Goals and Services of the Golden West College STEM Program:

• Increase student participation in STEM programs by providing outreach, counseling, and guidance

• Improve student persistence by enhancing their engagement in the STEM learning process with extended learning areas

• Strengthen STEM programs, curriculum, and equipment

• Operate a STEM Center to provide a social and academic learning environment

• Academic and career advising (Please see the Drop-in Counseling Hours on the last page of this newsletter)

• Undergraduate research opportunities (Please see the Announcements, Scholarships and Internships section of this newsletter)

• Supplemental Instruction workspace for STEM faculty

• Independent study room (requires reservation)

• Computers and laptops for students’ use

• Use of STEM reference materials (e.g. anatomical models, textbooks, calculators, microscopes, micro slides)

Science Showtime

On September 30, the GWC Math and Science Department, in partnership with the Huntington Beach Rotary Club, hosted its eighth consecutive Science Showtime on campus. This annual event is free and open to the public to get grade-school kids (and their families) interested in science with the hopes that someday those impressionable minds will consider careers using math and science. The efforts of faculty, staff and student volunteers who assisted in preparing for our big night helped to make it a very successful event. A large number of our community members attended Science Showtime and were very impressed and grateful of this event at Golden West College.

The guests had access to more than 20 interactive exhibits, including attractions such as glow-in-the-dark rocks, make-your-own slime, generating electricity on a bike, operating a Rainbow Environmental Services recycling truck, Halloween chemistry, spaghetti and marshmallow towers, Alka-Seltzer rockets, build your own clock, Math facts cootie catchers, Math bingo and more. In addition, to commemorate Golden West's 50th Anniversary, kids made their own souvenir using a penny-smashing machine. The arrival of Darth Vader and the Stormtroopers were a special treat this year.


**STEM Center Sudoku**

Sudoku (数独 sūdoku, digit-single) (/suːˈdoʊkuː/, /-ˈdɒ-, /soʊ-, originally called Number Place), is a logic-based, combinatorial number-placement puzzle. The objective is to fill a 9×9 grid with digits so that each column, each row, and each of the nine 3×3 subgrids that compose the grid (also called “boxes”, “blocks”, “regions”, or “subsquares”) contains all of the digits from 1 to 9. The puzzle setter provides a partially completed grid, which for a well-posed puzzle has a unique solution. (http://www.sudokudragon.com/sudokuhistory.htm; https://en.wikipedia.org/wiki/Sudoku) Sudoku originated in Switzerland and then traveled to Japan by way of America. Sudoku’s journey has been traced from China, through Persia to Europe and then across the Atlantic to New York. After it jumped over to Japan it then became a great craze in the U.S. and Europe, being published in most newspapers and magazines with championships and conventions all over the world. It is one of the few puzzles that can claim to be truly international by nature. It has no cultural baggage and just needs a logical mind to solve it. The great mathematician Leonhard Euler is the man chiefly credited with the creation of the puzzle that we now know as Leonhard Euler Sudoku.

Born in Basle, Switzerland in 1707 just after the giant leap forward in mathematics pioneered by Isaac Newton and Gottfried Leibniz, he both consolidated and pioneered mathematical knowledge in many fruitful areas. He moved from Basle to St Petersburg, Russia to study medicine but by the chance happenings of fate he became the chief mathematician at the St Petersburg Academy. In 1741 he spent 25 years in Germany before returning to the Academy in Russia where he died at the grand age of 76. Even though blind for the last seventeen years of his life he still made important discoveries. (http://www.sudokudragon.com/sudokuhistory.htm;https://en.wikipedia.org/wiki/Sudoku)

Rules to solve Sudoku puzzles: There is only one simple rule in Sudoku: each Sudoku group of nine squares must have a unique occurrence of each of the numbers 1 through 9.

*Let’s try solving these Sudoku puzzles…*
Announcements, Scholarships and Internships


Golden West College is offering free review workshops during Winter Intersession 2017 for students who would like to improve their math academic abilities and retake the related placement test to potentially increase their placement level.

STUDENTS WILL BE ABLE TO:
- Improve math skills
- Attend workshops led by faculty members
- Participate in study sessions/open lab hours with tutors
- Retake the math placement test (with instructor’s approval)

ELIGIBILITY:
Students should meet one of the following requirements to participate in Jumpstart:
1. GWC incoming or current students who want to improve their math skills or re-take the math placement
2. GWC students who placed in Math G030 for Spring 2017 semester
3. GWC students who passed Math G010 in Fall 2016 semester
4. GWC students who did not pass Math G010/G030 in previous semesters

Students will be required to attend a mandatory orientation.

