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Program News

Lisa McLaughlin is the College of Arts and Sciences Distinguished Scholar - Summer 2013



Lisa McLaughlin graduated on August 10th with a Bachelor's of Science Degree in Geology. Lisa is an Honor's College (HC) graduate that completed her HC project entitled "An Oil and Gas Exploration Field Study: Midland Field, Kennedy County Texas." She received the Distinguished Student Undergraduate award from the College of Arts and Sciences. She has been a part of the Physics/Geosciences Department since Fall 2010. She organized and promoted the Earth Sciences Week (5-day event) on campus last year that started with a key note speech from Mayor Sam Fugate. She organized and was President of the American Association of Petroleum Geologist's (AAPG) Student Chapter on campus two years ago. With Lisa at the helm, the club brought in a National AAPG Distinguished speaker, an EPA Regional Director, and four local speakers to talk about their careers and encourage a strong Geosciences Program on this campus. She also has mentored or trained

seven geology majors in volunteering and collecting data on South Texas streams for the "Texas Stream Team" (a Center at Texas State University funded by the EPA and the Texas Commission on Environmental Quality). Lisa completed and presented a Pathways to the Doctorate research project with Michael Hill and Jonathan Boehm entitled "The final Journey of Enchanted Rock." Ms. McLaughlin also completed a poster entitled "Standing Water: A Coastal Bend Water Quality Assessment." Ms. McLaughlin has been a volunteer for this program and a trainer for TAMUK and Coastal Bend students for the past three years. She also volunteered to collect data energy consumption data for Rochelle Martino and Provost Rex Gandy in the "Green Campus" study in 2011. Lisa McLaughlin received the Fall 2011 EPA Greater Research Opportunities (GRO) Fellowship to pay for her education and field camp. She also earned a number of local Corpus Geological Society Scholarships. Ms. McLaughlin brings a high-level of energy, enthusiasm, and commitment to all of her academic pursuits. Lisa is working as a geologist for Dewbre Petroleum Corporation in Corpus Christi Texas.

Three Majors walked the stage in August



Lisa McLaughlin, Tyler Quade, and Stephanie Resendez walked the stage in the summer 2013 TAMUK Commencement. These students worked tirelessly for the benefit of our program. We are proud of their accomplishments and wish them well in their professional careers.

Karl Tyler Quade graduated with a Bachelor's of Science in Geology. Tyler started the program as a freshman from the Deer Park, Texas (Sugarland) area with a 3.76 average.

Tyler was an excellent student with a 3.20 overall average at graduation. Tyler finished his degree with an exclamation point. He received a scholarship from the Corpus Christi Geological Society and used the money to pay for part of his field camp tuition at Idaho State University (Pocatello, Idaho). Tyler completed with one of the few A-averages awarded in the ISU field camp. He was offered a scholarship for graduate school at ISU to study sedimentology. Tyler is currently working with the Gisler Brothers Mud Logging Company centrally located in Runge, Texas.

Stephannie Resendez graduated with a Bachelor's of Science in Geology. Stephannie transferred to TAMUK in the Fall of 2010, transferring from South Texas College. Stephannie worked as a lab TA in our Earth Science I labs as well as other departmental assignments. She served as president of the student chapter of the AAPG during the 2012-2013 year, during which one of her accomplishments was bring representatives from Career Services to the department to help students prepare resumes and to engage in mock interviews to hone their interviewing skills. Stephannie attended the Western Michigan University field school which is designed around ground water including topics such as Surface Geophysics (ground-penetrating radar and "sledge hammer seismic), Well Drilling, Aquifer Testing, and Hazardous Waste Operations. One benefit of the course is that Stephannie earned her Hazwoper Certification.

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Geosciences Department welcomes seventeen New Majors

We are happy to have 17 new majors enroll in classes this Fall, 2013.

