

**BIOL 470: Frontiers in Marine Biology**  
Section A01 201601

**Instructor**

Prof. Verena Tunnicliffe  
Wright Centre SCI A325  
250 721-7135  
[verenat@uvic.ca](mailto:verenat@uvic.ca)

**Schedule**

Mon, Thurs 1300 – 1425h  
CLE A307

**Description:** This course will explore new advances in topics related to ocean biology. This year we will focus on marine ecosystems with an eye on the tremendous challenges that face scientists and society over the next decade. Ocean change is rapid and unpredictable. Many programmes are struggling to understand species responses in the context of whole communities and ecosystems. We will explore contributions to this analysis in the context of specific systems, approaches and ecosystem integration.

**Format:** There is no text for this course. Instead, there will be required readings that will be covered in class. “Required” means that you are expected to contribute discussion and comment. There will be 10 papers – written at overview level – that will mean planned time for reading. Please read before the class and prepare a question or comment: it is part of your participation mark.

We will have guest lecturers to give you expert insight into some specific topics. These researchers will share their ‘take’ on advances in their own fields. Please ‘exploit’ them with questions.

The main assignment for the course is a project related to a dataset that you will receive. It will not be complex nor will the expected analyses be beyond the skills you should have. However, the exercise is intended to focus research on a topic and to set unique information in the context of a research inquiry. There will be two reports submitted and a brief presentation on your results.

The Course Experience Survey is a useful mechanism to communicate to me. Please give me, and the Department, your feedback. [www.uvic.ca/learningandteaching/faculty/resources/ces/](http://www.uvic.ca/learningandteaching/faculty/resources/ces/)

**Assessment:**

Dataproject 1: Background, objective:	15	Test	20
Dataproject 2: Results/Discussion	20	Class participation	5
Presentation	5	Exam (Take Home)	35

**UVic Grading:** A+ (90-100); A (85-89); A- (80-84); B+ (77-79)  
B (73-76) B- (70-72); C+ (65-69); C (60-64); D (50-59); F (0-49)

### Lecture Schedule

DATE		TOPIC	PRESENTER	Paper
Jan 4	1	Intro; Ocean exploration and techniques	VT	
Jan 7	2	Data projects	VT	
Jan 11	3	Ocean Ecosystems Challenges	VT	yes
Jan 14	4	Microbial futures in the ocean	VT	suggested
Jan 18	5	Chemosynthetic systems	VT	yes
Jan 21	6	Hot Vents	VT	suggested
Jan 25	7	Functional Traits	VT	
Jan 28	8	Zooplankton and traits	A. Sastri	yes
Feb 1	9	Pelagic-Benthic Coupling	VT	suggested
Feb 4	10	Connectivity	VT	yes
Feb 15	11	<b>TEST</b>	VT	
Feb 18	12	Metapopulations	VT	
Feb 22	13	Ocean diversity	VT	yes
Feb 25	14	Marine communities and Metacommunities	VT	
Feb 29	15	Ecosystem function	VT	
Mar 3	16	Hypoxia in the ocean	J. Chu	yes
Mar 7	17	Ocean change	VT	
Mar 10	18	Protozoa to Ichthyoplankton	J. Dower	yes
Mar 14	19	Presentations	you	
Mar 17	20	Presentations	you	
Mar 21	21	Presentations	you	
Mar 24	22	Deep-sea advances	VT	yes
Mar 31	23	Science to Policy	VT	yes
Apr 4	24	Hot Topics CES	VT	