



**Department of Oceanography**  
**Faculty of Earth and Environmental Sciences**  
**University of Dhaka**  
**Syllabus for B.S Honors in Oceanography**  
**(Semester-System Course Structure)**

The ocean is a defining feature of our planet and crucial to life on Earth. Yet it remains one of the planet's last and least unexplored frontiers. For this reason the Department of Oceanography at University of Dhaka is committed to explore all facets of the ocean as well as its complex relationships with Earth's atmosphere, land, ice, seafloor, and life- including humanity. This is essential not only to advance knowledge about our planet, but also to ensure society's long-term welfare and to help guide human stewardship of the environment. Faculties/researchers here are dedicated to work on ocean science, ocean resources and ocean environment. The mission is to provide information for public policy and decision making, and to expand awareness about the importance of the sovereign maritime, regional and global ocean and its resources.

**Course Structure: B.S. Programme in Oceanography**

<b>First Semester</b>		
<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>
OCN 101	Fundamentals of Ocean Sciences	2
OCN 102	Marine Biology: Invertebrates	3
OCN 103	Fundamentals of Marine Chemistry	3
OCN 104	Introduction to Atmospheric Science	2
OCN 105	Marine Botany	2
OCN 106	Calculus	3
OCN 107	Practical/Field Work + Viva voce	2+1=3
<b>Sub-total</b>		<b>18</b>
<b>Second Semester</b>		
<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>
OCN 111	Marine Geology	3
OCN 112	Hydrodynamics and Coastal Hydraulics	2
OCN 113	Marine Geophysics	2
OCN 114	Differential Equation & Linear Algebra	3
OCN 115	Marine Biology: Vertebrates	3
OCN 116	Marine Analytical Chemistry	3
OCN 117	Practical/Field Work + Viva voce	2+1=3
<b>Sub-total</b>		<b>19</b>

Third Semester		
Course No.	Course Title	Credit Hours
OCN 201	Physical Oceanography	3
OCN 202	Oceanography of the Bay of Bengal	2
OCN 203	Marine Biogeochemistry	3
OCN 204	Ocean Minerals and Energy Resources	2
OCN 205	Marine Biochemistry and Molecular Biology	3
OCN 206	Computer Programming	3
OCN 207	Practical/Field Work + Viva voce	2+1=3
Sub-total		19
Fourth Semester		
Course No.	Course Title	Credit Hours
OCN 211	Marine Meteorology	2
OCN 212	Satellite Oceanography	3
OCN 213	Marine Planktonology & Benthic Organisms	3
OCN 214	Marine Sedimentology & Stratigraphy	2
OCN 215	Marine Microbiology	3
OCN 216	Numerical Techniques in Oceanography	3
OCN 217	Practical/Field Work + Viva voce	2+1=3
Sub-total		19
Fifth Semester		
Course No.	Course Title	Credit Hours
OCN 301	Acoustical Oceanography	2
OCN 302	Molecular Methods in Oceanography	3
OCN 303	Marine Ecology	3
OCN 304	Fisheries Oceanography	2
OCN 305	Petroleum Geology & Geophysics	3
OCN 306	Marine Mammals	2
OCN 307	Practical/Field Work + Viva voce	2+1=3
Sub-total		18
Sixth Semester		
Course No.	Course Title	Credit Hours
OCN 311	Ocean Waves & Tidal Energy	2
OCN 312	Marine Ecological & Ecosystem Modeling	2
OCN 313	Population Dynamics of Marine Organisms	2
OCN 314	Marine Biotechnology and Therapeutics	3
OCN 315	Submarine and Underwater Communication	2
OCN 316	Geophysical Fluid Dynamics	3
OCN 317	Coastal & Marine Aquaculture	2
OCN 318	Practical/Field Work + Viva voce	2+1=3
Sub-total		19
Seventh Semester		
Course No.	Course Title	Credit Hours
OCN 401	Global Climate Change	2
OCN 402	Coastal Zone Management	2
OCN 403	Coastal and Marine Pollution	2
OCN 404	Marine Governance and Ocean Policy	2
OCN 405	Coastal Landscape and GIS	3

OCN 406	Coastal and Offshore Structure	3
OCN 407	Statistical Techniques for Oceanographer	3
OCN 408	Practical/Field Work + Viva voce	2+1=3
<b>Sub-total</b>		20
<b>Eighth Semester</b>		
<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>
OCN 411	Mathematical Modeling in Oceanography	3
OCN 412	Paleontology & Paleo-oceanography	3
OCN 413	Evolution and Earth's Biosphere	2
OCN 414	Law of the Sea	2
OCN 415	Marine Biodiversity and Conservation	3
OCN 416	Research Methodology	2
OCN 417	Practical/Field Work + Viva voce	2+1=3
<b>Sub-total</b>		18

**Grand total** (18+19+19+19+18+19+20+18=150)

### 1. Preamble

Under the Semester System, the four-year B.S Honors (integrated) Degree in Oceanography at the University of Dhaka is a programme of eight semesters. Each semester consist of six months. The duration of B.S Honors is four years divided into eight semesters.

Students are required to take all courses equivalent to 150 credit hours.

