# Professional Learning Programs Overview CS Principles and CS Discoveries



## The Rice USMP Code.org Professional Learning Program

Whether you are new to teaching computer science (CS) or have experience teaching other CS courses, the Rice University School Mathematics Project (Rice USMP) Code.org Professional Learning Program is designed to promote growth by providing space for you to become comfortable with curricular materials, CS content, and pedagogy. The program supports teachers with diverse teaching backgrounds as they prepare to teach either of the following courses:

- Computer Science Discoveries is an introductory computer science course that empowers students to create authentic artifacts and engage with computer science as a medium for creativity, communication, problem solving, and fun. The curriculum is recommended for middle and high school students (grades 6-10), and can be taught either as a semester or full-year offering.
- Computer Science Principles (can be taught as an AP® course) is a higher level introductory course for 9th12th grade students that introduces students to the foundational concepts of computer science while
  challenging them to explore how computing and technology can impact the world. No computer science
  background is necessary for students or teachers.

Our curriculum supports teachers new to the discipline with a complete set of lesson plans that include inquiry-based activities, videos, assessment support, and educational tools.



## **Professional Learning Program features:**

- One cohesive set of resources: Our professional learning and curriculum flow seamlessly together, empowering teachers to deliver the course with confidence. In-person workshops combine with online tools to provide participants with a broad selection of resources to help them plan ahead for implementing the course in their classrooms, while also collaborating with other educators.
- Teaching and learning in context: Participants will engage with the curriculum both as instructors and as learners. By experiencing the course content as an active learner, participants will gain important, concrete insight into the perspective their students will have during the academic year. By interacting with curriculum content as instructors, participants will learn how to plan and deliver lessons.
- A collaborative, participant-centric approach: Teachers and facilitators will have the opportunity to share
  their expertise from the field and collaborate on strategies to bring to the CS Principles and CS Discoveries
  classrooms, giving participants a chance to learn from everyone in the room. Facilitators model pedagogical
  strategies and participants share their own approaches by planning and delivering lessons.

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### **Program Commitments:**

The Rice USMP Code.org Professional Learning Program has both in-person and online supports designed to prepare teachers before and during their first year teaching CS Principles or CS Discoveries.

#### Timeline:

Summer Workshop	Ongoing Support
Summer	School Year (September - June)
<ul> <li>5-day, in-person session in your region (travel may be required)</li> </ul>	<ul> <li>4 in-person sessions in your region (usually on Saturdays)</li> <li>Continued professional development and resources</li> </ul>

#### **Summer Workshop:**

The Professional Learning Program kicks off with a 5-day workshop hosted by Rice USMP, in partnership with Code.org. Participants explore the curriculum and learning tools, discuss classroom management and teaching strategies, and build a community with other CS educators. With a focus on a customized experience, participants will develop skills while working in small groups to deepen their understanding of the materials.

### **Ongoing Support:**

Participants attend local, follow up workshops throughout the academic year. These meetings are hosted by Rice USMP and focus on the essential elements of the course, such as teaching new content, keeping the classroom environment equitable and engaging, and continue to build pedagogical strategies.

In addition, all teachers have access to the Code.org forum, an online professional learning community that offers continued support with tools and content, introduces new and helpful resources for teaching the course, and lets teachers continue to explore the curriculum.



"I do not have a computer science background. I would change nothing about the training. It was an incredible experience, and I felt valued and respected."



"They make it so that you can understand the material and they make it so you want to come back!"

## For additional information, including course overviews, FAQs, and more, visit:

- Rice University School Mathematics Project: https://rusmp.rice.edu/register/teachers-cs
- Professional Learning Program: https://code.org/professional-learning
- **CS Discoveries:** https://code.org/csd
- CS Principles: <a href="https://code.org/csp">https://code.org/csp</a>