

BIMM 194: Advanced Topics – Biofuels and Bioproducts S. Mayfield FA17

GENERAL INFORMATION

Time and Place: Tuesday 4-5:20 pm, 1103 Muir Biology
Instructor: Dr. Stephen Mayfield, 858-822-7743 smayfield@ucsd.edu
Office Hours: Applied Physic & Math 3802, by apt.

ALL CLASS INFORMATION WILL BE POSTED ON BLACKBOARD

Check Blackboard frequently for announcements, syllabus updates, and grades. Please check Blackboard announcements before emailing the professor to see if your question is already answered there.

CLASS CONTENT

The purpose of this course is to provide students with an interdisciplinary exposure to the new biology-based industry of photosynthetic biofuels and bioproducts. A series of outstanding speakers has been assembled to cover diverse topics related to biofuels and bioproducts.

WHAT IS EXPECTED OF YOU

Because this is a seminar course, in which the material is delivered mainly through lectures, *attendance is mandatory*. Only one unexcused absence is permitted without affecting your grade. Attendance will be taken at each class meeting; you need to sign in BEFORE the lecture starts.

Listen attentively to the speakers and ask questions! This course provides you with exceptional access to leaders in the field of photosynthetic bio-manufacturing—use the opportunity to learn as much as you can!

COURSE PROJECT

You will select one figure (one main point) from a slide from one of the first 6 lectures. You must research the information presented in that figure and come up with a modification of the figure based on the information from your research. Perform a literature search to find *three primary publications* (research articles) that contain information supporting the figure or perhaps disputing the figure, and cite them appropriately. A news item from the web and wikipedia are NOT primary publications (although they often cite primary publications) and are not a suitable article, and a URL is not a citation.

You may send in a draft of this project by week 7 of the course if you want feedback on your project. Email the figure you have chosen, your 3 primary references and a short statement (2 or 3 sentences) on whether they agree or disagree with the original figure. I will give you feedback in week 8, and the final project will be submitted during week 10 and will include the modified slide, your 3 references and a written explanation of the modifications.

UCSD POLICY ON INTEGRITY OF SCHOLARSHIP

You are expected to read and abide by the UCSD POLICY ON INTEGRITY OF SCHOLARSHIP. Breach of policy will result in a failing grade.

<http://www-senate.ucsd.edu/manual/appendices/app2.htm>

GRADING POLICY

For an A: Perfect attendance (one unexcused absence allowed), completion final project with suitable citations, an “A” on the final exam and submission of a completed course survey at the final class, A-, B+, B, C, D, or F grades will be assigned for performance below that which is expected for an A, depending on the performance level.

SCHEDULE

Date	Topic	Speaker
October 3	Introduction to Energy/Food/Bio-Products	Stephen Mayfield Molecular Biology, UCSD
October 10	Cyanobacteria as a platform for Biofuels and Bio-Products	Brian Palenik Molecular Biology, UCSD
October 17	Algae as Producers of Bio-Products	Stephen Mayfield Molecular Biology, UCSD
October 24	Engineering Higher Plants for Improved Yield	Marty Yanofsky – Cell and Developmental Biology UCSD
October 31	Sustainable Polymers from algae and plants	Skip Pomeroy Chemistry & Biochemistry, UCSD
November 7	Developing products in algae using synthetic biology	Shaun Bailey - Synthetic Genomics PhD
November 14	Jatropha Oils for biofuels and high value products	Bob Schmidt
November 21	Nutraceutical protein production in green algae	Miller Tran- Triton Health and Nutrition
November 28	High Value Oils from Algae	Craig Behnke Sapphire Energy
December 5	Final Exam	Muir 1103