Pennsylvania State University (University Park, PA), Indiana University (Bloomington, IN), and Elizabeth City State University (Elizabeth City, NC).

Do you know people who have been impacted by hurricanes or big storms? As coastal development expands with a growing global population and increased urbanization, the number of people living near the coast will expand, and the need to understand and predict future sea level rise is becoming increasingly important. The future of the Greenland and Antarctic ice sheets are the largest uncertainty in current sea level predictions. CReSIS is addressing this global need to **understand and predict the role of polar ice sheets in sea level change.**

A team of world-class scientists and engineers working together is required to address the important issue of how the polar ice sheets will respond to climate change. CReSIS electrical engineers are developing **innovative radars** and **seismic sensors** to provide a three-dimensional image of what lies below the surface of these ice sheets. Other engineers are designing and building remote controlled, **uncrewed aircraft** to carry these sensors over the ice sheets. Glaciologists, geophysicists and GIS experts are using these results to create maps of the base of the ice sheet, and **model ice sheet dynamics**. Computer scientists are designing mobile units which can be used in **polar regions** to rapidly store, process and back-up data.

2012 KU CReSIS REU Participants

General Information for CReSIS REU/RET Program Participants

Admission and Enrollment for Course Credit

This year's KU CReSIS REU/RET program handled the admission process and enrollment in the one hour research course for students. You may have already received an email from KU regarding your status as a special student for the summer. There is nothing more that you will need to do for the admission process or your enrollment. If anything changes, I will contact you individually.

Travel Arrangements

Airline Reservations

Travel arrangements (roundtrip flights) have been made and you should have received information via email from ECSU or KU. If you have any questions about your flight itinerary, please contact ECSU (Rashida Williams 252-335-3696) or KU (Darryl Monteau 785-864-7797) about your travel information.

Getting to KU from Kansas City International (MCI)

KU CReSIS will be making shuttle arrangements for those flying in to MCI. We will be sending out an email the week of May 26th with information. The shuttle will take you directly to Hashinger Hall, your residence hall on campus. It's about a 1 hour trip from the airport to the KU campus. The cost of the shuttle ride will be prepaid. Also, shuttle arrangements will be made to transport students back to the airport on July 25th.

Student Stipends

ECSU sent out forms via email/regular mail to students for stipend payouts. These forms should have been completed and mailed back into Dr. Linda Hayden at ECSU. Please contact Rashida Williams at ECSU to confirm all of your forms have been received (phone 252-334-3696). If you have any questions or concerns about your stipend payments you can contact Ms. Williams (or Dr. Hayden - haydenl@mindspring.com).

NOTE: The RET/REU student stipends will come in the form of a check that will be sent to KU CReSIS for distribution. Students are encouraged to check with their banking institutions to inquire about depositing remotely or there are several banking institutions in Lawrence that offer free checking for students. *This process is only for students who are funded by ECSU CReSIS for the REU/RET Program.*

If you are a KU sponsored REU student, you should have received forms via email from Darryl Monteau. These forms were to be completed and mailed back in to KU CReSIS attn: D. Monteau. If you have any questions or concerns about your stipend payments, you can contact Darryl Monteau (dmonteau@ku.edu) or Jennifer Laverentz (jenlav@ku.edu). KU CReSIS sponsored students will have their stipend payments set up on direct deposit specified in KU's Enroll and Pay system.

Housing/Dining Information

All REU/RET participants (KU CReSIS and other programs) will be housed in Hashinger Hall. Here is a quick listing of what to expect with housing and meals:

- Students arrive on June 2, 2014 and can begin checking in after 12:00 p.m.
- When students arrive to campus they will be checked in by residential hall staff. They will receive a key to their rooms and will be let in and out of the building by staff until they receive their KU Student ID card. (We will be getting KU IDs on Tuesday, June 3rd)

- **Mrs. E's Dining Center** will provide 3 meals Monday through Friday (7 a.m. to 7 p.m.; breakfast, lunch, dinner) and Saturday-Sunday (11 a.m. to 7 p.m.: brunch and dinner). More information about dining options will be provided when you arrive.
- The quickest way to get to CReSIS (Nichols Hall) is walk (we are not too far from Daisy Hill); however there may be road construction taking place and students could take the bus if needed. More information about transportation is provided below.
- Room assignments will be sent out in a separate email. Once you receive the information, we encourage you to begin corresponding with your roommate. Bedding - Students will need to bring their own bedding (pillow, twin sheet set, blanket). Link for Hashinger Hall: http://www.housing.ku.edu/residence-halls/hashinger

