Drone Designers Educator Professional Learning
Course Syllabus
Co-Instructors
Dr. Angela Hemingway & Dr. Kaitlin Maguire, STEM Action Center

Course Number: TBD

Course Hours: 15 hours of coursework – 1 graduate professional development credit

Link to Registration: Coming Soon

Registration Deadline: August 1, 2020

Location and Course Dates:
- 2-day in-person training workshop (week of July 13-17, 2020)
    - Treasure Valley, ID
- Final report due: May 1, 2021

Course Cost: $60 per PD credit = $60

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COURSE DESCRIPTION: Drones are transforming the world of arts and entertainment, performing alongside artists as diverse as Metallica, Drake and Cirque du Soleil. Follow in the footsteps of the world's groundbreaking drone designers, weaving together the iterative design process and principles of aerodynamics to costume, choreograph and code tiny aerial robots in creative performances. The program's structure emphasizes career exploration and disciplinary literacy through students following the engineering design process according to real-life production team members at the world's leading company specializing in drone performance systems.

The 12 one-hour lessons and extensions in the Drone Designers curriculum provide the perfect introduction to this latest application of drones in concert tours, Broadway musicals and beyond! The training workshop will include a hands-on introduction to the Drone Designers curriculum, as well as support for educators to integrate the lessons into their existing programs. Drone Designers comes with a printed instructor guide, digital curriculum resources, and all the supplies needed for 12 one-hour activities.

COURSE OBJECTIVES: Educators will participate in a 2-day Teacher Course. Educators will submit a final report describing key learnings from the professional learning including what they have taken away from experience that informs their teaching practices.

LEARNER OUTCOMES: Educators who participate in this course will demonstrate:

1. Understanding of UAV fundamentals, including student safety while operating drones, components of a drone performance, members of a professional production team and applications of drone technology in the arts and entertainment.
2. Ability to code and fly a mini quadcopter autonomously. Understand how to plan and execute a costumed and choreographed drone performance to music.
3. Understanding of best practices and resources for implementing drone education programs

COURSE ASSIGNMENTS:

1. Attend the two-day advanced Teacher Course (16 hrs).
2. Read and apply the content from the following resources: Drone Designers Instructor Guide, Online Resource Hub and Designer's Notebook for students (1 hr).
3. Complete all surveys and assessments administered through the course including a final report in the Community Grants Portal by May 1, 2021(2 hrs).

RESOURCES:
Drone Designers - curriculum, instructor guide and student design notebook by PCS Edventures
Drone Designers online resource hub by PCS Edventures

COURSE ASSIGNMENT DUE DATE: May 1, 2021 by midnight MST via Salesforce (Community Grant Portal).

TRANSCRIPT: Spring 2021