



THE UNIVERSITY OF ARIZONA
BIOSYSTEMS ENGINEERING

Controlled Environment Agriculture Center

21st Annual

Greenhouse Crop Production and Engineering Design Short Course

Online and On-site

March 7th, 8th, and 9th, 2022

Sponsored by:





MONDAY, MARCH 7TH

7:30 – 8:15 am Check-in for on-site participants (1951 E Roger Rd. Tucson, AZ 85719)

8:15 – 8:30 am Welcome and Introductions by Dr. Murat Kacira (CEAC Director)

FUNDAMENTALS OF HYDROPONICS & CONTROLLED ENVIRONMENT AGRICULTURE (CEA):

8:30 – 9:15 am Controlled Environment Greenhouse and Hydroponics- Limitless Opportunity

Dr. Merle Jensen- Professor Emeritus, School of Plant Sciences, The University of Arizona

9:15 – 9:25 am Discussion of Previous Lectures, Q&A

9:25 – 10:10 am Hydroponics, Medium Composition & Delivery Systems

Dr. Triston Hooks- Professor, Biosystems Engineering, The University of Arizona

10:10 – 10:20 am Discussion of Previous Lectures, Q&A

10:20 – 10:50 pm Break/ Exhibitor Networking

10:50 – 11:05 pm 3. 5 minute presentations from Sponsors/Exhibitors

11:05 – 11:50 am Managing Plant Nutrition for Crop Production Optimization

Dr. Stacy Tollefson- Director of Cultivation, Aeriz

11:50 – 12:00 pm Discussion of Previous Lecture, Q&A

12:00 – 1:00pm Lunch Provided

1:00pm – 1:15pm 3, 5 minute presentations from Sponsors/Exhibitors

1:15pm – 2:00 pm Greenhouse Design- Structures, Glazing, & Cooling

Dr. Gene Giacomelli- Professor, Biosystems Engineering, The University of Arizona

2:00pm – 2:10pm Discussion of Previous Lecture, Q&A

2:10pm – 3:30pm CEAC Tour (2 stations)/ Networking





TUESDAY, MARCH 8TH

ENVIRONMENTAL CONTROLS & AUTOMATION IN CEA:

8:30 – 9:15 am	Monitoring Your Greenhouse Environment: Simple Tools to Technology Trends Dr. Murat Kacira- Professor, Biosystems Engineering, The University of Arizona
9:15 – 9:25 am	Discussion/ Q&A
9:25 – 10:10 am	Hands-free Cultivation Eric Highfield- Founder, High Yield Horticulture
10:10 – 10:20 am	Discussion/ Q&A
10:20 – 10:50 pm	Break/ Exhibitor Networking
10:50 – 11:05 pm	3. 5 minute presentations from Sponsors/Exhibitors
11:05 – 11:50 am	Detection and Management of Emerging Viral Diseases in Greenhouse Tomatoes Dr. Kai-Shu Ling- Research Plant Pathologist, USDA- Agricultural Research Service
11:50 – 12:00 pm	Discussion/ Q&A
12:00 – 1:00pm	Lunch Provided
1:00pm – 1:15pm	3, 5 minute presentations from Sponsors/Exhibitors
1:15pm – 2:00 pm	Fundamentals of Supplemental and Sole Course Lighting for CEA Dr. Roberto Lopez- Professor, Michigan State University
2:00pm – 2:10pm	Discussion/ Q&A
2:10pm – 3:30pm	CEAC Tour (2 stations)/ Networking





WEDNESDAY, MARCH 9TH

ALTERNATIVE CROPS/ GROWING METHODS IN CEA:

8:30 – 9:15 am	Hemp in CEA Dr. Hope Jones- Founder & CEO, Emergent Cannabis Sciences
9:15 – 9:25 am	Discussion/ Q&A
9:25 – 10:10 am	Strawberries Production and Technologies Dr. Cheri Kubota- Professor of Horticulture and Crop Science, Ohio State University
10:10 – 10:20 am	Discussion/ Q&A
10:20 – 10:50 pm	Break/ Exhibitor Networking
10:50 – 11:05 pm	3. 5 minute presentations from Sponsors/Exhibitors
11:05 – 11:50 am	Mushrooms in CEA Dr. Barry Pryor-Professor, School of Plant Sciences, University of Arizona
11:50 – 12:00 pm	Discussion/ Q&A
12:00 – 1:00pm	Lunch Provided
1:00pm – 1:15pm	3, 5 minute presentations from Sponsors/Exhibitors
1:15pm – 2:00 pm	Aquaponics in CEA Dr. Matthew Recsetar- Adjunct Lecturer, Biosystems Engineering, University of Arizona
2:00pm – 2:10pm	Discussion/ Q&A
2:10pm – 3:30pm	CEAC Tour (2 stations)/ Networking

