Master of Science in Fishery Science and Technology Program

The Faculty of Fisheries offers the professional multidisciplinary program in Fishery Science and Technology. We aim to produce and develop researchers who will work in the fishery field through our research oriented program.

- Curriculum Structure

A regular two year program requires a minimum of 36 credits. The program is shaped into six modules to fulfill the knowledge branch of fisheries. The structure of our program is divided into two plans depending on the applicant’s aim and experience.

Plan A1 consists of 36 credits for the thesis. The additional audited class participation is required as Seminars and Core Courses for a total of 8 credits.

Plan A2 consists of 12 credits of the thesis and a further 24 credits for course work.

- Thesis 12 credits

- Core Courses 8 credits
  - Seminar 2 credits
  - Fishery Resources and Food Security 3 credits
  - Research Methods in Fishery Science and Technology 3 credits

- Elective Course 16 credits

The students can select at least 12 credit courses from one module and a minimum of 4 credits from affiliated module.

Six modules are offered as follows:

Module I Aquatic Biodiversity and Ecology e.g.

Advanced Phycology
Advanced Taxonomy, Evolution, Physiology and Ecology of Fish
Primary Productivity of Waters
Advanced Limnology
Ecology of Freshwaters
Morphology and Physiology of Seagrasses, Seagrass Community
Advanced Planktonology, Ecology and Biogeography of Marine Plankton
Fish Reproductive Biology and Strategies
Physiology of Crustacean
Behavior of Aquatic Animals
Marine Biological Diversity
Marine Geochemistry

**Module II Aquatic Resources and Environmental Management** e.g.

Aquatic Toxicology and Hazard Evaluation
Biology of Polluted Water
Coastal and Marine Fishery Management
Inland Fishery and Environmental Management
Fishery Resource Economics
Fishery Environmental Economics
Risk Management in Fisheries
Social Analysis for Fishery Management
Spatial Analysis for Fishery Resources Management
Geoinformatics Application in Fisheries Science
Management Information System in Fisheries
Statistical Analysis for Fishery Research
Environmental Impact Assessment in marine Ecosystems
Estuarine Pollution

**Module III Aquaculture Technology** e.g.

Advanced Freshwater Aquaculture and Mariculture
Hormone in Aquaculture
Aquaculture Project Planning
Immunology of Aquatic Animals
Applications of Chemicals and Drugs in Aquaculture
Aquatic Animal Genomics and Genetic Improvement
Aquatic Animal Nutrition
Aquatic Animal Feed Processing Technology
Algal Propagation
Diseases and Parasites of Aquatic Animal
Fish Pathology
Sustainable Aquaculture Management

**Module IV Fishing Technology** e.g.
Fishing Population Dynamics
Fisheries Stock Assessment
Fishery Industrial Development
Remote Sensing in Oceanography
Applied Radiometry to Oceanography
Acoustic Techniques for Fishery Resources Assessment
Deep Sea Fisheries
Marine Affairs
Sustainable Utilization of Marine Resources
Responsible Fishing Technology

**Module V Fishery Biotechnology** e.g.
Bioactive Substance from Algae
Fishery Product Biotechnology
Marine Natural Products
Pigments in the Sea
Marine Environmental Biotechnology

**Module VI Fishery Post-harvest Technology** e.g.
Food Additives in Fish and Fishery Products
Seafood Nutrition
Fish Oils
Marine Biotoxins
Protein in Fish and Fish Product
Enzyme from Fish
Food Safety and Quality Management Systems in Fish Processing Plant
Fishery Product Development

Advanced Fish Processing

System Analysis and Management in Fish Processing Industry

- **Postgraduate (Master) Program on Tropical Fisheries with International Linkage**

  In the master program, we offer the international linkage program for students who intend to take selective courses in program member schools at Kagoshima University, Sam Ratulangi University and University of the Philippines Visayas. A student who wants to register for the linkage program shall notify us at the time of entry.

- **Qualifications and Admission Requirements**

  1. An applicant must hold a Bachelor in Science degree or other related field enclosed with research background as thesis.

  2. Adequate command of spoken and written English is required for admission. Non-native English-speakers must submit one of the following English language proficiency test results:
     - TOEFL overall score of 520 (PBT)/ 190 (CBT)/ 61(iBT) or above
     - IELTS overall score of 5.5 or above
     - CU-TED score equivalent to TOEFL (iBT) score of 61 or above

  For applicants with an international education, qualifications will be approved individually.

  3. Three letters of recommendations are required.

  4. The applicants who aim to participate in Plan A1 Program must have at least one paper published in a journal, academic publication or an academic conference proceedings.
Doctor of Philosophy in Fishery Science and Technology Program

The Faculty of Fisheries offers a doctoral program to serve as a focus of multidisciplinary studies and research in Fishery Science and Technology. The applicants will gain a deeper understanding of their fields of interest through research upon completion of the program.

- **Curriculum Structure**

  A regular three to five year program requires a minimum of 52 and 75 credits, respectively. The program has six modules to fulfill the knowledge branch of fisheries. The structure of the program is divided into two plans depending on the applicant’s aim and experience.

**Plan 1** is a research oriented program with the aim of producing an innovative thesis. This plan is classified into two formats.