### 2. Credit and distribution of courses over the Semester

#### Theory:

2 credit = 30 classes (1 hour duration) = 50 marks

3 credit = 45 classes (1 hour duration) = 100 marks

4 credit = 60 classes (1 hour duration) = 100 marks

#### Practical/Lab:

1 credit = 5 classes (3 hour duration) = 25 marks

2 credit = 10 classes (3 hour duration) = 50 marks

#### Field Trip:

1 credit = 1~2 full working days of field work = 25 marks

2 credit = 3~4 full working days of field work = 50 marks

**Viva-voce:** 1 credit/2 credit = 50 marks

The course and credit over eight semester is illustrated below:

Class Year	Number of Courses		Total Course	Credit Distribution		Total Credit
	First Semester	Second Semester		First Semester	Second Semester	
First Year	7	7	14	18	19	37
Second Year	7	7	14	19	19	38
Third Year	7	8	15	18	19	37
Fourth Year	8	7	15	20	18	38
Total			58			150

### 3. Evaluation and Grading

#### i. Theory courses

Class attendance

05%

In-course assessment	25%
Course final examination	Subjective: 50%
	Objective: 20%

ii. Practical course

In-course assessment + class attendances	40%+10%
Course final examination	50%

iii. Marks of attendances

Attendance %	Marks%
90 and above	05
85 to 89	04
80 to 84	03
75 to 79	02
70 to 74	01
Less than 74	00

iv. In-course Assessment for Theory Courses

- In-course Assessment may be done by taking class test and/or by giving assignments.
- The course teacher will announce the dates of in-course examinations at the beginning of the course. The in-course assessment will be of one hour duration and the teacher concerned will be responsible to assess the students sitting in his/her course. There will be 2 tests for each course.
- Maximum duration of in-course test will be one class hour.

v. Course Final Examination (Theory and practical Courses)

- Student having 75% or more attendance on average (collegiate) are eligible to appear in the final examination.
- Student having 60-74% attendance are considered to be non-collegiate and will be eligible to sit for the final examination on payment on fine Tk. 1,000/= (One thousand).
- Student having attendance less than 60% will not be allowed to sit for the final examination but may ask seek readmission in the program.

- The duration of theoretical course final examinations will be as follows:

Credit	Duration of Examination
4 credit course	3.5 hours
3 credit course	3.5 hours
2 credit course	2.5 hours

- Duration of practical examinations will be between 3-5 hours irrespective of credit hours.

The Class Test(s) for first In-course Assessment will be taken usually after covering 40% of the course topics and second In-course Assessment will be taken usually after covering 80% of the course topics. The Course Final Examination will be taken upon completion of the entire course. In Final Examination, each theory course will be evaluated by two teachers of the Department. If a single teacher teaches a course then the semester final test scripts must also be evaluated by two teachers, one of whom must be the course teacher, and another, a suitable second examiner who may be either from DU or outside DU. In the semester final examination if the difference of marks in any course is more than 20%, the script will be evaluated by a third examiner. The final marks obtained will be averaged of the nearest two marks, or third examiners marks if the difference between his/her marks and the two other examiner's marks are the same.

The total marks in a course will be converted into letter grade as under:

Numerical Marks	Letter Grade	Grade Point
80 above	A+	4.00
75 -79	A	3.75
70 – 74	A-	3.5
65 -69	B+	3.25

60 – 64	B	3.00
55 -59	B-	2.75
50 – 54	C+	2.50
45 -49	C	2.25
40 – 44	D	2.00
Below 40	F	0.00

#### **4. Promotion**

For promotion from one class year to next class year, a student is required to obtain a minimum CGPA (Cumulative Grade Point Average) or GPA (only for 1<sup>st</sup> Semester) as under:

Class Year	Minimum CGPA
From First Year to Second Year	2.00
From Second Year to Third Year	2.25
From Third Year to Fourth Year	2.50

The minimum CGPA of a student, as mentioned above, is calculated taking into consideration the grade points obtained in courses of all previous class years. Besides, a student failing to clear up university or departmental dues shall not be promoted to the next class year.

#### **5. Degree Requirements**

For the B.S. Honors degree, each student is required to:

- i) Complete 150 credit hours without a F grade in any course
- ii) Earn a minimum CGPA of 2.50: and
- iii) Complete the program in maximum six consecutive academic years including the year of first admission into the program.

For appearing at the each semester final examination, every student is to fill in examination entry form supplied by the Controller of Examination on payment of dues.

#### **6. Credit Transfer**

No credit transfer from any other programs or institutions is allowed for the B.S. Honours degree.

#### **7. Improvement of Grades**

A student earning F grade in a course in any year must improve the grade with any of the following two batches. A student is allowed to seat for improvement examinations in a course not more than one times. No improvement is allowed for marks in mid-term examination and *viva vocé*, as well as in course(s) in which a student did not attend classes. Students obtaining less than C+ grade in any course may also choose to improve the grade by appearing at the semester final examination with the following batch only. In such cases, the best one of the two examinations will be considered for improving the result.

Students willing to improve the grade in a course should apply to the Chairman of the Department at least four weeks before the start of the semester final examination.

#### **8. Re-admission**

A student failing to get the requisite grade points for promotion to the next year may seek re-admission with the following batches. For re-admission a student should apply within one month after the publication of result of the concerned year. On re-admission, grades obtained earlier by a student in the class year of re-admission shall be canceled and the student shall have to retake all the courses and examinations. Re-admission in a class-year shall be allowed only once in a class and a student shall not be allowed re-admission in more than twice during the entire program.

#### **9. Dean's Award**

Students who have obtained CGPA 3.75 without having any improvement, no F grade and no academic loss during his/her eight semesters and having at least 90% attendance shall be presented as Dean's Award.