AQUATIC PHOTOSYNTHESIS, FALL 2008

Instructor: Dr. Michael Durako (durakom@uncw.edu) BIO 495 006
Class Times: Wed. 4:00-4:50pm Room: DO226
Telephone: 962-2373/2374 Office: FR1002A/CMS2337 Office Hours: Mon. 4:00-5:00 & Thur.11-12:30

WEEK	DATE	ACTIVITY	SPEAKER
1	8/20	*No Class*	
2	8/27	Introduction	Dr. Durako
3	9/03	Photosynthesis vs Light	Dr. Durako
4	9/10*	Utilization of Light in Aquatic Systems	Dr. Durako
5	9/17	Carbon Limitation	Dr. Durako
6	9/24	Presentation 1	Students
7	10/01	Presentation 1	Students
8	10/08**	Presentation 1	Students
9	10/15	Presentation 1	Students
10	10/22	Presentation 2	Students
11	10/29	Presentation 2	Students
12	11/05	Presentation 2	Students
13	11/12	Presentation 2	Students
14	11/19	Presentation 2	Students
15	11/26	*Thanksgiving Break*	
16	12/03	Summary	Dr. Durako

*Date for submission of Presentation 1 topic. **Date for submission of Presentation 2 topic

Grades: Each student will present two seminars (1st:10-12 min 40%; 2nd:15-18 min 60%). The seminars will be graded on organization and information content, not on speaking ability. Students should use handouts and PowerPoint for their presentations. Each student will provide handouts for the rest of class (handouts will be copied by the instructor if received 1 wk prior to talk). The handouts (3-4 pages max) should include an outline of major points that the presenter wishes to make and pertinent data, figures, and tables. The handouts must include a bibliography with at least 3 primary references from the peer-reviewed scientific literature. The quality of the handouts will constitute part of the grade. The presenter also needs to provide the instructor with the two best papers that the student used to prepare each seminar. Attendance is mandatory! Each unexcused absence will result in a lowering of your grade by 5 points.
A:90-100 B:80-89 C:70-79 D:60-69 F:0-59

Potential Topics:
Measurement of Light in Aquatic Systems
- 2π versus 4π sensors - Theoretical considerations
- Radiance vs Irradiance
- IOPs vs AOPs
- PAR versus PUR
- Extinction vs Absorption Coefficients - What do they tell us?

Causes of Light Attenuation in Aquatic Systems - TSS, CDOM, Water
Photosynthesis versus Irradiance
- Measurement Techniques, Photoinhibition vs Down regulation , Spatial and Temporal Changes

Pigments and Light Capture
Photosynthetic Carbon Uptake in Aquatic Systems – Limitations and concentrating mechanisms
Ocean Acidification – Opportunities and constraints