REGISTRATION:
Register for the Math 030 Jumpstart workshop: https://goo.gl/forms/KvnKt6PeVGkVUAsw2
After registering for a workshop, an academic counselor will be in touch with additional details and confirmed program dates/times.
Questions? Contact Margaret Morales at mmorales@gwc.cccd.edu. Please note, students may only register for one workshop during Winter Intersession.

Research Opportunities for Community College Teachers (ROCCT) program at UCI

Since last June, three faculty members (Erin Craig, Steve Alemansour and Gita Alemansour) at GWC have been selected to join the 2016 cohort of the Research Opportunities for Community College Teachers (ROCCT) program at University of California, Irvine. Being a part of this project is a testimony to our interest in scientific research and pedagogical aspects of transforming STEM education at community college level. The main focus of this research project has been about the worsening of the water crisis in California. This research project has been an eye-opening experience both from a scientific and pedagogical point of view. The findings of this project have important scientific results and it is currently used as a mathematical project in a Math G030 class. This project will show a real-life application of using mathematical concepts and calculations in reaching conclusions that affects our environment in California directly.

INSPIRE Summer Program at UCI

The INSPIRE Summer Program leverages the Schools' facilities and participating faculty for a 2-Week Engineering and Computer Science Course over the summer period.
Here is a link to the INSPIRE program at UCI: sites.uci.edu/inspire.
Math/Science Building

A new Math/Science building, scheduled to be completed in late 2018, will contain an exciting new STEM Center and we look forward to the future and all that it holds for the improvement in the learning of Mathematics and Science.

STEM Center Advisory Group

Jeff Courchaine, Dean of Mathematics and Science, initiated the First STEM Center Advisory Group (SCAG) meeting which was held on Friday September 11, 2015 in MATHSC 114 (the STEM Center). In this meeting, David Gatewood, Dean of Career and Technical Education, and faculty shared their input, thoughts and perspective that will be important in shaping the future of STEM education and services at Golden West College.

The list of the faculty and staff that have been a part of the GWC STEM Center is as follows: Jeff Courchaine (Dean of Mathematics and Science), David Gatewood (Dean of Career and Technical Education), Pete Bouzar (Department Chair of Mathematics), Gita Alemansour (Math Instructor at LRC), Annamaria Crescimanno (Biology Instructor), Susan Girard (Math/Science Division Office Coordinator), Katherine Green (Chemistry Instructor), Teresa Speakman (Department Chair of Physical Science), Jennifer Wilcox (Chemistry Instructor), Darla Kelly (Department Chair of Biology), Maryam Khakbazan (Math Instructor at LRC), Nalani Queja (Biology Instructional Associate), Elizabeth Caluag (Biology Instructional Associate), Travis Vail (Biology Instructor), Michael Valinluck (Biology Instructor).

GWC STEM Center Logo Contest

Help us brand our center with a logo!

All GWC students, faculty, or staff members of any department at GWC are eligible to enter. Email your entry to galemansour@gwc.cccd.edu or jcourchaine@gwc.cccd.edu

Contest deadline is January 1, 2017. The STEM Center Advisory Group will vote and choose the winning logo.

Success Begins at the STEM Center!
Live Long and Prosper...

Golden West College
Wes Bryan, President

Coast Community College District Board of Trustees
David A. Grant, Mary L. Hornbuckle, Jim Moreno,
Jerry Patterson, Lorraine Prinsky, Ph.D., Stephanie L. Eichman, Student Trustee
John T. Weispfenning, Ph.D., Chancellor

STEM Center Hours:
Monday – Thursday: 9:00 a.m. – 4:00 p.m.

Appointments and Questions:
bqueja@gwc.cccd.edu or 714-892-7711 Ext. 55005

Drop-in Counseling Hours
Mon. 9:00am-3:00pm, Tues. 1:00-4:00pm,
Wed. 12:30-4:00pm, and Thurs. 9:00am-3:00pm.

Contact Information:
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This newsletter was prepared by Gita Alemansour & the members of the STEM Center Advisory Group