



Master Degree Program of

MOUNTAIN STUDIES

2019

University of Tsukuba

Graduate School of Life and Environmental Science

Master's Program



Mountainous areas provide forest, water, tourism and many other resources which enrich our lives. However, these areas also face a number of challenges, such as the effects of depopulation and forestry industry decline on forest utilization and mesomountainous areas. More recently, mountainous areas are being affected by climate change, natural disasters, the loss of biodiversity and many other environmental problems which require us to think about how to ensure a sustainable relationship between human activities and mountain environments.



What is the Master of Mountain Studies?

The Master Degree Program of Mountain Studies program features collaboration amongst different universities, as well as integration of various mountain science related fields (Agricultural and Basic Sciences, and Engineering). Hands-on instruction and research activities performed at a diversity of field stations maintained by the collaborating universities (the University of Tsukuba, Shinshu University, Shizuoka University and the University of Yamanashi) are used to cultivate people capable of addressing the various issues facing mountainous areas.

Basic Sciences

Ecology,
Genetics,
Topography,
Hydrology,
Systematic Taxonomy,
Meteorology,
Geology,
Geography

Engineering Sciences

River Engineering,
Environmental Engineering,
Forest Engineering,
Civil Engineering,
Social Technology,
Risk Engineering

Mountain Science

Agricultural Sciences

Natural Aspects

Silviculture, Forest Soil Science,
Mountain Afforestation, Erosion Control Engineering,
Forest Protection Science, Forestry

Social Aspects

Forest Policy, Forestry Business Administration,
Environmental Economics, Forest Aesthetics, Mountain Village Sociology



Mountain Studies Field Stations

Mountain Science Center, University of Tsukuba

■ **Sugadaira Research Station**
Sugadaira, Nagano

■ **Yatsugatake Forest Station**
Nobeyama, Nagano

■ **Ikawa Forest Station**
Ikawa (Southern Alps), Shizuoka

■ **Tsukuba Experimental Forest**
Tsukuba, Ibaraki

In addition, we are able to utilise facilities at the collaborating universities, as well as overseas universities and institutes.



■ Field Course Highlights



• Internship

Undertake an internship under the guidance of a national park ranger. Rangers work at the forefront of mountain activities. We place great importance on work experience in the field and offer credit for applicable internships.



• Field Safety Management

A lecture in Field Safety Management, which is a required subject in the Master Degree Program of Mountain Studies. We learn outdoor first-aid skills in case urban emergency services are unable to respond. We believe that the knowledge acquired in this subject is indispensable in the study of Mountain Science.



• Mountain Science Field Course A

Receiving a lecture from a member of the Forestry Agency on forest management at a larch forest logging site. In mountain field exercises, we go out in the field to learn about Mountain Science from professionals in a variety of areas presenting you with opportunities to think for yourself about issues.

■ Promising Career Paths

Mountainous area issues-focused national/local government employee, national research and development institute member, regional research institute researcher, corporate employee, association personnel, NPO/NGO staff, etc.





Mountain Studies Curriculum



In order to provide both the broad scope of education and high degree of expertise required for mountain environment conservation and management, core subjects and specialized subjects are established.

Students can take classes, field courses and specialized applied subjects, which are lectured in offered by collaborating universities as common subjects.

First year

[Interim Presentation]*

- Introduction to Mountain Science A (Required)
- Mountain Science Field Course A (Required)

- Specialized Applied Subjects (Selective)
- Field Safety Management (Required)

- Mountain Studies Seminar IA・IB (Required)
- Specialized Applied Subjects (Select from three domains)
- Introduction to culture and science of mountains (Required)

- Mountain Science Research I (Required)

Second year

[Final Presentation]

- Mountain Science Field Course B (Required)

- Specialized Applied Subjects (Selective)

- Mountain Studies Seminar IIA・IIB (Required)
- Specialized Applied Subjects (Select from three domains)

- Mountain Science Research II (Required)

※ Interim evaluations shall be carried out at a combined annual reporting session by the relevant universities.

