



# Greenhouse Technology I (HAG2211B)

## NDCDE User Guide

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Welcome: Start Here!

## Course Overview, Portfolio, and Textbook- READ NOW!

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Portfolio Instructions: Download and Read First!

Course Portfolio Information and Examples

How-to Video: Sharing your Pathbrite Portfolio with your Teacher. View, learn, and share yours today!

Course Textbook- USE THIS FOR ALL UNITS, ASSIGNMENTS, AND READINGS.

QUIZ- Course Portfolio- Complete after reading all materials on the Course Portfolio- Within first FIVE days of course

## Supervised Agriculture Experience Project - SAE - Major Grade

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SAE Project Requirements

SAE Examples!

SAE Skill Sets (Important Resource for your SAE Portfolio)

SAE: Teacher Contact (Complete within first week of course!)

QUIZ- SAE- Complete after reading all materials about the SAE Project

## Greenhouse Project- Due at End of Semester in your Portfolio

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## Discussion Board: Getting to Know You- Complete Before Unit 1 (Within First 10 Days of Class)

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## Unit 1 ... Choices To Make when Building a Greenhouse

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Unit 1 Concepts and Terms

Battlefield Farms: A Large Greenhouse Serving Big Box Stores Video

Deep Winter Greenhouses

Choices To Make When Building a Greenhouse E-Chapter

Choices to Make when Building a Greenhouse PPT

Building a Greenhouse PT 1

Building a Greenhouse PT 2

Building a Greenhouse PT 3

Choices To Make When Building a Greenhouse Worksheet

Unit 1 Quiz

Choices To Make When Building a Greenhouse LAB

## Unit 2 ... Selecting a Greenhouse Growing Medium

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Unit 2 Concepts and Terms

Selecting a Greenhouse Growing Medium E-Chapter

Production Growing Media for Greenhouse

Growing Media for Container Production

Best Growing Media for Greenhouse Vegetable & Herb Production Video

Unit 2 Quiz

Selecting a Greenhouse Growing Medium LAB

## Unit 3 ... Managing pH of Greenhouse Growing Media

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Unit 3 Concepts and Terms

Managing pH of Greenhouse Growing Media E-Chapter

Growing Media

Managing the pH of Container Media

Using a Stationary pH Meter

Digital pH Meter

How to Use pH and EC "Pens" to Monitor Greenhouse Crop Nutrition

Unit 3 Quiz

Managing pH of Greenhouse Growing Media Discussion Forum

## Unit 4 ... Feeding Greenhouse Plants

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Unit 4 Concepts and Terms

Feeding Greenhouse Plants E-Chapter

Fertilizing Guidelines by Plant Group

Plant Nutrition and Fertilizers for Greenhouse Production

Fertilizer Requirements of Greenhouse Plants

Plant Nutrition, Water and Fertilizer Management

Greenhouse Fertilizer Lab

Unit 4 Quiz

## Unit 5 ... Guides to Nutrient Deficiency in Plants

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Unit 5 Concepts and Terms

Guides to Nutrient Deficiency in Plants E-Chapter

Plant Nutrient Function and Toxicity Symptoms

Testing and Nutrition Guidelines

Identification of Nutrient Deficiencies (Greenhouse Plants)

Plant Nutrient PPT

Unit 5 Quiz

Unit 5 Guides to Nutrient Deficiency in Plants LAB

## Unit 6 ... Understanding Micronutrients

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Unit 6 Concepts and Terms

Understanding Micronutrients E-Chapter

Managing Greenhouse Micronutrients E-Chapter

Balancing Greenhouse Micronutrients E-Chapter

Managing Micronutrients in the Green House

Micronutrients

Micronutrients Excess

What micronutrients are, and their effects on growing media

Unit 6 Nutrition Problem

Unit 6 Quiz

Understanding Micronutrients Discussion Forum.

## Unit 7 ... Calculating PPM for Greenhouse Applications

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Unit 7 Concepts and Terms

Calculating PPM for Greenhouse Applications E-Chapter

Conversion Tables, Formulas and Suggested Guidelines for Horticultural Use

Fertilizer PPM Calculators

Unit 7 Lab Problems

Unit 7 Quiz

## Mid-Term Exam

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## 2nd Major Portfolio Update

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### Unit 8 ... Irrigation of Greenhouse Plants

