BIMM 194: Advanced Topics – Biofuels and Bioproducts S. Mayfield FA16

GENERAL INFORMATION

Time and Place: **Tuesday 4-5:30 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 first draft of this project 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 of an initial draft and 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
September 27	**Introduction to Energy/Food/Bio-Products**	**Stephen Mayfield Molecular Biology, UCSD**
October 4	**Cyanobacteria as a platform for Biofuels and Bio-Products**	**Brian Palenik Molecular Biology, UCSD**
October 11	**Algae as Producers of Bio-Products**	**Stephen Mayfield Molecular Biology, UCSD**
October 18	**Engineering Higher Plants for Improved Yield**	**Marty Yanofsky – Cell and Developmental Biology UCSD**
October 25	**Engineering Green Algae for Sustainable Polymers**	**Michael Burkart Chemistry & Biochemistry, UCSD**
November 1	**Developing products in algae using synthetic biology**	**Shaun Bailey - Synthetic Genomics PhD**
November 8	**Nutraceutical protein production in green algae**	**Miller Tran- Triton Health and Nutrition**
November 15 (draft project due)	**Jatropha commercialization**	**Bob Schmidt – SG Biofuels**
November 22	**High Value Oils from Algae**	**Craig Behnke – Sapphire**
November 29	**Final Exam**	**Muir 1103**