Specialized subjects

- Bioresource Management
- Vegetation Geography
- Vegetation Science [Japanese]
- Vegetation Science
- Soil Genesis and Classification
- Ecosystem Ecology
- Advanced Field Course in Fungal Biodiversity
- Laboratory and Field Studies in Arthropod Biology
- Environmental Field Work [Japanese]
- Advanced Field Course in Mountain Forest Ecology
- Mountain Microbiology
- Mountain Soil Survey Fieldwork
- SATOYAMA Management Fieldwork
- Laboratory and Field Studies in Molecular Ecology
- Mountain Meteorology
- Lecture on Mountain Geomorphology
- Lecture on Erosional Landforms
- Lecture on Polar Geomorphology
- Hillslope Geomorphology and Hazards
- Overseas Fieldwork in Alpine Geomorphology
- Basin Area Hydrology
- Environmental Hydrology [Japanese]
- Introduction to Water Environments
- Remote Sensing
- Mountain Geology
- Advanced Conservation of Regional Resources
- Applied Environmental Ethics (Introduction to English Presentation and Debate)
- Mountain Tourism
- Introduction to Culture and Science of Mountains
- Environmental Disaster and Protection Planning
- Environmental Disaster and Protection Policies
- Nature Conservation Studies
- Natural Heritage Studies
- International Conventions for Heritage Conservation



Faculty Members

☐ Biological Sciences

Ken-ichiro ISHIDA Plant and Protist Phylogeny and Systematics
Kenta TANAKA Population Biology, Plant Reproductive Ecology
Yukihiko TOQUENAGA ... Theoretical Ecology
Yousuke DEGAWA Mycology, Plant Systematic Taxonomy
Kensuke YAHATA Animal Systematic Taxonomy
Kazuharu OHASHI Plant Evolutionary Ecology
Yukie SATO Behavioral Ecology, Evolutionary Ecology

☐ Geoscience

Norikazu MATSUOKA Geomorphology
Masaaki KUREHA Tourism Geography
Ken-ichiro HISADA Stratigraphy
Yoji ARAKAWA Petrology
Keisuke MATSUI Human Geography
Yuji YAGI Seismology
Atsushi IKEDA Geomorphology
Kenichi UENO Atmospheric Science
Tsutomu YAMANAKA Hydrologic Science
Tsuyoshi HATTANJI Geomorphology
Thomas PARKNER Geomorphology

☐ Integrative Environment and Biomass Sciences

Yuichi ONDA Hydrogeomorphology, Geomorphic Development
Takeshi NAKAYAMA Plant Systematic Taxonomy

☐ Agro-Bioresources Science and Technology

Yoshihiko TSUMURA Forest Genetics, Molecular Ecology
Kenji TAMURA Soil Science
Takeshi KAMIJO Forest Ecology
Toshiharu ENOMAE Environmental Materials Science
Tatsuyuki SEINO Forest Ecology
Satoshi TACHIBANA Forest Resource Economics
Katsuhisa KOHROKI Forest Resource Sociology
Eiichi OBATAYA Wood Materials Engineering
Akiko NAKAGAWA Wood Science
Yoshiaki TSUDA Molecular Ecology, Population Genetics
Masashi KADOWAKI Animal Ecology
Maki ASANO Soil Science
Kiyokazu KAWADA Plant Ecology
Yosuke YAMAKAWA Erosion Control Engineering
Hikaru OSAWA Landslide Science, Slope Hydrology, Glaciology

☐ Environmental Sciences

Maki TSUJIMURA Aquatic Environmental Science
Keiko YAMAJI Environmental Ecochemistry
Kenlo NASAHARA Remote Sensing
Mitsuru HIROTA Ecosystem Ecology
Kenichi MATSUI Human Geography
Tomoyuki YOKOI Insect Ecology, Behavioral Ecology, Conservation Ecology
Minaco ADACHI Forest Ecology

