

Northwest Offering Computer Science High School Teachers

High school educators interested in learning computer science skills and trends they can use to help prepare students for the 21st century workforce are encouraged to participate in a summer workshop sponsored by Northwest Missouri State University.

The workshop, offered during two weeks in June on Northwest's Maryville campus, will train teachers on coding and creating websites in addition to introductions of mobile apps and the internet.

Interested individuals need no background in computer science to participate.

"We will literally start from scratch, and our goal is to provide a gentle introduction to these topics," Dr. Michael Rodgers, associate professor of computer science and information systems at Northwest, said. "All of the presenters have experience working with teachers and are attuned to their needs."

Participants will receive hands-on introductions to new technology during each day of the workshop. They will work through entertaining exercises suitable for students, develop lesson plans and test those plans by teaching them to peers.

The workshop incorporates Scratch, a kid-friendly and popular visual programming language, and Cloud 9, a cloud-based environment that allows students to publish their work, as well as mobile app development using Android Studio and Swift Playgrounds, internet of things, and Hour of Code.

Participants will connect with like-minded teachers while learning new skills from expert instructors that will help make a positive difference in students' lives.

Students of participating educators benefit by developing problem-solving skills through coding and creation methods that help them learn to approach problems rationally and systematically. Additionally, Rodgers noted, there are more than 10,000 computing jobs available in the state of Missouri.

"From a practical standpoint, jobs in computing are in very high demand, far from exceeding the number of graduates," Rogers said. "Consequently, parents, principals and employers are interested in seeing more students exposed to more computer science earlier in their studies.

"Computer science impacts so many fields – it doesn't matter if you're going to study agriculture, zoology or anything in between – that knowing the fundamentals will give students a leg up. For teachers who do want to help their students but have little or no experience in computing, this series of workshops, part of a yearlong set of activities both at Northwest and at teachers' schools, will give them a great grounding in the fundamentals, and the confidence to incorporate this into their classrooms."

Participants will attend two sessions, June 19-20 and June 26-27. Lodging may be included with registration. The first 25 individuals to register will receive \$400 plus lodging expenses for completing the program.

Registrants also may choose to receive one or two graduate credit hours from Northwest and a professional development certificate.

Teachers' learning won't stop when the June sessions are complete, however. Participants will revisit workshop topics during a series of "meet-ups" Oct. 5, 2017, and March 1, 2018, and Google

Hangouts on the first Thursday of each month.

The experience culminates May 3, 2018, with “Computingpalooza,” a conference and competition at Northwest designed to foster interest in computer science among students in the region. Students participate in a series of hands-on activities and contests, and workshop participants will be recognized.

Northwest is offering the workshop with funding support from a Google Grant worth \$28,260 to promote high school computer science education and training.

For more information about the workshop, contact Michael Rogers at michael@nwmissouri.edu. To register, contact Beccy Baldwin at 660.562.1995 or visit www.nwrpdc.org.