



PCC Inventor Camp

Welcome!

Introductions:

Instructor: Francesca Frattaroli, BSME, Cascade Fab Lab Manager

Mentors:

- Joel
- Lisa
- Jordan
- Station
- Shannon

Introductions:

Tell us about You:

- Your preferred name
- Where you go to School
- Answer this Question:

If you could have any job, what would it be?

(Don't factor in your current skill set - assume you'd be awesome at it)

What is Inventor Camp?

- A 3-week, intensive, hands-on educational experience.
- Exposure to Engineering Design concepts and Methods.
 - Engineering Design Process, Human-Centered Design
 - Design Evaluation
 - Prototyping
- Training in engineering tools and skills:
 - Microcontroller programming, electric circuits, soldering
 - Sensors and Actuators
 - 2D, 3D Modeling, Lasercutting, 3D Printing
- Guest Lectures - Local Designers and Engineers
- Design and Fabrication of own Invention
- Final Presentation of Inventions to Public

Week 1 Overview: Getting Started

This first week starts with an overview of camp expectations, an introduction to the design process and prototyping, as well as Arduino Microcontrollers and Soldering skills.

- Day 1: Orientation and Introduction to Inventor Camp
- Day 2: Arduino Setup, LED control, and Soldering
- Day 3: Additional Arduino Programming, LED circuits
- Day 4: 2D Modeling, Intro to Laser Cutter
- Day 5: Sensors and Project Development

Week 2 Overview: Design Tools and Project Development

This week will focus on developing motor control, audio and visual sensor, and 3d printing skills. Project Designs will also be finalized, as we transition to Invention Fabrication. Guest Lectures will be given.

- Day 1: Driving and Controlling Motors, Printer Take Apart
- Day 2: Audio Visual Peripherals
- Day 3: 3D Modeling, Intro to 3D Printers
- Day 4: Engineering and Art
- Day 5: Open Lab, Project Design Decisions

Week 3 Overview: Invention Fabrication

The final week of the course is dedicated to project fabrication and completion.

- Day 1: Project
- Day 2: Project
- Day 3: Project
- Day 4: Project
- Day 5: Project Final Touches and Public Presentation

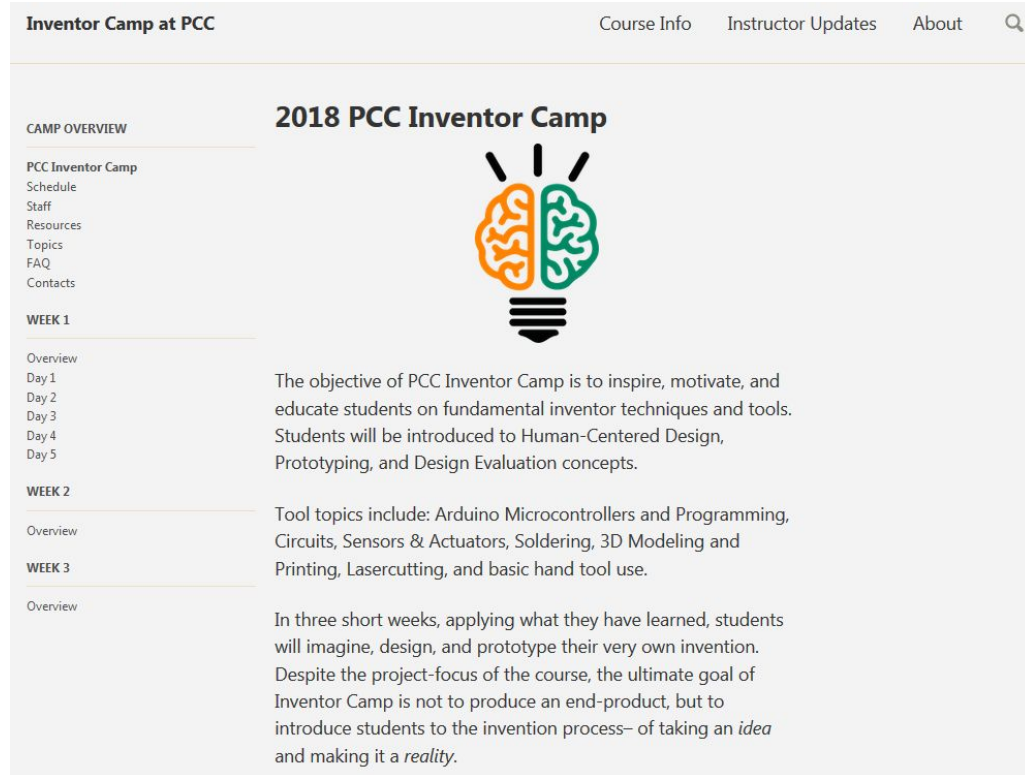
Resources: Course Website

- **Course Information**

- [Schedule](#)
- [Staff](#)
- [Resources](#)
- [Topics](#)
- [FAQ](#)
- [Contacts](#)

- **Instructor Updates**

- **Daily Lesson Plans/Content**



The screenshot shows the website for the 2018 PCC Inventor Camp. The header includes the site name "Inventor Camp at PCC" and navigation links for "Course Info", "Instructor Updates", and "About". A search icon is also present. The main content area is titled "2018 PCC Inventor Camp" and features a logo of a lightbulb with a brain inside, colored in orange and green. The page is organized into sections: "CAMP OVERVIEW" with a sub-section "PCC Inventor Camp" containing links for "Schedule", "Staff", "Resources", "Topics", "FAQ", and "Contacts"; "WEEK 1" with an "Overview" and "Day 1" through "Day 5" links; "WEEK 2" with an "Overview" link; and "WEEK 3" with an "Overview" link. The main text describes the camp's objective: to inspire, motivate, and educate students on fundamental inventor techniques and tools, including Human-Centered Design, Prototyping, and Design Evaluation. It also lists tool topics for Week 2: Arduino Microcontrollers and Programming, Circuits, Sensors & Actuators, Soldering, 3D Modeling and Printing, Lasercutting, and basic hand tool use. The final paragraph states that in three short weeks, students will apply their learning to imagine, design, and prototype their own invention, with the ultimate goal of introducing them to the invention process of taking an idea and making it a reality.

<https://francescafr.github.io/PCC-Inventor-Camp/2018/>

Instructor & Mentor Contract

- What are our duties as Educators?:
 - Share our knowledge and skills
 - Provide you with challenging but achievable problems to solve
 - Give you the tools to be successful
 - Answer questions and offer constructive feedback
- What does it mean to be a respectful educator?
 - Show up on time and prepared to educate
 - Give you our undivided attention during class time
 - Actively listen to and acknowledge your concerns and experiences
 - Constantly try to improve our educational content and methods as we continue to learn
 - Maintain a compassionate and positive attitude, especially at times of disagreement

Inventor Contract

- What are my duties as an Inventor Camp Participant?
- What does it mean to be a respectful student?
- What does it mean to be a respectful team member?

PCC Student Rights

Right to freedom from harassment and discrimination

PCC does not tolerate unlawful discrimination based on race, color, religion, use of native language, national origin, sex, marital status, height/weight ratio, disability, veteran status, age, or sexual orientation in any area, activity, or operation of PCC.

Inventor Camp Case Manager:

Windy Wehlke (*Windy.Wahlke15@pcc.edu, 971-722-6201*)