CLASS DISCUSSIONS SESSIONS

FIRST CLASS: Tuesday, September 23
Here is the link for publications listed below: [http://www.genetics.iastate.edu/wsf14.html](http://www.genetics.iastate.edu/wsf14.html)

Tuesday, September 23: Introduction and Expectations 3:40 p.m. to 5:00 p.m.
5:00 p.m. By Drena Dobbs [d dobbs@iastate.edu](mailto:d dobbs@iastate.edu) GDCB
Read prior to class
“Foundations of Engineering Biology” by Drew Endy
“A Brief History of Synthetic Biology” by D. Ewen Cameron, et al.

Tuesday, September 30: Introduction/Discussion of Christopher Voigt’s research 3:40 p.m. to 5:00 p.m. By Basil Nikolau, [dimmas@iastate.edu](mailto:dimmas@iastate.edu), BBMB
Read Prior to class
TBA

Tuesday, October 7: Introduction/Discussion of Hal S. Alper’s Research 3:40 p.m. to 5:00 p.m. By Zengyi Shao, [zyshao@iastate.edu](mailto:zyshao@iastate.edu), Chem & Biol Engineer
Read Prior to class
“Design of synthetic yeast promoters via tuning of nucleosome...
“Harnessing Yarrowia lipolytica lipogenesis to create a platform...
“Controlling Promoter Strength and Regulation in S. cerevisiae ...

Tuesday, October 14: Public presentation for Dr. Alper (4:10 p.m.), 1414 MBB
All Attend

Wednesday, October 15: Graduate Student meeting (11:10 a.m.)
Sign up to attend:
Location: Carver Co-Lab

Tuesday, October 21: Introduction/Discussion of Zengyi Shao’s Research 3:40 p.m. to 5:00 p.m. By Greg Phillips, [Gregory@iastate.edu](mailto:Gregory@iastate.edu), VMPM
Read Prior to class
“DNA assembler, an in vivo genetic method for rapid construction ...
“Refactoring the Silent Spectinabilin Gene Cluster Using ....

Thursday, December 11: Public presentation for Dr. Shao (4:10 p.m.), 1414 MBB
All attend

Friday, December 12: Graduate Student meeting (11:10 a.m.)
Sign up to attend
Location: Carver Co-Lab

Discussion questions:

What are the basic questions that the authors attempted to answer (i.e. what hypothesis were tested?)
Why did the authors do the work? (significance, previous work)
Methodology—Was there anything particularly appropriate, powerful, unique about methods used.
Results: What were the most significant results that supported the author’s hypothesis? Were there any results that ran counter to the author’s hypothesis or were unexpected and led to new ideas. Were there any experiments or results that are missing, or are begging to be done?

Conclusions: what the authors concluded and your comments on those conclusions.

Future: What experiments remain to be done. How does this affect the field? What new areas of research will this work lead to?

The learning outcomes of this course are to:

- Develop habits of thinking important for a geneticist
- Communicate genetics research effective to peers
- Synthesize accurate and up-to-date views of topics in genetics research
- Critically assess genetics literature and research needs

Papers can be downloaded from [http://www.genetics.iastate.edu/wsf14.html](http://www.genetics.iastate.edu/wsf14.html) when they become available.

**SEMINARS & CHALK TALKS**

Time/place Updates will be posted in [http://www.genetics.iastate.edu/wsf14.html](http://www.genetics.iastate.edu/wsf14.html)

**Tuesday, October 14 – Wednesday, October 15, 2014**

Hal S. Alper, Ph.D.,
University of Texas at Austin, McKetta Department of Chemical Engineering
[http://www.che.utexas.edu/alper_group/index.html](http://www.che.utexas.edu/alper_group/index.html)

Seminar: “Synthetic Biology and Directed Evolution Strategies for Metabolic Engineering”
Tuesday, October 14, 4:10 p.m. in 1414 Molecular Biology

Graduate Student Meeting with Speaker Dr. Alper:
Wednesday, October 15, 11:10 a.m. in Carver Co-Lab
Agrawal, Baumbach, Char, Heinrich, Herrmann, Kono, Mauch, Merrick, Natukunda, Pedersen, Powell, Ren, Riaz, Rowland, Soto-Burgos, Testroet, Welker, Yang, Zhao

ISU contact: Basil Nikolau (dimmas@iastate.edu) and Genetics Graduate Group (G3) Joe Gallagher (jpg@iastate.edu)

**Thursday, December 11, 2014 – Friday, December 12, 2014**

Zengyi Shao, Assistant Professor
Iowa State University, Department of Chemical and Biological Engineering
[http://zyshao.public.iastate.edu/](http://zyshao.public.iastate.edu/)

Seminar: “Putting Synthesis into Biology”
Thursday, December 11, 2014, 4:10 p.m. in 1414 Molecular Biology

Graduate Student Meeting with Speaker Dr. Shao:
Friday, December 12, 2014, at 11:10 a.m. in Carver Co-Lab
EXPECTATIONS AND GRADING

To satisfactory complete this course students are expected to:

1. **Attend class on Tuesdays as listed above, read ALL assigned papers, and be prepared for discussion.** The class will be divided into small groups for discussion and will present the results of the discussion to the rest of the class.

   Students unable to attend a discussion session due to an excusable circumstance (e.g. medical emergency, research trip) must read all papers and write an acceptable 1-page discussion of the major points for each paper. These papers should be submitted to the faculty member listed as contact for the speaker no later than Monday, November 3, 2014 at 5pm.

2. **Attend ALL speaker seminars.**

   Students who miss a seminar due to an excusable circumstance (e.g. medical emergency, research trip) must read all papers and write an acceptable 2-page discussion of the major points for each paper. These papers should be submitted to the faculty member listed as contact for the speaker no later than Tuesday, November 11, 2014 at 5:00 p.m.

3. **Attend at least one small group talk.**

   Course is graded Satisfactory (S) and Failed (F)

**Academic Dishonesty**

This class will follow Iowa State University’s policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office.

http://www.dso.iastate.edu/ja/academic/misconduct.html

**Disability Accommodation**

Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact (instructor name) to set up a meeting within the first two weeks of the semester or as soon as you become aware of your need. Before meeting with (instructor name), you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-7220 or email disabilityresources@iastate.edu. Retroactive requests for accommodations will not be honored.

**Harassment and Discrimination**

Iowa State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment based upon race, ethnicity, sex (including sexual assault), pregnancy, color, religion, national origin, physical or mental
disability, age, marital status, sexual orientation, gender identity, genetic information, or status as a U.S. veteran. Any student who has concerns about such behavior should contact his/her instructor, Student Assistance at 515-294-1020 or email dso-sas@iastate.edu, or the Office of Equal Opportunity and Compliance at 515-294-7612.

Religious Accommodation
If an academic or work requirement conflicts with your religious practices and/or observances, you may request reasonable accommodations. Your request must be in writing, and your instructor or supervisor will review the request. You or your instructor may also seek assistance from the Dean of Students Office or the Office of Equal Opportunity and Compliance.

Contact Information
If you are experiencing, or have experienced, a problem with any of the above issues, email academicissues@iastate.edu.