

## **Molecular Marine Biology**

Course code: ENV 3020

Total contact hours: 60 hours

Pre-requisite: None

### **Course Overview**

The use of biological-molecular tools has revolutionized research in marine sciences in recent decades. These approaches offer the extraordinary potential to address ecological issues in the marine environment, ranging from species identification to understanding connectivity among populations.

This course focuses on using molecular markers based on mitochondrial and nuclear DNA to highlight the importance of conservation genetics and the implications on a global scale to manage marine species in danger of extinction.

Activities and conferences will be carried out at the CPI Biomolecular Laboratory (BIOMOL).

Students will participate in field activities to understand some controversial conservation issues related to the endangered trapezoidal marine species in Costa Rica, such as sea turtles and sharks. We will gather tissue samples and later performing hands-on activities in the laboratory such as DNA extractions, PCRs, electrophoresis, and introduction to bioinformatics analysis.