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Unit 8 Concepts and Terms

Irrigation of Greenhouse Plants E-Chapter

Irrigation Water for Greenhouses

Irrigation of Greenhouse Vegetables

Irrigation Systems

Automating Greenhouse Irrigation

Unit 8 Quiz

Irrigation of Greenhouse Plants Lab

### Unit 9 ... Understanding Irrigation Water Quality

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Unit 9 Concepts and Terms

Understanding Irrigation Water Quality E-Chapter

Irrigation Water Quality for Greenhouse Production

Irrigation Water for Greenhouses and Nurseries

Water quality

Water Quality Management for Greenhouse Production

Taking a Water Sample for your Greenhouse

Water quality issues: 1 Water pH and alkalinity

Unit 9 Quiz

### Unit 10 ... Correcting Irrigation Water Quality

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Unit 10 Concepts and Terms

Correcting Irrigation Water Quality E-Chapter

Irrigation Water Quality for Container-grown Plants

Water quality for nursery and Greenhouse Crops

Water quality issues: 2 Fertilizers

Unit 10 Practical Exercise

Unit 10 Quiz

### Unit 11 ... Managing Water Quality Problems

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Unit 11 Concepts and Terms

Managing Water Quality Problems E-Chapter

Water Quality Handbook for Nurseries

Water quality issues: 3 Salts

Water quality issues: 4 The effect of irrigation water on plant nutrition

Water Quality Management for Greenhouse Production

Unit 11 Quiz

### Unit 12 ... Balancing Air, Water and Media for Plants

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Unit 12 Concepts and Terms

Balancing Air, Water and Media for Plants E-Chapter

Growing Media for Container Production in a Greenhouse

Mastering Moisture Content

Air Handling Units

THE IMPORTANCE OF SELECTING A GROWTH MEDIUM WITH ADEQUATE AERATION

Unit 12 Quiz

### Unit 13 - Controlling Height and Regulating Growth of Greenhouse Crops

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Unit 13 Concepts and Terms

Controlling Height of Greenhouse Plants E-Chapter  
Regulating Growth of Greenhouse Crops E-Chapter  
Mechanical Conditioning to Control Height PDF  
Controlling Height with Temperature  
Control plant growth and Height for Potted Herbs  
Non Chem Height Control  
Applying Plant Growth Retardants  
A new growth regulator for greenhouse plants  
Selecting the "Right" Plant Growth Regulator  
Determining the Proper Timing for a PGR Application  
Early Growth Regulation with Liner Soaks and Drenches  
Unit 13 Quiz

## Unit 14 Greenhouse IPM and Insecticides

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Unit 14 Concepts and Terms  
Total Crop Management for Greenhouse Production  
Managing Greenhouse Insects E-Chapter  
Greenhouse Insect Management  
Greenhouse Aphid Management  
Natural Pest Control, Using Bugs (TED TALK)  
Using IPM for Greenhouse Production E-Chapter  
Principles of IPM  
Control Pest Problems Before They Start  
Pest Compatibility  
Soil Dwellers  
Leaf Chewers  
Understanding Greenhouse Pesticides E-Chapter  
Greenhouse Pesticides and Safety  
Using Pesticides in Greenhouses  
Insecticide and Fungicide Guide  
Unit 14 Quiz

## Unit 15 Scouting and Controlling Greenhouse Pests

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Unit 15 Concepts and Terms  
Guide to Scouting Greenhouse Pests E-Chapter  
Scouting and Monitoring for Pests in Commercial Greenhouses  
Pest Scouting in Greenhouses  
Identifying Major Greenhouse Pests E-Chapter  
Common Pests Found in Greenhouses  
Identifying Pests on Your Sticky Cards  
Biological Control of Greenhouse Pests E-Chapter  
Biocontrol  
Biological Control of Pest in Greenhouse Crops  
Controlling Major Greenhouse Insects E-Chapter  
Greenhouse Pest Control Study Guide  
INSECT AND MITE Control  
Effective Pest Management in Greenhouse and Nursery Production Video  
Biological pest control in greenhouse Video  
Unit 15 Quiz

## Unit 16 How To Diagnose Plant Disease Problems

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Unit 16 Concepts and Terms  
How To Diagnose Plant Disease Problems E-Chapter

Diseases Commonly Found in Greenhouses  
Diagnosing Plant Diseases Caused by Fungi and Viruses  
Diagnosing Plant Diseases 2016  
Greenhouse Tomato Diseases  
Sources Of Plant Disease In Greenhouses  
Identification and Organic Control of Greenhouse Diseases  
Pest and Disease Control in Greenhouse Strawberries Video  
Unit 16 Quiz

Greenhouse Project- Turn in via Pathbrite Portfolio before Final Exam

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3rd & Final Portfolio Update: Complete Now

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Final Exam

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Final Exam  
NAASO Survey -- PLEASE COMPLETE THIS SURVEY!  
SAE Project- FINALIZE NOW IN YOUR PORTFOLIO

End of Course Survey

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End of Course Survey

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