

KEIM, LSU
DHS Coastal Resilience Center
Education Project:
Annual Project Performance Report

Covers reporting period January 1, 2016 – June 30, 2016

- 1. Project Title:** Disaster Science and Management Program at LSU
- 2. Principal Investigator / Institution:** Barry D. Keim, Professor in the Department of Geography and Anthropology and Louisiana State Climatologist.
- 3. Other Education Participants/Partners:**
 - Baton Rouge Community College (BRCC)
 - NOAA's Southern Climate Impacts Planning Program.

4. Short Project Description:

The Disaster Science and Management (DSM) Program at LSU was originally within the College of Humanities and Social Sciences (for 7 years), however, the educational structure of the program took place outside of any single Department. This Coastal Resilience Center of Excellence project builds a home for the DSM program at Louisiana State University by making it an integral part of the Geography degree program. We are making DSM a concentration available within both the BA and BS degrees in Geography, and as a minor to students with majors in other Departments. We will enhance relationships with the Emergency Management Program at BRCC to partner with them in program development and foster ease of credit transfer to LSU for those that want to continue to a Baccalaureate degree. Additionally, we will continue fostering internships within the Emergency Management community.

5. Abstract:

Louisiana's propensity for natural disasters (e.g., Hurricanes Katrina, Rita, Gustav, Ike, and Isaac) demonstrates a clear need for a robust Disaster Science and Management Program in the region. We are building on past successes, while providing a solid platform for the DSM program to thrive by formally bringing it into the Department of Geography and Anthropology. The Program will begin in the Fall 2016 as a concentration within the Geography undergraduate curriculum, whereas students can obtain either a BA or BS in Geography, with a DSM concentration, in addition to making the program available as a minor. A revised curriculum was developed for the Program, including both on-campus, and on-line courses, and it will build on past successes of the student internship program.

6. End users:

End User/Agency	Project Role	Expected Return/Benefit
Ms. Joanne Moreau, Director Mayor's Office of Homeland Security and Emergency Preparedness	<ul style="list-style-type: none"> • Provided internship for DSM student during Spring 2016 semester. • Hired DSM student as a student worker. 	Student gained real-world experience with employment in a Homeland Security Enterprise position.
Ms. Amy Pinero, Chair Department of Social Sciences and History Baton Rouge Community College	<ul style="list-style-type: none"> • Build curriculum at BRCC 	DSM PhD alum employed by BRCC to teach Fall 2016. Curriculum at BRCC serves as a potential gateway from the community college to the LSU DSM program. Increase student diversity at LSU as BRCC maintains a higher percentage of minorities vs LSU (45% at BRCC vs. 25% at LSU).
Mr. Garrett J. Romagossa, Disaster Program Manager American Red Cross, Baton Rouge Chapter	<ul style="list-style-type: none"> • Provided internship for DSM student during Spring 2016 semester. • Provided volunteer opportunities for DSM class 	Student gained real-world experience with employment in a Homeland Security Enterprise position.
Rick Weber, Director Ascension Parish Emergency Management Offices	<ul style="list-style-type: none"> • Provided internship for DSM student during Spring 2016 semester. 	Student gained real-world experience with employment in a Homeland Security Enterprise position.
Mr. Christopher Gilbeaux Deputy Director Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP)	<ul style="list-style-type: none"> • Provided internship for DSM student during Spring 2016 semester. • Hired DSM student as a student worker. • Hired DSM graduate as a full-time employee. 	Student gained real-world experience with employment in a Homeland Security Enterprise position.

7. Explanation of Changes:

No changes were made.

8. Unanticipated Problems:

The DSM program underwent structural changes within the university which involved over 20 forms that required department, college, and university approval. This process was much more tedious than anticipated, but was successful.

There was also vigorous debate regarding a name change to the LSU DSM program. Ultimately, the department retained the original name.

9. Project Outcomes:

This program will officially commence in Fall 2016, though we have maintained the curriculum to grandfather students through the original college-managed DSM program. The majority of the groundwork for the transition from the College of Humanities and Social Sciences to the Department of Geography and Anthropology was completed during the reporting timeframe.

