COURSE DETAIL

MARINE BIOTECHNOLOGY
Country Japan
Host Institution Tohoku University
Program(s) Engineering and Science
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Biological Sciences
UCEAP Course Number 103
UCEAP Course Suffix
UCEAP Official Title MARINE BIOTECHNOLOGY
UCEAP Transcript Title MARINE BIOTECH
UCEAP Quarter Units 3.00
UCEAP Semester Units 2.00

Course Description
This course examines developmental biology of fish, molecular engineering in fish, and bioinformatics using computer and web sites. The course covers fundamental issues of genetic engineering and genomics in fish, and bioinformatics necessary for future researches in the fields of marine biotechnology. Topic during the class include: embryonic development in fish; forward genetics (Mutant library, Positional cloning); reverse genetics (Knockout fish, TALEN, CRISPR/Cas9); other basic techniques essential for fish biotechnology; fish genomes; practical training using computer (BLAST search, Multiple alignment, Phylogenetic tree, PubMed, Ensembl), larval and metamorphic development; transgenic fish.

Language(s) of Instruction
English

Host Institution Course Number
ABS-APS346E

Host Institution Course Title
MARINE BIOTECHNOLOGY

Host Institution Course Details

Host Institution Campus
Tohoku Universitty

Host Institution Faculty

Host Institution Degree

Host Institution Department
Agriculture

Course Last Reviewed

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