



THE UNIVERSITY OF ARIZONA

College of Agriculture  
& Life Sciences

Controlled Environment Agriculture Center  
Department of Agricultural & Biosystems Engineering  
School of Plant Sciences



Controlled Environment Agriculture Center  
1951 East Roger Road  
Tucson, Arizona 85719-1178  
Ph: 520-626-9566 Fx: 520-626-1700  
email: ceac@ag.arizona.edu  
<http://ag.arizona.edu/ceac/>

# 2017 Greenhouse Crop Production & Engineering Design Short Course

April 3 – 7, 2017

Located at the Tucson Marriott University Park  
Main Gate Square, 880 E 2nd St, Tucson, AZ 85719

## Monday, April 3, 2017

### “Plant Production in within Hydroponics and Controlled Environments”

- Critical Factors to Consider When Producing Under Cover
- Plant Nutrition Basics
- IPM and Crop Hygiene
- Insects, Mites & Diseases
- Welcome Reception & Award Recognitions

## Tuesday, April 4, 2017

### “Structure, HVAC and Lighting --- Basic Components for Growing Crops in Controlled Environments”

- Understanding greenhouse structures and glazing
- Designing the right HVAC system for your operations
- Sunlight and supplemental lighting in greenhouses
- Sole-source electric lighting for indoor operations

### “Alternative Systems and Crops for Controlled Environments”

- Aquaponics Systems and Concepts
- Myco-Culture & Growing Mushrooms
- Organic Hydroponics

## Wednesday, April 7, 2017

### “Indoor Growing Session”

- Urban Ag Farming
- LED Lighting

### “Production, Marketing and Business Establishment in CEA”

- A Closer Analysis of CEA Market
- Getting your Business Going and Growing
- Succeeding as a Small Greenhouse Grower
- Packaging Business Plan and Product for Success

## Thursday, April 6, 2017

### Hands on workshops at the Controlled Environment Agriculture Center

- |  |                                    |
|--|------------------------------------|
| • <i>Fertigation</i>                             | • <i>Urban Ag Farming</i>          |
| • <i>Tomato Maintenance</i>                      | • <i>Mushrooms</i>                 |
| • <i>Lettuce NFT, DWC &amp; Floating Systems</i> | • <i>Aquaponics</i>                |
| • <i>Sensors and Controls</i>                    | • <i>Business Planning Session</i> |

## Friday, April 7, 2017, Morning

Commercial Greenhouse Tour – Location TBD

\*Schedule is subject to change