Certificate Program. The DSM certificate/concentration program targets current LSU students and professionals interested in the field of Emergency Management (EM). The program appeals to working professionals in the EM area as well as others who desire to increase their skill set to include EM. Homeland Security Enterprises, including the Red Cross, GOHSEP, LSU Police, etc. were places for students to further their experiences.

Degree Program. We completed the process of developing the DSM concentration in the Department of Geography and Anthropology which will begin officially in Fall 2016. All current DSM courses have been reconstituted under the GEOG (Geography) rubric. These courses will be available to students in either the BA or the BS degree programs in Geography, whereby if they take the requisite core DSM courses, the student would be awarded a concentration in DSM along with their Geography degree. We will also host a minor degree program through the Department. This concentration should be of interest to employers in the Homeland Security Enterprise, both locally (i.e., MOHSEP - the Mayor's Office of Homeland Security and Emergency Preparedness), regionally (i.e., the Louisiana Department of Environmental Quality), and nationally (i.e., FEMA). Depending on the success of the program, a Graduate-level certificate in DSM may be developed in future years.

10. Education Activity and Milestone Progress:

Education Activities and Milestones: Progress to Date

Reporting Period 1/1/2016 – 6/30/2016			
Education Activity	Proposed Completion Date	% Complete	Explanation of why activity / milestone was not reached, and when completion is expected
1. Continue to deliver DSM courses while formulate concentration in BA/BS DSM concentration to be moved into the school of Geography and Anthropology.	1/29/2016	100%	
2. Formulate draft of Certification Program.	2/29/2016	100%	
3. Partner with Baton Rouge Community College (BRCC) to develop BRCC DSM curriculum.	1/29/2016	100%	
Education Milestone			
1. Deliver at least three (3) DSM courses during the Spring 2016 semester. Submit documentation for DSM concentration in BS/BA DSM to the Department of Anthropology and Geography for approval	2/29/2016	100%	
2. Submit documentation for DSM certificate to the Department of Anthropology and Geography for approval	3/31/2016	100%	

3. Complete one (1) or more course curricula for Baton Rouge Community College (BRCC) DSM.	6/30/2016	100%	
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11. Transition Activity and Milestone Progress:

Transition Activities and Milestones: Progress to Date

Reporting Period 1/1/2016 – 6/30/2016			
Transition Activity	Proposed Completion Date	% Complete	Explanation of why activity / milestone was not reached, and when completion is expected
1. Develop DSM Student Post-Graduation tracking method in order to document post-graduation activities.	1/29/2016	100%	
2. Partner with the American Red Cross Baton Rouge Chapter to offer service learning project for DSM 2010 course and DSMA student association.	1/29/2016	100%	
3. Develop a working document detailing end users in the HSE to include name, agency, contact information, etc.	1/29/2016	100%	
Transition Milestone			
1. Implement DSM Student Post-Graduation tracking method and document post-graduation activities in Homeland Security enterprises or continued grad school of 50-60% of Spring 2016 students.	5/31/2016	100%	
2. Through the partnership with the ARC, 60-75% students completing Spring 2016 DSM 2010 Fundamentals of Emergency Management will complete the service learning portion of that class.	5/31/2016	100%	
3. Input data into the working document that contains the contact information of at least fifteen (15) end users in the HSE.	4/29/2016	100%	

11. Interactions with research projects:

Rudy Bartels, PhD candidate and DSM instructor at LSU, participated in an internship through the CRC SUMREX program. He was hosted by Dr. Don Resio at the University of Northern Florida. He collaborated on research projects involving rainfall across the United States.

Dr. Barry Keim, Principal Investigator on this project, was invited by Gavin Smith to give a lecture for a course via Skype at the University of North Carolina Chapel Hill. The course was part of the Graduate Certificate program in Natural Hazards Resilience sponsored by the CRC.

Dr. Barry Keim gave a presentation at the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) to researchers from South American countries as part of the USAID program which was hosted by Brant Mitchell from the Stephenson Disaster Management Institute (SDMI) and is a part of the CRC Research Project spearheaded by Dr. Robert Twilley (*Integrated Modeling Approaches ...for Creating More Resilient Communities*).

12. Publications:

Gilliand, J., and B.D. Keim. Submitted. Surface Wind Speed Trend Climatology of Brazil from 1980-2014. *Journal of Climate*.