☐ Cooperative Graduate School System

Tetsuya MATSUI Vegetation Science, Impact of Climate Change
Takashi MASAKI Forest Ecology
Naoki TANI Tropical forest Management, Molecular Ecology
Shigeharu MORIYA Biomass Utilization, Microbial Ecology, Molecular Evolution
Yuichiro HIRANO Forest Policy, Natural Resource Management



Examination Information

Those who wish to enroll in the Master Degree Program of Mountain Studies should contact their desired faculty advisor beforehand. The contact information for faculty advisors is listed on the Master Degree Program of Mountain Studies homepage (refer to the back page).

August Entrance Examination	August 21 and 22, 2019 Application Period: July 2 - 23
February Entrance Examination	Application Period: Please check the homepage after November.

* Please see the application guidelines for detailed information, including application qualifications and entrance examination details.

* The application guidelines are published on the University of Tsukuba Graduate School application guidelines website.

☞ <http://www.ap-graduate.tsukuba.ac.jp/course/les/>

Please contact your desired faculty advisor or the admissions supervisor (sangaku-admission@ml.cc.tsukuba.ac.jp) for the Master Degree Program of Mountain Studies regarding any questions you may have about the entrance examination.

Graduate Course OVERALL ORIENTATION

A graduate school orientation meeting will be held for the Graduate School of Life and Environmental Sciences and the Master Degree Program of Mountain Studies.

In the orientation for the Master Degree Program of Mountain Studies, we will explain the curriculum, field of research, and entrance exam information for this graduate degree program and faculty members will answer your questions. Reservations are not required so please feel free to join us!

Date : **May 11(Sat), 2019** 10AM-12PM (Graduate course overall orientation)
12:15 - 13:00 (Orientation for Master degree program of mountain studies)

Venue : **Room 203, Laboratory for Environmental Disaster Prevention Research**
[Orientation for Master Degree Program of Mountain Studies]

Building 2H101, Central Area, University of Tsukuba
[Graduate course overall orientation]



The nearest bus stop is
Tsukuba Daigaku Chuo /
Dai-ichi Area Mae

 Please bring your own lunch.

Access

Access from Tokyo to Tsukuba Station

■ Tsukuba Express

45 minutes from Akihabara Station to Tsukuba Station by rapid train.

After getting off at Tsukuba Station, you can take a bus.

■ Highway Express Bus from Tokyo Station

45 minutes from Akihabara Station to Tsukuba Station by rapid train.

After getting off at Tsukuba Station, you can take a bus.

■ Airport Bus

< Narita Airport >

About 60 minutes from Narita Airport by bus bound for "Tsukuba Center". Take a bus at the bus stop at Terminal 1, 2 or 3.

< Haneda Airport >

About 120 minutes from Haneda Airport by bus bound for "Tsukuba Center". Take a bus at bus stop No.6 in the International Terminal or at bus stop No.13 in Terminal 1 or 2.

< Ibaraki Airport >

About 60 minutes from Ibaraki Airport by bus bound for "Tsukuba Center".

■ University Loop-line On-Campus Bus [Tsukuba Daigaku Junkan Bus] (clockwise or counterclockwise)

Biological Sciences ♀ Tsukuba Daigaku Chuo

Agro-Bioresources
Science and Technology .. ♀ Tsukuba Daigaku Chuo

Environmental Sciences .. ♀ Dai-San Area Mae
Geoscience/ Tsukuba Daigaku
Master Degree Program .. ♀ Chuo/
of Mountain Studies Dai-ichi Area Mae

Integrative Environment
and Biomass Sciences ♀ Tsukuba Daigaku Chuo

Contact

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Graduate School of Life and
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 <http://www.life.tsukuba.ac.jp/~sangaku/>



CAMPUS MAP Central Area

