Guayaquil – Ecuador
Campus Gustavo Galindo Velasco – Km. 30.5 Vía Perimetral – Pbx: (593–4) 2269 269
www.espol.edu.ec
in espol   f @espol   @espol   @espol1

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Course Syllabus

FISHERIES OCEANOGRAPHY

Printed by: lualtam

Program: Oceanographic Engineering

1. Course number and name

OCEG1042 - FISHERY OCEANOGRAPHY

2. Credits and contact hours

3 credits and 3 contact hours

3. Instructor's course or coordinator's name

JONATHAN MARCELO CEDEÑO OVIEDO

4. Text book, tittle, author, and year

• Harrison, Paul J; Timothy R. Parsons. Fisheries Oceanography. An integrative Approach to Fisheries Ecology and Management (1st Edition)

a. Other supplemental materials

• Charles, Anthony. Sustainable Fisheries Sytems (2001)

• Castrejón Mendoza, Hugo M.. Co-Manejo Pesquero en la Reserva Marina de Galápagos (1era Edición)

• Agüero, Max. Capacidad de pesca y manejo pesquero en América Latina y el Caribe. (2007)

• Bertrand, Arnaud; M. Lengaigne; K. Takahashi; A. Avadí; F. Poulain; Ch. Harrod. El Niño-Southern Oscillation (ENSO) effects on fisheries and aquaculture (1st Edition)

• Ormaza-González F., A. Mora-Cervetto, Raquel M. Bermúdez-Martínez, M. Hurtado-Domínguez, M. Peralta-Bravo, V. Jurado-Maldonado. Can small pelagic fish landings be used as predictors of high-frequency oceanographic fluctuations in the 1+2 El Niño region? ()

• Ormaza-González F., A. Mora-Cervetto, Raquel M. Bermúdez-Martínez. Relationships between tuna catch and variable frequency oceanographic conditions ()

• Ormaza-González F.. The code of conduct for responsible fisheries: its application in Ecuador ()

• Cushing, David. The effect of El Niño upon the Peruvian anchoveta stock. In: Climate and Fisheries. ()

5. Specific course information

a. Brief description of the content of the course (catalog description)

This professional training course (Itinerary) aims to study and understand the physical, chemical and biological factors that affect recruitment and abundance of captured species.

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The study of the trophic chain is vital to understand the energy passage from phytoplankton to top predators.

This course shows how oceanographic data can be used to generate oceanographic conditions index and how those are related to the recruitment of marine species.

Additionally, the parameters will be given in a sustainable way, using criteria from the Marine Stewardship Council (MSC). Management will be oriented to native species of Ecuador (small and large pelagic).

   b.   This course is: Selected elective

6. Specific goals for the course

   a.   Specific outcomes of instruction

    1.- Know the parameters that define the habitats of different life histories and stages of fish, for their correct identification

    2.- Evaluate the health of fishing ecosystems, for the establishment of measures of sustainable use and protection

    3.- Analyze the effects of fish survival and abundance that are part of the goal of fishing to undesrstand its population dynamics

    4.- Undesrtand that sustainable management of fisheries requires a holistic vision entire process anrelated fishery activities, from the capture until it reaches the consumer's plate.

    5.- Know the direct and indirect fishering actors and how they interact in the sustainable management processes

   b.   Explicity indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course

7. Brief list of topics to be covered

   1.- Evaluation activities

   2.- Introduction to fisheries science

   3.- Species, life histories and distribution

   4.- Ocean's effects on population dynamics

   5.- Fisheries management

   6.- Climate change and fisheries

   7.- Fishing data