  - Plan 1.1 is designed for students with a master’s degree. A regular three year program requires 52 credits of thesis. The additional audited class participation is required as Core Courses for a total of 10 credits.
  
  - Plan 1.2 is designed for students with a bachelor’s degree. A regular five year program requires 75 credits of thesis. The additional audited class participation is required as Core Courses for a total of 15 credits.

**Plan 2** is a research oriented program with the objective of achieving high quality research as well as academic advancement and development of occupational skill, and requires additional study participation. This plan is classified into two formats.

  - Plan 2.1 is designed for students with a master’s degree. A regular three year program requires 36 credits of thesis and a further 16 credits for course work.
  
  - Plan 2.2 is designed for students with a bachelor’s degree. A regular five year program requires 48 credits of thesis and a further 27 credits for course work.

<table>
<thead>
<tr>
<th>Course</th>
<th>Study Plan/credits</th>
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<tbody>
<tr>
<td></td>
<td>Plan 1.1</td>
</tr>
<tr>
<td>Thesis</td>
<td>52</td>
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<tr>
<td>Core Course</td>
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</tr>
<tr>
<td>- Seminar</td>
<td>4*</td>
</tr>
<tr>
<td>- Fishery Resources and Food Security</td>
<td>-</td>
</tr>
<tr>
<td>- Green Technology in Fishery</td>
<td>3*</td>
</tr>
<tr>
<td>- Advanced Research Methods in Fishery Science and Technology</td>
<td>3*</td>
</tr>
<tr>
<td>Elective Course</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
</tr>
</tbody>
</table>

*audit class participation*
- **Elective Course**

  The Plan 2.1 students can select a minimum of 3 credits courses from module and minimum of 3 credits from affiliated module.

  Six modules and offered as follow:

  **Module I  Aquatic Biodiversity and Ecology** e.g.
  Biogeochemistry of Benthic Boundary Layer
  Hydro-Ecological and Carrying Capacity for Integrated Water Resources Management
  Physiological Ecology of Algae
  Osmotic and Ionic Regulation in Marine Animals
  Marine Benthos
  Marine Microbial Ecology

  **Module II  Aquatic Resources and Environmental Management** e.g.
  Bioassay in Water Pollution Study
  Hydro-Ecological and Carrying Capacity for Integrated Water Resources Management
  Tropical Fishery Resource Management
  Advanced Impact Assessment in Fishery Development
  Small-scale Fishery Management
  Fishery Conflict Management
  Marine Pollution Monitoring and Mitigation
  Petroleum Oil in Marine Environment

  **Module III  Aquaculture Technology** e.g.
  Intensive Aquaculture System
  Vaccine Application in Aquatic Animals
  Applied Population Genetics for Aquaculture
  Aquaculture Pond Bottom Soil Management
  Shrimp Pathology
  Virology of Aquatic Animals

  **Module IV  Fishing Technology** e.g.
  Ecological Dynamics of Tropical Fishery Resources
  Wave in Oceanic and Coastal Waters
Module V  Fishery Biotechnology  e.g.

Applied Phycology
Advanced Algal Biotechnology
Bio-Product from Aquatic Resources
Bioactive Marine Natural Products

Module VI  Fishery Post-harvest Technology  e.g.

Advanced Fishery Product Analysis
Aquatic Food Proteins
Seafood Enzymes

The Plan 2.2 students can select a minimum of 9 credits courses from one module and a minimum of 3 credit from the affiliated module. The student can participate in the courses offered from the master’s program under the supervision of thesis committee.

- Qualifications and Admission Requirements

1. An applicant must hold a Bachelor or a Master of Science degree or other related field with a research background as thesis.
2. Applicants who aim to participate in Plan 1.1 or 1.2 Program must have a paper published in a journal or academic publication or academic conference proceedings.
3. Applicants who aim to participate in Plan 1.2 or 2.2 Program are required to have a GPA of at least 3.0 on a 4.0 scale. For the different assessment system, qualifications will be approved individually.
4. Adequate command of spoken and written English is required for admission. Non-native English-speakers must submit one of the following English Language proficiency test results with a minimum score:
   - TOEFL overall score of 520 (PBT) / 190(CBT) / 61(iBT) or above
   - IELTS overall score of 5.5 or above
   - CU-TEP score equivalent to TOEFL (iBT) score of 61 or above
For applicants with an international education, qualifications will be approved individually.
5. Three letters of recommendation are required.
6. An applicant must submit the concept paper of her/his dissertation research.

- Estimated Academic Fees*

65,000 THB/semester

The fee does not include costs of textbooks and research work.
- **Academic Calendar Year**
  
  First Semester: August to December  
  Second Semester: January to May

- **Online Submission and More Details**
  
  [http://www.interprogram.ku.ac.th](http://www.interprogram.ku.ac.th)  
  [http://www.grad.ku.ac.th](http://www.grad.ku.ac.th)  
  [http://www.fish.ku.ac.th](http://www.fish.ku.ac.th)

- **Scholarships for International Students**

  Students can apply for the international scholarship and research funding from the Graduate School at Kasetsart University. For more information, please visit [http://www.grad.ku.ac.th/eng.../](http://www.grad.ku.ac.th/eng.../).