

The Beauty and Joy of Computing in Wyoming
Friday, April 15, 8:30-11:30 am workshop
Tebbet Building, Room 273, Eastern Wyoming College

10th Lost in Transition Mathematics Institute
Friday-Saturday, April 15-16, 2016
Eastern Wyoming College, Torrington

registration is free, but you must register online by April 10

<https://ewc.wy.edu/wyoming-mathematics-articulation-2016/registration/>

Title

The Beauty and Joy of Computing in Wyoming:
Interactive Workshop for Secondary and Postsecondary Faculty

Session Leaders

Lynne Ipina, Ruben Gamboa, Dan Stanescu, University of Wyoming

Workshop Description

During this three-hour interactive workshop, learn about a National Science Foundation funded University of Wyoming initiative to increase the number of AP computer science teachers in Wyoming high schools.

The workshop will have three parts. First, participants will overview the need and distinguish this effort in computer science as different from preparing students for the AP calculus exam. Then, participants will examine computer science literacy and representative data sets. The final hour of the workshop will include coding.

Participants will learn about participation stipends for graduate course tuition, travel, and lodging for the three-week summer course that will occur at UW- Laramie, 2016, 2017, and 2018.

Intended Audience

Secondary and postsecondary faculty, all who are interested

registration is free, but you must register online by April 10
Wyoming Professional Teaching Standards Board renewal credit available

<https://ewc.wy.edu/wyoming-mathematics-articulation-2016/registration/>

THE BEAUTY & JOY OF COMPUTING IN WYOMING

Call for Participation



In AY 2016-17 The College Board will launch an Advanced Placement Program[®] called Computer Science Principles. We are seeking teachers from Wyoming and surrounding states willing to participate in an educational research project that will adapt and launch an innovative preparatory course for the exam. Participants will teach the course on an exploratory basis. Training will be provided to participating teachers.



Science



Technology



Engineering



Mathematics

Background

The course will help prepare students for *STEM* majors, most of which assume prerequisite knowledge of basic programming and introductory computer science, fluency with digital technologies, and the ability to effectively identify and analyze information. Students taking this course will also learn to appreciate the value of collaborative problem solving.

Goals

The research goal is to adapt for high school students the highly regarded *The Beauty and Joy of Computing* course taught at UC Berkley. The course attracts a wide variety of students; there are currently more women than men enrolled in the course. We will focus on how best to prepare teachers to provide the curriculum and guide students to be successful on the AP[®] exam. We will also develop training for *Snap!* the easy to use graphical programming language designed for the course.



Training

The training will consist of 8 or, optionally, 12 days, in July.

When

Summer 2016, 2017, or 2018.

Where

UW Campus

Financial Support

Stipend & travel reimbursement provided. 1-3 hours Graduate or PTSB credit available



Calendar

Summer 2016

July 11-14, 18-21 Intro to Snap!
July 25-28 Teacher training

Summer 2017

July 10-13, 17-20 Intro to Snap!
July 24-27 Teacher training

Summer 2018

July 9-12, 16-19 Intro to Snap!
July 23-26 Teacher training



To become a participant, fill out the online application form at [bjc-wy blog](#)

There will also be frequent project updates on the blog.

Further Information

AP Computer Science Principles

<https://advancesinap.collegeboard.org/stem/computer-science-principles>

The Beauty and Joy of Computing

<http://bjc.berkeley.edu/>

The Research Team

Lynne Ipina (PI) ipina@uwyo.edu

Ruben Gamboa ruben@uwyo.edu

Dan Stanescu stanescu@uwyo.edu

Funding

This project is funded by the National Science Foundation, under grant CNS-1441069.

Acknowledgements

The Beauty and Joy of Computing Logo by omoju is licensed under the Creative Commons 4.0

The Snap! Logo by omoju is licensed under Creative Commons 4.0

University of Wyoming

Departments of Mathematics and Computer Science

Laramie, WY 82071