Mailing Items

Students can mail packages ahead of time if necessary. You have two options you can mail your items to CReSIS or the KU Housing. If you do plan on sending items ahead of time to CReSIS send me an email to let me know (see address listed under contact information). I will keep you posted when package(s) are received. Items can also be sent to KU Housing at the following address:

Your Name
CReSIS REU/RET Program
Hashinger Hall
1632 Engel Rd.
Lawrence, KS 66045

Dress for the Office:

Students are allowed to dress casually most of the time. Summertime in Kansas is warm/hot and the weather can be unpredictable - bring shorts and an umbrella. You'll also need a light jacket or hoodie. You'll be doing a lot of walking on campus so comfy walking shoes are a must. Also, you will be expected to dress up a bit for certain meetings and presentations. Business or business casual dress is best for these occasions.

Computer Regulations

On your first day, the Senior Network Specialist should have assigned you an email address. You can access your account anywhere by going to http://webmail.cresis.ku.edu. If you have a problem, please send an email to helpdesk@cresis.ku.edu. Any computer you are assigned is for **professional use only.**

Downloading of copyrighted material is prohibited, including games, music and movies. Installation of file sharing or peer-to-peer (P2P) applications is prohibited. Viewing of sexually explicit material is prohibited, and should this occur you will be terminated immediately.

https://documents.ku.edu/policies/Information_Services/AcceptableUse.htm

For additional information about computing resources at CReSIS, please see: https://wiki.cresis.ku.edu

Assessment

Pre-Survey for REU Program

You should have received an email inviting you to complete an online pre-survey for the REU program. We ask that you complete it at your earliest convenience. The information will be shared with your faculty advisors.

Post-Survey for REU Program

At the end for the program, you will receive a post-survey assessment sent via email. You will be required to complete this survey to receive final grade for one credit hour course. All of the survey information will be collected and analyzed and put into a final report.

Social Media

If you are on Facebook, join our "2014 CReSIS REU - KU, ECSU, IU" group for updates.

KU Campus

To get a sense of the campus, please visit http://www.ku.edu/. You can view the campus map; learn more about the academic programs and the schools rich history and traditions.

City of Lawrence

The University of Kansas is located in Lawrence, KS. The city of Lawrence' population is estimated at 80,000. Lawrence is 30 minutes from Kansas City and 20 minutes from Topeka, the state capital of Kansas. To learn more about Lawrence, visit the following link: http://www.visitlawrence.com/.

Transportation

KU CReSIS will provide transportation to REURET related events/activities hosted off-campus. Occasionally, transportation will be made available to students who need to pick up personal care items (will notify students in advance).

We encourage students to use the KU on Wheels/Lawrence Transit System (the T) to get around the campus and city of Lawrence. KU students, faculty, and staff with a valid KU Card may board any KU or T fixed route bus fare free by simply showing their KU Card upon boarding. KU on Wheels and Lawrence Transit System are coordinating the display of route maps and schedules. All route schedules and maps are found on www.lawrencetransit.org jointly maintained by KU and the T.

Issues with Students/Student Concerns

If any concerns arise regarding REU/RET students (i.e. excessive absences, work performance, issues in residence hall, etc.) the following process will occur:

- Student will meet with Darryl Monteau, Program Coordinator to discuss issue and information shared with faculty advisor on how issue will be handled.
- If another concern arises with same student, the situation will be turned over to Dr. Linda Hayden and she will provide a final decision on dealing with concern which may result in student exiting the program.

Students are also encouraged to voice any issues/concerns they have as well. If a student has a concern, the student will:

- Visit with Darryl Monteau, Program Coordinator to resolve issue.
- If student feels issue/concern not handled to their liking, student will make an appointment to have a teleconference with Dr. Linda Hayden.

Program Schedule – Week 1 June 2-8, 2014

The final comprehensive schedule will be made available to students during the orientation on June 3rd. The first week schedule is available and pertinent dates are shared for planning purposes:

Monday, June 2nd
Students arrive; check into Hashinger Hall
7:00 p.m. Transportation available for students needing to pick up personal items; meet Darryl in front of Hashinger Hall.

Tuesday, June 3rd
8:45 a.m. Pick up students in front of Hashinger Hall and transport to Kansas Union
9:00 a.m. Student IDs at Kansas Union
10:00 a.m. Tour of Campus
11:30 a.m. Tour of Nichols
12:00 p.m. Lunch with REU students and faculty advisors/GRAs – Mercury Room
1:00 p.m. REU Orientation – Mercury Room
Welcome and Overview of CReSIS
Office Procedures/Information
CSO
REU Overview
2:00 p.m. Students will set up work stations; log on to computers, pick up office keys, review information/materials and prepare for first full day

Wednesday, June 4th
8:00 a.m. REU/RET Students arrive and begin working regularly scheduled hours*
Students will meet with their Faculty Advisors/GRAs and review project plan; location and times will vary.

