

Geog. 307**Oceanography****Cr. Hours (03)****BS Geography 4 Years Programme, University of the Punjab, Lahore**

- Introduction to Oceanography
 - Historical overview of oceanography
 - Scope and significance of oceanography
- Origin and Structure of Ocean Basins
 - Origin of ocean basins
 - The permanency of the ocean basins and related theories
 - The origin of ocean water
 - Changes in sea level during the Tertiary and Quaternary periods
- The Floors of Oceans
 - The Physiography of the ocean floor
 - Geologic differences between continents & ocean basins
 - Characteristic features of ocean basins
 - Marine sedimentation
- The Circulation of the Oceans
 - Ocean Currents
 - Waves and tides
 - Oceanic storms and disturbances
 - The Ocean Resources
 - Law of the sea
 - Mineral Resources
 - Biological Resources
 - Marine Energy
- The Geographical Significance of the Oceans
 - Interaction of ocean and atmosphere
 - The changing sea level
 - Oceans in exploration and transport
 - The strategic role of oceans
- Oceans and Seas of the World

Recommended Books:

1. Barnes, H. (1959) Apparatus & Methods of Oceanography, London; 1st Edition. George Allen & Unwin Ltd.
2. Duxbury, A.B & Duxbury, A.C. (1994) An Introduction to the World Oceans. Oxford; 4th Edition. WMC Brown Publishers.
3. Duxbury, A. B. & Duxbury, A.C. (2001) Fundamentals of Oceanography. London; 2nd Edition. WMC Brown Publishers.
4. King, C.A.M. (1962) Oceanography for Geographers. London; 1st Edition. Edward Arnold Publishers, Ltd.
5. Pinet, P.R (2002) Invitation to Oceanography. London; 3rd Edition. Jones & Bartlett Publishers.
6. Summerhayes, C.P. & Thorpe, S.A. (1998) Oceanography – An Illustrated Guide. London; 2nd Edition. Monson Publishing Ltd.