- Dylan Bass** is a freshman from Tomball High School.
- John Dabney** is a junior status transfer student from Blinn Community College (Brenham).
- Eric Garcia** is a junior status transfer student from Coastal Bend College (Alice).
- Mathew Garcia** is a freshman transfer student from Coastal Bend College.
- Blanca Garza** is a junior status transfer student from South Texas College.
- Jessica Garza** is a sophomore status transfer student from Harlingen, Texas.
- Sarah Grant** is a Junior Status transfer student from TAMUCC.
- William (Damon) Crutcher** is an internal transfer student from Natural Gas Engineering
- Kevin Maynard** is an incoming Freshman from Pearland, Texas.
- John E. Mikolajczyk** is a Sophomore Status internal transfer student from the Music Department.
- Robert Najera** is a post-baccalaureate Biologist from TAMUK seeking a second degree.
- Morgan Pope** is a Junior Status transfer student from Wharton Community College.
- Zach Pusley** is a transfer student from Jarvis Christian College.
- Jonathan Thomas** is an incoming Freshman from Katy, Texas.
- Jonathon Tuck** is a Junior Status transfer student from Alvin Community College.
- Katelyn Wallace** is a Junior Status internal transfer student from Chemical Engineering.
- Jon Pollock** is a post-baccalaureate Geoscientist from TAMUK seeking a second degree.



Congratulations to eighteen Majors that completed Summer Intersession Central Texas (TAMUK) Field Camp



This is our second year operating this part of our field camp. Juan Cavazos, Jeff Elsworth, Stephanie Garza, Jacob Gomez, Andrew Hancock, Daniella Herrera, Zachary Hull, Casey Mibb, Veronica Nieto, Lauren Oconnell, Daniel Rios, Gloria Salinas, Robert Schoen, Cesar Serna, William Sundland, Andrew Willias, David Wood, and Juan Zamora completed the second three-hour part of their eight hour commitment to professional training. The theme of this component is hydrogeology which includes mapping exercises, logging a well, and performing an aquifer test. The faculty is very proud of this group's field acumen. Tom McGehee, Dan Jackson, John Buckley, Paul Tybor (Hill Country Underground Water District), Ron Fiesler (Blanco-Pedernales Groundwater Conservation District), and Rebecca Harper (Tyler Community College) were

instructors on the field camp. Stephen Butler (Tyler Community College) joined our students in Mason County to observe and participate in mapping the McMillan Ranch Project.

Field Camp gets much needed Equipment

Teresa Riley, Senior Vice President for Fiscal and Student Affairs, purchased appliances and cooking equipment to provide stable food preservation and cooking gear for our camp. This included a refrigerator and freezer, pots and pans, and cooking utensils. Our special thanks to Lowes and Ace Mart for their educational discounts.



External Field Camp Activities of Majors

Tyler Quade completed his capstone field course with the Geosciences Department at Idaho State University. Their exercises involve detailed rock descriptions and geologic mapping using air photos, topographic maps, remote sensing and GPS computer applications. Their emphasis is placed on developing an individual's ability to observe, record, and interpret field relationships. Students then prepare several complete geologic reports including digital data and maps.

Lisa McLaughlin completed her capstone course with James Madison University Geology Field Camp in Ireland. The course had traditional and digital mapping projects (Finney Landscape, folded marbles at Cur, Omev Beach, and mountainside at Recess), environmental mapping projects, and glacial geomorphology projects.

Justin Mauck attended Oklahoma State University field camp in Canon City, CO, where he measured stratigraphic sections and mapped rocks of the Pennsylvanian through Cretaceous ages. The focus was on the tectonics of both the current Rockies and the Ancestral Rockies. Interpretations were based on what they observed in the field, their maps and measured sections.

Stephanie Resendez completed her hydrogeology field course with Western Michigan University. This is an applied hydrogeology field course designed to educate and train students in OSHA 40 hour HAZWOPER training, environmental surface geophysics, well drilling and installation, aquifer testing, groundwater sampling and testing, and remediation.

