The course content will include both theoretical presentations and practical exercises throughout the entire course.

Day 1 – GIS in Aquaculture and Introduction to QGIS

This lesson introduces the use of Geographical Information Systems in aquaculture and presents the open-source software QGIS. The lesson content will include the exploration of the QGIS interfaces and its primary functionalities, as well as the understanding of symbology and how to approach the feature-attribute relationship.

Course presentation [T]
EXPLORE QGIS [T]
EXPLORE QGIS [P]
EXPLORE A GIS MAP [P]
SIMBOLOGY [T]
EXPLORE THE FEATURES-ATTRIBUTE RELATIONSHIP [P]

Day 2 – Understanding Coordinate Reference Systems and the Use of Raster and Vector Data

This lesson explores Coordinate Reference Systems (CRS) and the utilization of raster and vector data. It includes topics such as comparing different map projections, methods for changing the projection of a shapefile, and exploring raster and vector data. In addition, it exploits the QGIS Print Layout, which is an efficient tool for creating thematic maps.

CRS [T]
COMPARING MAP PROJECTIONS [P]
CHANGE PROJECTION TO A SHAPEFILE [P]
PROJECTION [P]
EXPLORE VECTOR AND RASTER DATA [T]
EXPLORE VECTOR AND RASTER DATA [P]
CREATE A LAYER BY TEXT FILE XY [P]
CREATE THEMATIC MAP [T]
CREATE THEMATIC MAP [P]

Day 3 – Querying and Editing Geographic Data

The goal of this lesson is to understand how to select and query data based on attributes and location. In addition, it explains how to edit geographical data using geometries such as polygons, lines, and points.

QUERY AND DATA SELECTION [T]

QUERY DATA BASED ON ATTRIBUTES [P]
QUERY DATA BASED ON LOCATION [P]
EDITING [T]
EDITING GEOGRAPHICAL DATA - EDITING Geometries polygons, lines and points
EDITING GEOGRAPHICAL DATA - EDITING OF THE ATTRIBUTES

Day 4 – Join and GPS

In this lesson, we will discuss the joining process in QGIS, the creation of buffers, and the utilization of GPS. The lesson's content will include topics such as joining attributes from a table, joining data from another layer based on location, and working with data imported by GPS.

GIS Data independence and Joining data [T]
JOIN ATTRIBUTES FROM TABLE [P]
JOIN DATA FROM ANOTHER LAYER BASED ON SPATIAL LOCATION [P]
CREATE BUFFERS [P]
GPS [T]
IMPORTING DATA FROM A GPS [P]

Day 5 – **GIS project and self-evaluation**

In the final lesson, based on the knowledge acquired during the previous days, students will be required to complete an entire GIS project and present the final results.

Project presentation [T]
Project [P]