

**Course Information Sheet****Course Name: Greenhouse Operations & Production****Instructional Material: iCEV****First Semester:**

Week	Topic/Unit
1	Introduction to Greenhouse Operations & Production
2	Careers in the Greenhouse & Horticultural Industry
3	Plant Anatomy & Physiology: Advanced Concepts
4	Plant Propagation: Sexual & Asexual Methods
5	Media & Growing Mixes: Components & Properties
6	Soil Science: Greenhouse Media & Soil-less Mixes
7	Greenhouse Structures: Types, Components, and Maintenance
8	Greenhouse Environment: Temperature & Light Control
9	Greenhouse Environment: Air & Humidity Management
10	Irrigation Systems: Types, Operation, & Water Quality
11	Plant Nutrition: Essential Elements & Fertilizers
12	Fertilizer Application & pH Management
13	Integrated Pest Management (IPM): Principles & Practices
14	Identifying & Managing Common Greenhouse Pests
15	Identifying & Managing Common Greenhouse Diseases
16	Chemical & Biological Pest Control Methods
17	Greenhouse Safety Procedures & PPE
18	Final Review & Fall Semester Wrap-up

**Second Semester:**

Week	Topic/Unit
19	Plant Production Systems: Container & Hydroponics
20	Production of Bedding Plants & Annuals
21	Production of Potted Plants & Foliage
22	Production of Cut Flowers & Floral Crops
23	Marketing & Merchandising of Greenhouse Products
24	Business & Financial Management in Greenhouse Operations
25	Retail vs. Wholesale Greenhouse Operations
26	Greenhouse Plant Breeding & Genetics
27	Post-Harvest Handling & Storage of Crops
28	Sustainable & Organic Greenhouse Practices
29	Greenhouse Technology: Automation & Robotics
30	Drones, Sensors, & Data Analysis in the Greenhouse
31	Plant Growth Regulators & Their Uses
32	Research & Presentation on a Specific Greenhouse Crop
33	Hands-on Greenhouse Project: Planting & Managing a Crop
34	Record Keeping & Data Collection for Production
35	Current Issues & Trends in the Greenhouse Industry
36	Final Review & Spring Semester Wrap-up