Geosciences Club President's Page

This semester we have 4 new elected officers and one position (President) to fill. Vice President Stephanie Garza, Secretary Zach Hull, Treasurer Casey Mibb, and Historian Veronica Nieto are your 2013 Academic Year officers. This slate of officers has a number of good ideas to engage with their colleagues in activities. If you want to run for President or serve in the club activities please check the activities board in Manning Hall to find the time and date for the first meeting next week.

AAPG Student Chapter President's Page (Justin Mauck)



We will be traveling to Central Texas again for both Fall fieldtrips. We will conduct hydrogeology and geomorphology field exercises on the first fieldtrip on September 27-29. Brian Smith and Brian Hunt are taking us on a tour of the hydrogeology of Barton Springs. Ron Fieseler and Paul Tybor will be leading our group on a pumping test and log a water well. Professor Jackson will lead the geomorphology group to study karst features. On October 10-12 we will meet Frank Roberts at Badu Hill to map the feature and the surrounding geology. Dan Jackson has structural geology exercises planned for his class. We are also planning to go to the Houston Museum of Natural Sciences on November 14 to look at the "World's Finest Mineral Collection."

Upcoming Fall Fieldtrips

We will be traveling to Central Texas again for two of our Fall fieldtrips. We will conduct paleontology and mineralogy field exercises on the first fieldtrip on October 10-12. Dr. Buckley will be traveling to the Vertebrate Paleontology Lab affiliated with the Jackson School of Geological Sciences, University of Texas at Austin. On October 11th, we will meet Frank Roberts at the famous Badu Hill Pegmatite (contains rare-earth element minerals) to map the feature and the surrounding geology. Dr. Buckley will lead the group on a hunt for dinosaur tracks in the Glen Rose Formation followed by a collection of fossils from the Walnut Formation near Leander, Texas. On October 24-26 we will conduct our second fieldtrip which covers aspects of Stratigraphy/Sedimentology, Hydrogeology, and Structural Geology. Ron Fieseler and Paul Tybor will be leading our group on a pumping test and log a water well. Professor Jackson will lead the geomorphology group to study karst features in the area. On September 28th Dr. McGehee will look at modern sedimentary environments for his Sedimentology and Stratigraphy class. We are also planning to go to the Houston Museum of Natural Sciences on November 9th to look at the "World's Finest Mineral Collection."

Bree Gonzalez and Katelyn Wallace teach Premont Students



Following the success of the UBMS-Urban Program in May that won first place for their poster, Ms. Gonzalez and Katelyn Wallace started their first College Exploration Class for the TAMUK-Special Programs camp this summer. Michael Zamora, a reporter for the Corpus Christi Caller Times, was invited to cover a story involving Premont High School and Professor Bree Gonzalez. "Freshman Jacinda Vera, 15 (left), watches as geosciences professor Bree Gonzalez and freshman Emory Cantu (right) shake a coil to simulate different types of seismic waves Friday during the College Exploration Camp for Premont High School. Premont freshmen Alyssa Guerra (left) and Emory Cantu, both 14, get some help from geosciences professor Bree Gonzalez plotting out seismograph readings on a chart Friday during the College Exploration Camp for Premont High School freshman and sophomores at Texas A&M University-Kingsville. Twenty-six students participated in the two-day sleep over camp at the university". This project and above print was

published in the Corpus Christi Caller Times.



Bree Gonzalez is teaching Dual Credit Classes at Calallen

This semester Professor Bree Gonzalez is teaching an Earth Science course for Dual Enrollment students at the Northwest Center for Advanced Studies in Calallen. The course is being taught as a hands-on inquiry-based course. Students are exploring the field of Earth Science by investigating Earth's components, such as rocks and minerals, using seismographs and simulating earthquakes, creating stream systems using a four foot stream table, and relating fossils to Earth's rich history. Students are encouraged to explore and design their own experiments while recording everything they think, see, feel, hear, smell, and possibly taste in their lab notebooks. Katelyn Wallace, a Geology major, assists students with conducting and analyzing laboratory experiments. Students are also discussing current events and how Earth Science relates to the world around us.

