

Algae Technology Educational Consortium Online Opportunities

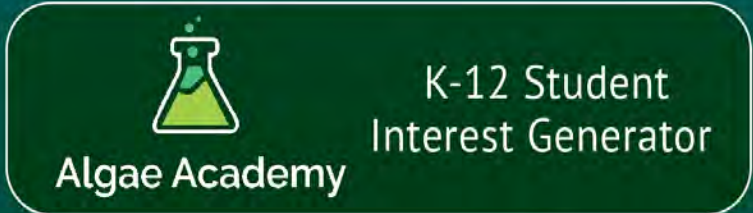


July, 2019

Algaefoundationatec.org
Thealgaefoundation.org



ONLINE OPPORTUNITIES Current & Future



Trained Workforce and Entrepreneurs



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Introduction to Algae
Massive Open Online Course (Algal MOOC)
 Published February 15, 2018
<https://www.coursera.org/learn/algae>

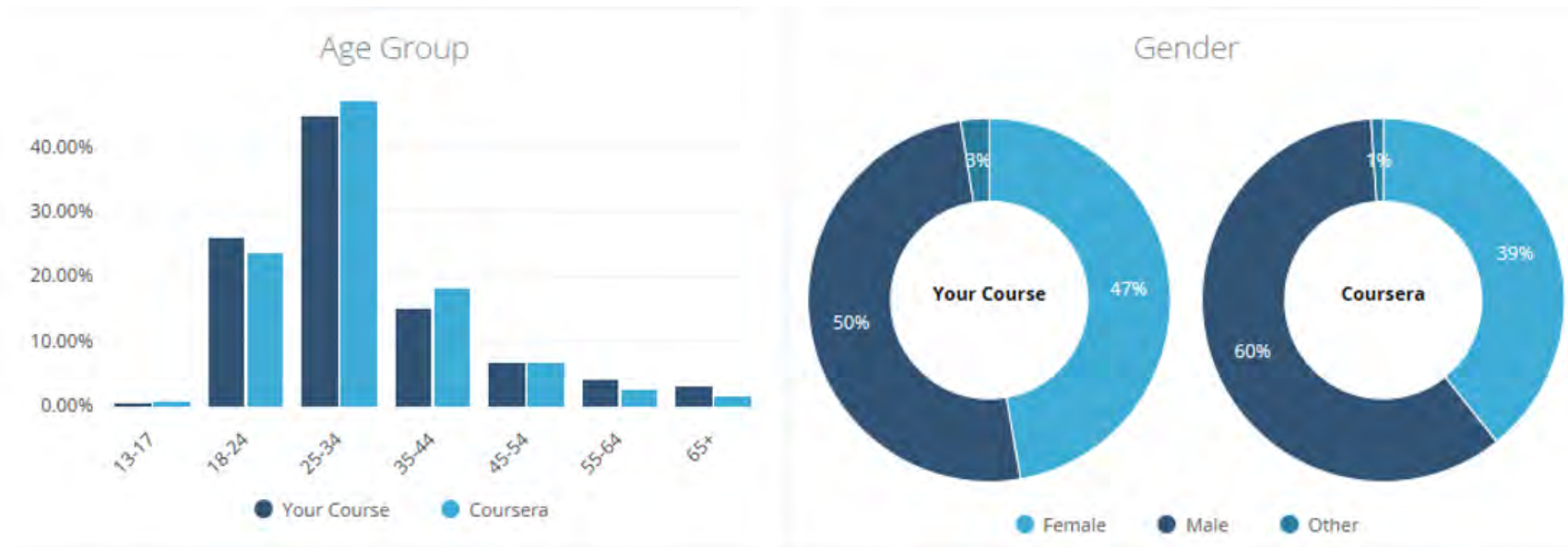
60 % started a new career after completing the course

45% got a tangible career benefit from this course

14% got a pay increase or promotion

4,400 enrollments, 13.2 % completion rate

Most participants are between 25-34, even distribution female/male





It is with great pleasure that we announce the availability (3rd quarter 2019) of the **Introduction to Algal Biotechnology** MOOC. The Massive Open Online Course offered through Coursera was produced by the University of San Diego and the Algae Technology Education Consortium and taught by Drs. Steve Mayfield of UCSD and Ira “Ike” Levine, University of Southern Maine. The initial effort focuses on microalgal biotechnology and subsequent effort to follow will include seaweed biotechnology

We invite you to sign up for this wonderful opportunity to learn the “Power of Algae” and share this course with all of your colleagues in the science community, educators, and your social networks. This course brings together some of foremost algae experts from industry and academia to share their experience and understandings of the fundamentals of algae.

