

Get Energized with STEM!

Science Technology Engineering Mathematics

**Teacher Professional Development
Summer 2015**



Looking for a summer full of innovation?

June 15-21	ED 507 RAP Camp: Natural Resources & People Camp (3)
June 15-19	ED 507 Math Matters and the Common Core (3)
June 16-18	ED 500 Southern Oregon Sustainable Forestry Tour (2)
June 15-16	ED 500 Teaching Applied Algebra I (2)
June 17-18	ED 500 Teaching Applied Algebra II (1)
June 22-23	ED 500 Lego Robotics for Teachers (1)
June 24	ED 500 Citizen Science: Making it Real! (1)
June 28-29	ED 500 Playing with Engineers: Design Challenges (3)
July 22-Sept 3	ED 500 Tinkering Fundamentals (3)
August 10-14	ED 500 Environmental Education August Institute (3)
August 19-21	ED 500 SuperQuest: Technology in Action! (2)

Celebrating Community STEM Partners!

- ◆ **Oregon Forestry Resources Institute:** Southern Oregon Forestry Tour
- ◆ **US Forest Service/BLM:** Resources and People Camp
- ◆ **Rogue Community College:** Teaching Applied Algebra I & II
- ◆ **SMILE and OSU:** Playing with Engineers
- ◆ **Southern Oregon Regional Envir Ed Leaders (SOREEL):** August Institute
- ◆ **Science Works:** Tinkering Fundamentals
- ◆ **Southern Oregon Education Service District (SOESD):** SuperQuest
- ◆ **KS Wild:** Citizen Science: Making it Real!



Please see attached Course Descriptions & Registration Information

For more information please contact:
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STEM Summer 2015 Course Descriptions

