

### U-FUTuRES fast, practical, in-service program prepares teachers to:

- actively engage students with scientific phenomena
- inspire students to include claims, evidence, and reasoning in science conversations
- intentionally deepen student understanding of core science concepts

### Science teachers need:

- to understand the nature of science
- to know how scientists do science
- to acquire science practices that excite and engage students

### Five online courses deepen teachers' knowledge of:

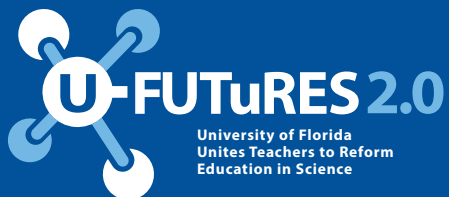
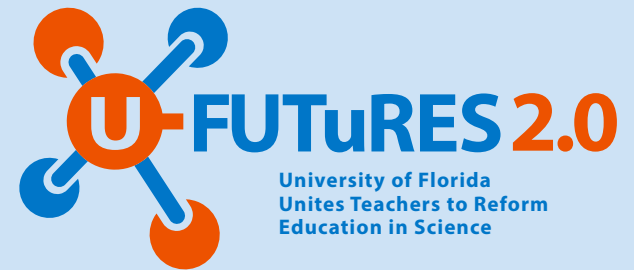
- inquiry-based instruction
- how students learn science
- standards-aligned science content

### The certificate program provides:

- a quick, economical, accelerated pathway to expertise
- five, eight-week online courses offered sequentially
- state-of-the-art instructional design

### Courses include:

- interactive video lessons
- UF scientists who have previous experience with middle grades science teachers
- demonstration lesson videos from P.K. Yonge Developmental Research School



**UF** UNIVERSITY of FLORIDA  
College of Education  
*School of Teaching and Learning*



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PROFESSIONAL LEARNING OPPORTUNITY  
FOR 4TH-8TH GRADE TEACHERS  
SCIENCE TEACHER CERTIFICATE PROGRAM  
SEPTEMBER - AUGUST

.....  
ENHANCE KNOWLEDGE OF SCIENCE  
AND SCIENCE-TEACHING METHODS

TRANSFORM YOUR CLASSROOM  
WITH AN INQUIRY-BASED APPROACH

BECOME A LEADER IN TRANSFORMATIVE  
SCIENCE TEACHING METHODS

For more information or to apply contact:  
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## The Courses

As an accelerated pathway to expertise, the certificate program is quicker and less expensive than earning a master's degree. Five, eight-week courses are offered sequentially online and taught using state-of-the-art instructional design. Aligned with Next Generation Science Standards and Florida State Standards, the program is led by UF College of Education professor Dr. Rose Pringle, the 2014 winner of three awards in science education, who researches science teacher training and engaging underrepresented populations in science.

Courses utilize video demonstrations and lessons, and collaboration with UF scientists with experience teaching K-8 science teachers. Two courses (\*) focus on deepening the teachers' science content knowledge, specifically in STEM disciplinary core ideas correlated to Florida Standards, and the current reform science framework. These inquiry-based science courses were co-developed and tested by a team of UF scientists, science and science education graduate students, and science educators from UF College of Education.



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### **SCE 5316** **Inquiry-Based Science Teaching**

*(September - November)*

Teachers explore how to engage students in a variety of science and engineering practices, such as asking questions, using evidence to support claims, creating models, and designing investigations to find potential solutions to questions.

### **PHY 5905** **\*Physics/Chemistry**

*(January - February)*

Common alternative conceptions specific to introductory physics and chemistry are emphasized along with content-specific pedagogy to deepen teachers' conceptual understanding in direct correlation to national and state science standards.

### **SCE 5695** **Diversity and Equity in Science Teaching**

*(March - April)*

This course explores the idea of providing all students with equitable access to an inquiry-based science education, and examines possible barriers to success. Teachers will develop a variety of inclusive strategies for teaching science to diverse populations in grades 4-8.

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*UF College of Education's Online Graduate Education Program is rated number one in U.S. News and World Report's 2016 Best Graduate Schools Rankings.*  
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### **GLY 6932** **\*Earth/Space Sciences**

*(May - June)*

This course, taught by a UF scientist, provides foundational knowledge of earth and space sciences with an emphasis on Florida environments and societal issues of local and global significance.

### **SCE 5140** **Science Curriculum Development**

*(June - August)*

Participants will explore the use of different science curriculum development models, and examine the role of standards, learning goals, and assessment in curriculum design.