Enrollment information will shortly be forthcoming

www.thealgaeoundation.org

www.algaeoundationatec.org

Introduction to Algal Biotechnology MOOC

Scheduled for Release 3rd Quarter 2019

Potential of Algae Biotechnology

Major Theme: How can algae help resolve some of these issues? “Pros” of algae production

Presenter: Stephen Mayfield

Challenges of Algae Biotechnology

Major Theme: What are the challenges to overcome to make algae biotechnology successful?

Presenter: Stephen Mayfield

Synthetic Biology and Genetic Engineering of Algae

Major Theme: What is molecular genetics, synthetic biology and genetic engineering?

Presenter: Anthony Berndt

Using breeding and selection to improve algae

Major Theme: How do we select and improve strains?

Presenter: Frank Fields

Genetic Engineering of Cyanobacteria

Major Theme: How do we engineer cyanobacteria?

Presenter: Ryan Simkovsky

Genetic Engineering of Green Algae - Chloroplast

Major Theme: How do we genetically engineer green algae?

Presenter: Stephen Mayfield

Genetic Engineering of Green Algae - Nuclear

Major Theme: How do we genetically engineer nuclear genes in green algae?

Presenter: Yasin Torres

Genetic Engineering of Diatoms

Major Theme: How do we genetically engineer diatoms?

Presenter: Jesse Traller

Metabolic Engineering of Algae

Major Theme: What is metabolic engineering and how do we use it for algae-based products? **Presenter:** Michael Burkart UCSD

Metabolic Engineering of cyanobacteria

Major Theme: What is metabolic engineering and how do we use it for algae-based products? **Presenter:** Ryan Simkovsky UCSD

Algae Products overview

Major Theme: What are the major products presently made from algae?

Presenter: Ashley Sproles

Omega-3 fatty acids produced in algae (September)

Major theme: What are omega-3 fatty acids and where do they come from?

Presenter: Eric Allen

Outdoor GMO Trial at UCSD

Major Theme: What studies have been done on outdoor GMOs and conclusions?

Presenter: John Shurin

Regulatory aspect of algae products – GRAS status

Major Theme: What are the regulatory aspects of algae-based products?

Presenter: Stephen Mayfield

Algae Commercial production – Triton Algae Innovations

Major Theme: What companies are producing algae-based products?

Presenter: Miller Tran

Algae commercial production - Algenesis

Major Theme: What companies are producing algae-based products?

Presenter: Marissa Tessman

Algae commercial production – Global Algae Innovations

Major Theme: What companies are producing algae-based products?

Presenter: Dave Hazlebeck

Algae commercial production - EarthRise

Major Theme: What companies are producing algae-based products?

Presenter: Amha Belay

Algae Commercial production – Qualtis

Major theme: What companies are producing algae-based products?

Presenter: Rebecca White

Algae commercial production - Corbion

Major Theme: What companies are producing algae-based products?

Presenter: Jill Kaufman-Johnson



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Algae Culture Extension Short-course



Macroalgae



www.algaefoundationatec.org

Aquaculture Introduction

- Overview: What is aquaculture, why is it important
- Dana Morse “What is Aquaculture?”
- International Mariculture of Seaweeds; An introduction to Seaweed Aquaculture. Dr. Charles Yarish
- From Sea to Table, University of Connecticut Research Benefits
- Seaweed Culture in New England: Overview of Seaweeds and Their Uses
- Seaweed in New England: A Seaweed Visionary. Interview with Shep Erhart, Maine Coast Sea Vegetables

Economically important species

- Seaweed culture in New England: Kelp, Gracilaria, Chondrus, Porphyra, Palmaria (Dulse), Kappaphycus and Eucheuma

Seaweed Aquaculture: Nursery

- Elements of a Seaweed Lab
- Introduction to Sugar Kelp Nursery Methods. University of New England

Seaweed Aquaculture: Leasing

- Permits/Leases/Regulations. Jon Lewis, Maine Dept. of Marine Resources

Seaweed Farm design and gear

- A Simple Method of Setting Seaweed Long Lines, Tollef Olson, President, Ocean’s Balance

Outplanting seaweed seed :

- Field clips of outplanting seaweed lines with Maine Sea Farms

Seaweed Husbandry:

- Winter on a Kelp Farm, Ocean Approved

Seaweed Aquaculture: Farming

- Seaweed Farms of Maine
- Maine Sea Farms Explains Kelp Farming
- Seaweed Farming, Tollef Olson, Oceans Balance Inc.

Harvesting :

- Pulling Seaweed Lines (Ocean Approved)
- Harvesting Kelp with Maine Sea Farms, spring 2018

Seaweed Processing/marketing:

- Greenhouse drying of seaweed with Maine Sea Farms
- Seaweed Product Forms, Lisa Scali, Ocean Approved Inc





ALGAE TECHNOLOGY
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Algae Culture Extension Short-course

ACES Part 2: Microalgae

Scheduled for Release 3rd Quarter 2019