- ED 507 Natural Resources & People (RAP) Camp** **Dates:** Pre-session, June 15-21 **3 Credits**
Instructor: Pam D'Haem (This is a residential program and students must stay the whole week)
Partner: BLM and Forest Service
This seven day residential natural resources field camp is held at Lake of the Woods near Klamath Falls, Oregon. Participants work with high school students and federal agency personnel to learn about careers in natural resource management. Participants (teachers) will live in rustic cabins and be exposed to a wide variety of curricula and engaging instructional strategies to integrate environmental education into their classrooms and excite learners about learning! **Instructor consent required** prior to registration on-line with SOU. Contact Pam H'Daem at pameladhaem@gmail.com or 541-941-9438 for more information.
- ED 507 Math Matters and the Common Core** **Dates:** Pre-session, June 15-19 **3 Credits**
Instructor: Mark Sherbow
A hands-on and engaging experience, learn strategies to nurture children's deep mathematical thinking and support their understanding of the Common Core Curriculum. Teachers will gain an understanding of the Common Core Curriculum, increase conceptual understanding of mathematics and fill their math toolbox with authentic student-centered resources. Work with other elementary teachers, interview students and make sense of the big changes with the Common Core Curriculum, while informing math teaching and understanding; all in a week-long intensive graduate seminar. **Register on line with SOU.**
- ED 500 Southern Oregon Sustainable Forestry Teacher Tour** **Dates:** Pre-session June 16-18 **2 Credits**
Instructor: Linda Hilligoss
Partner: Oregon Forest Resources Institute
In this three day workshop teachers will learn about the social, economic and ecological aspects of sustainable forestry in the field and receive a new (grades 8 – 12) 12 week forestry curriculum to use in the classroom. Teachers will visit federal, private and family forestland, tour innovative forest-product mills and biomass energy plants, explore a recent forest-fire area, hear from natural resources professionals who care for Oregon forests and those who provide products we use every day, make connections between what you learn and how to apply it to your classroom. Meals and transportation are included. **Register for this special workshop on-line at <http://bit.ly/1zB0r21>. Graduate credit available at \$70/credit. Registration for credit on-site.**
- ED 500 ED 500 Teaching Applied Algebra 1** **Dates:** June 15-16 (8 am—4:30 pm plus Monday dinner) **2 Credits**
Instructor: Doug Gardner/Serena Ota St Clair
Partner: Rogue Community College (Table Rock Campus)
This two day workshop is part of the Summer Math Institute at RCC for high school and community college teachers and provides a clearer vision of how math relates directly to real world technical jobs. Learn innovative approaches to teaching applied Algebra I (includes geometry and right angle trig) using the RCC MTH 63 Textbook and CTE applications and tool kit. The use of real numbers, exponents, number notation, manipulation of formulas, ratio, proportion, and percentage application for calculating and solving various situational applications for rates of change, slope, proportional relationships, and unit analysis will be emphasized. The curriculum can be adopted in whole or in part. Receive free access to MTH63 and MTH96 textbook and solutions, large set of hands-on student activities/projects, tool kit of supplies for MTH63. **Register for this special workshop on-line at www.rogecc.edu/SMI2015. Email Michelle Rhodes for questions at mrhodes@rogecc.edu. Graduate credit available at \$70/credit. Registration for credit on-site.**
- ED 500 ED 500 Teaching Applied Algebra II** **Dates:** June 17-18 **1 Credit**
Instructor: Doug Gardner/Serena Ota St Clair
June 17: 8:00 am-4:30 pm, June 18: 8:00-2:30 pm
Partner: Rogue Community College (Table Rock Campus)
This two day workshop is part of the RCC Summer Math Institute for high school and community college teachers and provides a clearer vision of how math relates directly to real world technical jobs. Study applications of linear, quadratic, power, exponential, and logarithmic expressions and functions. Working with real data, the mathematics of curve fitting will be developed making extensive use of the graphing calculator. **Register for this special workshop on-line at www.rogecc.edu/SMI2015. Email Michelle Rhodes for questions at mrhodes@rogecc.edu. Graduate credit available at \$70/credit. Registration for credit on-site.**
- ED 500 Robolympics: Lego Robotics for Teachers** **Dates:** June 22-23 (9:00 am – 4:00 pm both days) **1 Credit**
Instructor: Chris Duval /Linda Hilligoss
Partner: University Youth Programs
Designed to build skill and confidence levels of teachers wanting to integrate this creative design element into their classrooms. Students will build Lego robots and have competitions such as Sumo Wrestling and Miniature Golf with the robots! They will also learn how to align lessons with the standards and how to involve their students in the First Lego League and regional competitions. Participants may also serve as volunteer teaching assistants in the summer Lego Robotics camps offered through Pre-College Youth Programs. Teachers: 3-8. **Workshop Fee: \$50 To register for this special workshop contact Linda Hilligoss @ hilligol@sou.edu. Graduate credit available at \$70/credit. Registration for credit on-site.**
- ED 500 Citizen Science: Making it Real!** **Dates:** June 24 (9:00 to 4:00 pm) **1 Credit** Hybrid
Instructor: Jeanine Moy (There will also be a short follow-up meeting during the school year, Date TBA)
Partner: KS Wild
This class will provide teachers (grades 4-12) with the standards-aligned skills and knowledge needed to design authentic Citizen Science projects to engage students in collecting meaningful data and work with local agency professionals. Learn how to participate in projects such as StreamWeb, eBird, Project First Bud and other Phenology projects. Investigate global issues and dig deeper into environmental stewardship, sustainable choices, environmental impact, and other concepts. Dress for a field adventure! **Workshop Fee: \$50 To register for this special workshop contact Linda Hilligoss @ hilligol@sou.edu. Graduate credit available at \$70/credit. Registration for credit on-site.**
- ED 500 Playing with Engineers: Design Challenges & More!** **Dates:** June 29-30 (9:00 to 4:00 pm each day) **3 credits** Hybrid
Instructor: Ryan Collay (This class will have an on-line component & one additional meeting during the year. Date TBA)
Partners: OSU & SMILE
Teachers (grades 3-12) will be introduced to a variety of simple yet highly effective, low-cost engineering and design challenges that allow students to use critical thinking and problem solving skills to build a "problem-based learning" framework. Content will be aligned to the Next Generation Science Standards. All materials provided. **Workshop Fee: \$50 To register for this special workshop contact Linda Hilligoss @ hilligol@sou.edu Graduate credit available at \$70/credit. Registration for credit on-site.**
- ED 500 Tinkering Fundamentals** **Dates:** July 25, Aug 1, Aug, 15, Aug 22 **3 credits** Hybrid
Instructor: Summer Brandon (This class has four face-to-face meetings and on-line components.)
Partner: ScienceWorks
Offered in partnership with ScienceWorks, this course will provide K-12 educators with an opportunity to develop the practice of tinkering and design all aligned to the Next Generation Standards. The course is appropriate for anyone interested in incorporating tinkering activities into their educational programs. Face-to-face meetings and a strong on-line component. **Workshop Fee: \$50 To register for this special workshop contact Summer Brandon at Science Works or Linda Hilligoss @ hilligol@sou.edu. Graduate credit available at \$70/credit. Registration for credit on-site.**
- ED 500 Environmental Education August Institute** **Dates:** August 10-14 **3 credits**
Instructor: Linda Hilligoss
Partner: SOREEL (Southern Oregon Regional Envir Ed Partners) & Gray Family Fund
This institute provides K-12 educators with a series of engaging speakers and break-out sessions with a focus on standards-aligned interdisciplinary environmental education lessons and field experiences. The theme of this 5th annual institute is Healthy Kids/Healthy Communities. Special speakers on Place-based Education and Next Generation Science Standards. Teachers receive a \$100 stipend for attending and funds to help with bus costs for field trips. **To register contact AugustInsti@gmail.com. Call Kristi Reynolds 541-778-0597 Graduate credit available at \$70/credit. Registration for credit on-site.**
- ED 500 Southern Oregon SuperQuest** **Dates:** August 19-21 (8:00 to 4:00 pm daily) **2 credits**
Instructor: Virginia Pettit
Partners: SOESD & RCC & Oregon Computer Science Teachers Assoc.
This highly collaborative 3-day technology based "camp" for teachers will include interactive topics such as CAD and 3D Printing, robotics, interactive teaching with technology (ipads and Chromebooks), and game design/coding. It will be held at the RCC Table Rock Campus with limited enrollment. **Workshop Fee: \$50 To register for this special workshop contact Virginia Pettit at 541-858-6723 or virginia_pettitt@soesd.k12.or.us Graduate credit available at \$70/credit. Registration for credit on-site.**