Please welcome Dr. Mark Ford, our new faculty member in Geology



Dr. Mark Ford has accepted our Petrology/Mineralogy tenure track position starting this Fall, 2013. He will be teaching mineralogy and Earth Science classes this Fall while organizing his lectures and planning his research. Dr. Ford wants to meet most of our extended family in geosciences, so if you are in the area please come by and say hello.

Dr. Ford will demonstrate the field pXRF during the Winter Intersession Field Camp



The arrival of our new handheld Bruker pXRF has caused quite a stir. Other departments including Agriculture, Agribusiness and Environmental Sciences and Psychology and Sociology are already interested in collaborating with the Geosciences department on projects with the new equipment. While capable of analyzing the chemistry of soils and archeological artifacts, the main use of the the pXRF will be for determining the geochemistry of rocks and minerals. We hope to use the new machine not only for research projects and field exploration but also for some class projects, giving students a chance to learn about the kind of state of the art equipment that many companies are just beginning to use.

Our majors received Google Earth Pro for the Fall Semester

The Department was recently awarded an educational grant from Google to install Google Earth Pro on all lab computers in the GIS Teaching Lab. This grant was valued at \$9,000 and allows students to utilize the latest cutting edge technology from Google in GIS classes as well as with research projects. Google Earth Pro is much more capable than the free version. The Pro version allows students to print high resolution images, import GIS data and images, create professional quality maps, measure an area of a polygon and circle, as well as many other tools.

Dr. Brent Hedquist has been invited to two conferences

The first invitation is to collaborate with the partners of the new TAMUK Institute of Architectural Engineering Heritage (IAEH) and introduce multi-discipline research interest associated with the Institute at the conference in Kingsville, September 26-27, 2013. The second invitation is to present a poster on findings from implementing a Climate Diversity Course at the annual American Meteorological Society (AMS) Educational conference in Atlanta, Georgia, February 2-4, 2013. Dr. Hedquist had previously been invited to an AMS Climate Diversity workshop in Washington D.C. in May, 2013. This conference will conclude training done at the previous workshop by the AMS in teaching Climate Science and Sustainability at diverse institutions, as well as becoming climate leaders at their respective schools.

Special Thanks to Deans Abbey Zink & Mohamed Abdelrahman, AVP Mary Gonzalez

Dean Abbey Zink (College of Arts and Sciences), Associate VP Mary Gonzalez, and Dean Mohamed Abdelrahman (College of Graduate Studies) used research support to purchase a Bruker pXRF handheld/field X-ray Fluorescence Analyzer for the Geosciences Program. This instrument is useful for chemical field studies of soil and rocks. Dr. Mark Ford is considering several locations in Big Bend to study the origin of igneous activity of selected volcanic rock formations.

U-2013 Global Uranium Symposium (September 29-October 3, 2013)

Location: Omni Corpus Christi Hotel – Bayfront, Address: 900 North Shoreline Blvd. Corpus Christi, Texas 78401

This conference will bring together over 500 registered attendees, professionals in the fields of mining, processing, exploration, permitting, and health and safety together with business leaders, experts in the World uranium market, and government officials involved in regulation and permitting. In addition to workshops and presentations on uranium research and global developments, participants will have the opportunity to tour regional mines and nuclear power plants while enjoying the beautiful South Texas weather and hospitality.

Tom McGehee and Lee Clapp will moderate the Groundwater Modeling Sessions.



TAMUK Summer Intersession Central Texas Field Camp 2013

Students: Juan Cavazos, Jeff Elsworth, Stephanie Garza, Jacob Gomez, Andrew Hancock, Daniella Herrera, Zachary Hull, Casey Mibb, Veronica Nieto, Lauren Oconnell, Daniel Rios, Gloria Salinas, Robert Schoen, Cesar Serna, William Sundland, Andrew Willias, David Wood, and Juan Zamora

Instructors: Tom McGehee, Dan Jackson, John Buckley, Paul Tybor (Hill Country Underground Water District), Ron Fiesler (Blanco-Pedernales Groundwater Conservation District), and Rebecca Harper (Tyler Community College)

