

COURSE ANNOUNCEMENT: BMB 960 PHOTOSYNTHESIS

Spring 2022 BMB960
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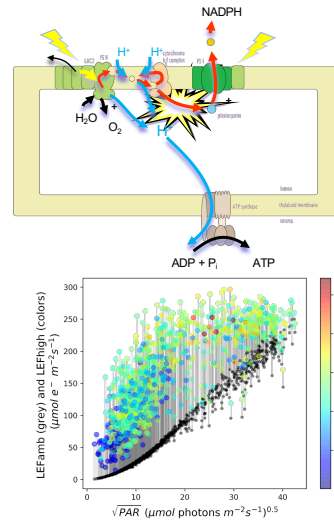
Credits: 3

Approval: Required

Schedule: **TIME AND LOCATION
WILL BE ARRANGED.**

Accommodations for online/virtual learning can be addressed with the instructor, on a case-by-case basis

The course will focus on the mechanisms of photosynthesis using real-life measurements made by the participants, to develop a working, integrated knowledge of photosynthesis applicable to range of disciplines, ranging from chemistry and biophysics, bioenergy and cell biology and ecophysiology and genomics.



The course is designed to meet the needs of MSU graduate students with projects related to photosynthesis, and will thus the specific topics be driven by their on-going projects.

This year we will focus on measuring and analyzing photosynthetic processes that can be measured in the lab and field using the PhotosynQ.org MultispeQ instrument, including photosynthetic efficiency, photoprotection, electron transfer, transpiration and water use efficiency, and related processes.

The class will include introductions to the theory, experiment design, generation and testing of hypotheses, modeling and statistical analysis, as required to interpret photosynthesis experiments.

To achieve this, participants will have access to the PhotosynQ.org platform and MultispeQ instruments and data analyses using Python and/or R. Participants may also present and analyze their existing data sets.

Course evaluation will be by research-related presentations or participation in the writing of a paper. *In the previous session of the course, the participants jointly published a paper in an international journal [1]!*

[1] Gregory, L, McClain, Luke M. Gregory, David M., Kramer, J. D. Pardo, Kaila E. Smith, Oliver L. Tessmer, Berkley J. Walker, Leonardo G. Ziccardi, Thomas D. Sharkey (2021) Plant Cell and Environment, 44, 3223-3226. <https://doi.org/10.1111/pce.14153>