General Oceanography I

Discipline Prefix:	MAR	Course Number:	101	Course Section:	57B
Course Title:	General Oceanography I				
Credit Hours:	4	Contact Hours:	3hours lab 3 hours lecture	Semester:	Fall 2016
Meeting Days/Time/Location:	MWF 8-9:15 AM				

Instructor Information:

Name:	Bethany Smith	Office Location:	RCC Warsaw Annex 208
Office Hours:	Monday through Friday 10:30-2:30, other hours by appointment		
Email:	bsmith@cbgs.k12.va.us	Phone:	804-333-1306
Instructor Response Time to Email:	< 24 hours		

Course Information:

VCCS Course Description:	Surveys physical and biological **oceanography** including an introduction to geological and chemical **oceanography**. Part I of II.		
This course will fulfill the requirement for:	One laboratory science course for the Associate of Arts and Science degree. Please consult an academic advisor about the transferability of the course.		
Prerequisites:	none		
Exam Date:	TBA	Withdrawal Date	12/06/2016
Method of Instruction:	Course is on-site at RCC Warsaw and employs a variety of instructional methods including lecture, student project-based learning and independent scientific research.		

	Students will use computer technology extensively as well as hands-on laboratories both in field studies and laboratory.
Instructional Materials:	Materials will be provided by the Instructor. Books: *Introduction to Oceanography*, Thurman and Burton *Marine Biology*, Castro and Huber; other readings as assigned.
Course Objectives:	Students will be able to: identify geological features of ocean floor; predict tectonic behavior based on geological structures; understand geological processes and sources for deep ocean and coastal sediments; explain biogeochemical relationships between water column processes and sea floor sediments; predict outcomes of ocean acidification based on chemical equations and empirical data; discuss biological pump and ocean carbon cycle significance in the global carbon cycle; predict future effects of anthropogenic influence on global carbon cycle in ocean. Students will examine and understand basic physics of ocean motion including waves, tides, surface and deep water ocean circulation. Students will generate hypotheses and execute scientific methodology; identify and operate basic scientific sampling equipment in a safe, appropriate manner. Students will use computers to analyze data, create graphs, do word processing and create powerpoint presentations. Scientific research and writing will be emphasized as well as public speaking; students will give formal presentations of their work.
Grading and Evaluation:	Student learning will be assessed and evaluated through a variety of methods including traditional tests and quizzes, homework and classwork, written papers and formal projects and presentations. Grades will be based on a points scale with student grade being determined by dividing points earned by total points possible. Late submissions will be penalized 2 points per day past the due date up to 1 week late. Assignments submitted more than 1 week late will be given a 50% completion grade. Grade Scale: 90-100=A; 80-89=B; 70-79=C; 60-69=D; 59 and below=F

Honor Code:

RCC does not condone academic dishonesty. The complete policy may be reviewed at http://www.rappahannock.edu/catalog/student-handbook/academic-honesty/ Faculty are required to report violations of the policy and include clearly in the Syllabus how the violation will be handled.
Consequences for violators: follows policy set forth in student handbook; violations will be reported to college and CBGS administration.
Students have the right to due process and to appeal as defined in the sections on Student Disciplinary Procedure and Student Grievance and Academic Due Process in the student handbook.

Other:

Special Requests:

It is important to RCC that all students have a learning environment that is conducive to their needs. Therefore, any student who feels that they may need some type of accommodation in order to make this class a successful setting, should go to the Counseling Office for information about applying for services and accommodations. You will need to provide current documentation of your disability and recommended accommodation for that disability.

For additional information refer to "Student Services" on the RCC website and look for: http://www.rappahannock.edu/studentservices/counseling-services/students-with-disabilities/

Course Policies and Other Information:

Attendance Policy:	Attendance for this class is mandatory, absence may be excused with prior consent of instructor.
Testing Policy:	All tests must be taken in accordance with CBGS/RCC Honor Policy guidelines. All tests and exams must be pledged. Tests are taken per instructor direction.
Other:	**Policy for Cell Phones/ Laptop Computers/ Misc. Electronic Devices/Inappropriate computer use:** see student handbook for policy. Students may not use cell phones in a manner inconsistent with instructor's direction. Handheld video games are not allowed in class. All computer usage must follow acceptable use policy as outlined in the student handbook.

Learning Sequence:

Weekly Schedule:

Wk 1: Introduction to Oceanography- history of oceanographic research

Wk 2&3: Hurricanes and Air-Sea Interactions

Wk: 3&4 Coastal Geomorphology- Waves, Beaches, Tides- OBX trip

Wk 5: Bathymetry: structure and origin of the ocean basins, sea floor structures, plate tectonics

Wk 6,7,8: Marine Geology and the Sea Floor -sediments, distribution and sources, mineral resources of the sea floor, issues of human exploitation of sea floor resources

Wk 8,9,10: Marine Biogeochemistry- ocean sediments and biogeochemical cycling in the oceans, primary production and nutrient dynamics, marine snow, carbonate buffering, ocean acidification and the Carbon cycle

Wk 11-16: Global Oceanic Circulation- Deep and Shallow water ocean circulation- topics: Coriolis, Ekman, DABW formation and climate change, the Global Ocean Conveyor Belt, upwelling, ENSO, ocean/atmosphere

thermodynamics, geostrophy and Western Boundary currents and warm/cold core eddies. related Marine Hydrokinetic Resources- Hydropower, Wind and Wave Farms, Global Ocean Circulation and Marine Debris **Wk 17-18**: Marine and Environmental Science Independent Research

Title IX:
Rappahannock Community College is committed to providing an environment that is free from harassment and discrimination based on any status protected by law. This institution promotes and maintains educational opportunities without regard to race, color, sex, ethnicity, religion, gender, age (except when age is a bona fide occupational qualification), disability, national origin, or other non- merit factors. More information on Title IX can be found at www.rappahannock.edu<http://www.rappahannock.edu/> by searching for “Title IX.” For questions related to Title IX, please contact RCC Title IX Coordinator, Lorraine A. Justice, at 804-333-6737 ortitleix@rappahannock.edu<mailto:titleix@rappahannock.edu>. To ensure that all members of our campus community are educated about Title IX, you will receive an email to complete the complete Title IX training. Each member of the RCC community to include students, faculty, and staff will receive a personalized email to complete the training provided by Campus Answers. If you do not receive the email or have questions, please contact your Title IX Coordinator, Lorraine Justice at 804-333-6737 or by email at titleix@rappahannock.edu<mailto:ljustice@rappahannock.edu> or Dr. David Keel, Dean of Student Development at 804-758-6730 or by email at dkeel@rappahannock.edu<mailto:dkeel@rappahannock.edu>."

Rappahannock Community College Course Policies and Procedures can be found at http://www.rappahannock.edu/policy/course-policiesrcc/.