Allard, J.M., J.V. Clarke, and B.D. Keim. In Press. Spatial and Temporal Patterns of In Situ Sea Surface Temperatures within the Gulf of Mexico (GoM), 1901–2010. *American Journal of Climate Change*.

Shao, W., S. Xian, B. Keim, K. Goidel, N. Lin. In Press. Understanding Perceptions of Changing Hurricane Strength Along the U.S. Gulf Coast. *International Journal of Climatology*.

Shao, W., J.C. Garand, B.D. Keim, and L.C. Hamilton. In Press. Science, Scientists, and Local Weather: Understanding Mass Perceptions of Global Warming. *Social Science Quarterly*. DOI: 10.1111/ssqu.12317

Hamilton, L.C, J. Hartter, B.D. Keim, A.E. Boag, M.W. Palace, F.R. Stevens, M.J. Ducey. In Press. Wildfire, Climate and Perceptions in Northeast Oregon. *Regional Environmental Change* 16(6):1819-1832. DOI: 10.1007/s10113-015-0914-y

Shankman, D., and B.D. Keim. 2016. Flood Risk Forecast for China's Poyang Lake Region. *Physical Geography* 37(1):88-91.

14. CRC Performance Metrics:

CRC Performance Metrics			
Metric	Research Project	Education Project	Center
Courses/certificates developed, taught, and/or modified		See Table	
Enrollments in Center-supported courses/certificates			
HS-related internships (number)		5	
Undergraduates provided tuition/fee support (number)		0	
Undergraduate students provided stipends (number)		0	
Graduate students provided tuition/fee support (number)		2	
Graduate students provided stipends (number)		2	
Undergraduates who received HS-related degrees (number)		4	
Graduate students who received HS-related degrees (number)		0	
Certificates awarded (number)		0	
Graduates who obtained HS-related employment (number)		2	
SUMREX program students hosted (number)			
Lectures/presentations/seminars at Center partners (number)		1	
DHS MSI Summer Research Teams hosted (number)		0	
Journal articles submitted (number)		1	
Journal articles published (number)		5	
Conference presentations made (number)		2	
Other presentations, interviews, etc. (number)		4	
Patent applications filed (number)			
Patents awarded (number)			
Trademarks/copyrights filed (number)		0	
Requests for assistance/advice from DHS agencies (number)		2	
Requests for assistance/advice from other Federal agencies or state/local governments (number)		5	
Total milestones for reporting period (number)		6	
Accomplished fully (number)		6	
Accomplished partially (number)		0	
Not accomplished (number)		0	
Product/s delivered to end-user/s (description and recipients)	See Table		
External funding received	See Table		
Leveraged support			
Articles on Center-related work published on website (number)			
Coverage in media, blogs (number)			
Social media followers (number)			
Posts to social media accounts (number)			
Events hosted (number)			
Website hits (number)			

Table for Documenting CRC Education Project Courses and Enrollments

Courses Developed and Taught by Louisiana State University under Project Disaster Science and Management						
Course		Developed (D), Revised (R), and/or Taught				
Number	Title	1	2	3	4	5
DSM	Hazards, Disasters, and the Environment	T				
	Offering: Elective (E), Concentration (C), Minor (M)	C				
	Enrollment	150				
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DSM	Fundamentals of Emergency Management	T				
	Offering: Elective (E), Concentration (C), Minor (M)	C				
	Enrollment	54				
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DSM	Hazards Seminar	T				
	Offering: Elective (E), Concentration (C), Minor (M)	C				
	Enrollment	10				
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DSM	Practicum in Disaster Science and Management	T				
	Offering: Elective (E), Concentration (C), Minor (M)	C				
	Enrollment	5				
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DSM	Crisis Management	T				
	Offering: Elective (E), Concentration (C), Minor (M)	C				
	Enrollment	8				

Table for Documenting External Funding and Leveraged Support

External Funding			
Title	PI	Total Amount	Source
Southern Climate Impacts Planning Program (SCIPP)	Keim	\$358,000	NOAA
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Leveraged Support			
Description		Estimated Annual Value	
Salary for DSM instructor from LSU Deans Office: DSM 2200 Hazards, Disasters, and the Environment		\$4,000	
LSU salary for Geog-DSM Professor to teach one (1) course: DSM 4600 Crisis Management		\$13,000	
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