Thursday, June 5th
8:00 a.m. REU/RET Students arrive and begin working regularly scheduled hours*
10:30 a.m. RET Students only meet with Cheri Hamilton

Friday, June 6th
8:00 a.m. REU/RET Students arrive and begin working regularly scheduled hours*

Saturday, June 7th
Open

Sunday, June 8th
Open

**Note: REU/RET student's regular work schedule will begin June 5th - Monday-Friday from 8:00 a.m. to 5:00 p.m. (1 hour lunch, morning/afternoon breaks).*

Contact Information for KU CReSIS and ECSU:

KU CReSIS Program Coordinator:
Darryl Monteau, Education Coordinator
CReSIS
University of Kansas
2335 Irving Hill Road
Lawrence, Kansas 66045-7559
(785) 864-7797
dmonteau@ku.edu
cresis.ku.edu

CReSIS Assistant Director of Education (over all CReSIS REU/RET programs):
Dr. Linda Hayden
Professor, Mathematics and Computer Science
Elizabeth City State University
office: 119 Lane Hall
phone: 252-335-3696
email: haydenl@mindspring.com

Dr. Hayden's Assistant:
Rashida Williams
Elizabeth City State University
1704 Weeksville Rd, Campus Box 672
Elizabeth City, NC 27909
Phone 252-335-3696
Fax 252-335-3790
Email: rlwilliams549@students.ecsu.edu

Checklist

Please review and make sure you have completed the following items:

_____ Confirmed travel arrangements with Marisol Denney or Darryl Monteau

_____ Printed off stipend payment forms and mailed back to Dr. Hayden at ECSU or Jennifer Laverentz at KU CReSIS

_____ Emailed Darryl Monteau my **KU Student ID #, KU Logon information, and KU email**

_____ Completed pre-survey for CReSIS REU students

_____ Made contact with my faculty advisor

_____ Emailed my photo and short bio to Darryl

_____ Completed Student/Faculty Agreement form and Photo Release form (can be turned in when you arrive on June 3rd)

KU CReSIS REU Program Participant Forms

The following forms will need to be completed and turned into Darryl Monteau upon your arrival:

- Student/Advisor Agreement
- Photo Release

2014 CReSIS REU/RET Program – Student/Advisor Agreement

The purpose of the 2014 CReSIS REU Program is to provide participating students an opportunity to enhance research skills, expand knowledge of polar science and impact of climate change, engage in research activities with faculty and encourage students to pursue graduate school. Student's will:

1. Correspond with their faculty on a regular basis for the duration of the program
2. Participate in briefing and orientation upon their arrival to KU (June 3rd).
3. Keep regular hours at their assigned offices (8:00 a.m. to 5:00 p.m., Monday through Friday) and inform their faculty advisor/GRA mentor and KU CReSIS Education Coordinator of absence.
4. Submit weekly progress report to faculty advisor and KU CReSIS Education Coordinator.
5. Attend all required tutorials, seminars, and meetings.
6. Produce a research poster, research paper and presentation for projects (deadlines will be shared with students).
7. Participate in follow-up activities i.e. evaluations, requests for information, etc.

CReSIS Faculty advisors/GRA mentors will:

1. Correspond with students and provide guidance and feedback on a regular basis;
2. Notify education staff if any problems/issues arise;
3. Supervisor the production of research poster and presentation;
4. Participate in follow-up activities.

By signing this contract, I, _____ , agree to adhere to the guidelines set forth by the 2014 CReSIS REU/RET Program.

Student Signature:_____ Date:_____

Faculty Advisor:_____ Date:_____

Program Coordinator:_____ Date:_____

Photo Release

Agreement by the subject to confer rights to use photograph(s) and/or video(s) by the University of Kansas

I hereby give my consent for my photograph or videograph taken this day to be used by the University of Kansas, or any of its agencies, in any way related to the publicity programs of this organization.

Date _____

_____

Name (please print)

_____

Address/City/State/Zip

_____

If the subject is a minor (younger than 18 years), please complete the following:

Name of parent or guardian (please print)

_____

_____

Parent's or guardian's signature

School Name_____

Grade level _____

KU Office of University Relations / 1314 Jayhawk Blvd. / Lawrence, KS 66045-3176 / (785) 864-3256

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