

## Master's Program in Mountain Studies

Name of the degree to be conferred	Master of Science in Mountain Studies
Educational purpose	To train the persons who are equipped with the knowledge and skills necessary for developing prosperous and robust communities and industrial development in mountainous areas including forestry and abilities for judgement and action to be able to take accurate measures with a wide vision and expertise, in order to cope with various problems relating to natural resources such as geosphere/hydrosphere, ecosystem and forests associated with natural variation/human activities in mountainous areas.
Vision of human resources development	The persons who have learned the knowledge and skills etc. over the plural areas such natural science and social science of mountain studies, have a deep interest in various phenomena/problems in mountainous areas and specifically contribute to their solutions.

### Diploma Policy

The degree of Master of Science in Mountain Studies is commenced to those who have fulfilled the requirements for the completion of the Master's programs, as set out in the Graduate School Regulations of the University of Tsukuba and related university regulations, and who are deemed to have the following competencies.

Competencies	Evaluation perspectives
1. Knowledge application competence: Ability to contribute to society with advanced knowledge	① Can you apply knowledge gained through research and other activities in society? ② Can you identify new problems, even in other fields of expertise, based on broad knowledge?
2. Management competence: Ability to appropriately address challenges from broad standpoints	① Can you take on major tasks with systematic planning? ② Can you understand and solve problems from multiple perspectives?
3. Communication competence: Ability to accurately and clearly communicate expert knowledge	① Are you capable of efficient communication for research purposes? ② Can you discuss research or research-specific knowledge with experts from your own field and from other fields?
4. Teamwork competence: Ability to work with a team and actively contribute to the achievement of goals	① Do you have experience cooperatively and actively working on challenges as part of a team? ② Have you helped promote projects and activities other than your own research?
5. Internationality competence: Willingness to contribute to international society	① Are you aware of making contributions to international society and getting involved in international activities? ② Have you obtained the linguistic skills necessary for international information collection and action?
6. Knowledge and technical skills: an ability to acquire basic knowledge and skills relating to mountain studies and make full use of them.	If having acquired basic specialized knowledge and skills relating to mountain studies
7. Problem solving ability: an ability to scientifically understand various problems in mountainous areas and to establish specific measures to solve such problems.	If having understood various problems in mountainous areas and established concrete measures for problem solving.
8. Ability for coordination and self-expression: communication skills to be able to communicate sufficiently and express themselves accurately.	If having acquired communication skills to express themselves accurately.

9. Leadership ability: an ability to coordinate and cooperate in order to solve problems in mountainous areas and to exhibit leadership.	If capable of coordination and cooperation for problem solving of mountainous areas and exhibiting leadership.
10. International character: an ability to be able to deal with various issues of mountainous areas in international vision.	If having acquired ability to deal with various issues of mountainous areas in international vision.

#### Dissertation evaluation criteria

The dissertation that satisfies all the following items shall be a pass as the thesis for master's degree after going through final examination.

Additionally, the thesis shall be examined by the committee for master's thesis review (composed of one chief examiner and two or more sub examiners). While the instructor shall be the sub-examiner in charge of master's program in mountain studies, the instructors in charge of other degree programs can participate in such examination.

1. If the submitted master's thesis is high in degree of completion including descriptions, logic expansion and charts.
2. If the contents of the master's degree thesis have international vision and their levels are high enough as the research in the area of mountain studies.
3. If the references are appropriately cited for the master's thesis.
4. If the contents of research for master's thesis can correspond to solution of various problems in mountainous areas.
5. If academic rank, contents and future developments of master's thesis are sufficiently understood.
6. If conducting questions and answers appropriately based on communication skills for appropriate presentation and sufficient communication in presentation.

#### Curriculum Policy

Basic knowledge and skills for mountain studies and specialized knowledge, skills and research methodologies necessary to resolve the real problems relating to bioresources shall be learned. The curriculum shall be organized in order that the students can learn the methods to analyze and summarize the data obtained by research/surveys though the said methodologies and communication skills and presentation ability can be acquired.

Curriculum organization policy	<p>As a specialized fundamental course, in addition to compulsory courses common to programs and selective compulsory courses common to courses, Inter-disciplinary Foundation Courses, Degree Programs' Common Courses and Graduate General Education Courses as elective compulsory courses shall be registered and broad culture and basic knowledge and skills of agro-biological resource sciences shall be acquired. The specialized lectures as specialized courses in area of expertise and practical training and special research as selective compulsory courses shall be registered and basic knowledge and skills of the area of expertise shall be learned.</p> <ul style="list-style-type: none"> <li>• In order to be able to acquire both the broad scope of education and high degree of expertise essential for mountain environment conservation and management, Major Core Subjects and Foundation Subjects for Major shall be established. The Major Core Subjects shall include courses from three different areas: geological, biological and anthropological areas. The Major Core Subjects within each area will equip students with highly specialized skills and knowledge for specific areas. At the same time, students should take courses across multiple areas to cultivate interdisciplinary and practical imaginative ability and the ability to identify issues.</li> <li>• By compiling the above-mentioned learning and the research of the area of expertise as the master's degree thesis, the items provided in the policy of degree award shall be achieved.</li> </ul>
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Learning methods · Processes	<p>The standard learning year shall be two years. As the requirements to complete master's degree, it is necessary to acquire the following 30 or more credits, to put the research outcomes together in master's thesis and to pass the final examination.</p> <ul style="list-style-type: none"> <li>• Foundation Subjects for Major shall be organized for the purpose of acquiring basic knowledge, approaches and practical skills relating to mountain studies and Introduction to Mountain Studies and Exercises shall be offered through the collaboration with other universities. The compulsory courses shall include Introduction to Mountain Science A,B (1 credit for each), Mountain Science Area Course A, B (1 credit for each), Area Safety Management (1 credit), Graduate General Education Courses (1 or more credits), Interdisciplinary Foundation Courses and Degree Programs' Common Courses (1 credit for each), 8 credits in total. The selective courses shall be registered from Mountain Environment Internship I, II, Advanced Research Area Course, Advanced Lecture in Mountain Studies for one or more credits.</li> <li>• Major Core Subjects shall be provided for the purpose of acquiring highly specialized knowledge/skills etc. in geological, biological and anthropological areas. The compulsory courses shall be from Mountain Studies Seminar IA, IB, IIA, IIB, Mountain Science Research I, II, and Introduction to Environmental Sciences, 15 credits in total. The selective courses shall be taken from Major Subjects of Master's Program in Mountain Studies, 2 or more credits of each area (geological, biological and anthropological areas).</li> <li>• Research instruction shall be provided by one chief supervisor and 2 or more sub supervisors. At least one sub instructor may be selected from collaborative universities. Additionally, the advisory committee (AC) composed of one chief instructor and 2 or more sub instructors shall be established to organize validity and problems of research plan for each student by holding meetings to investigate problems. Furthermore, instruction shall be provided to confirm registered courses and acquired credits etc.</li> </ul>
Evaluation of learning outcomes	<ul style="list-style-type: none"> <li>• The advisory committee shall periodically evaluate the students and examine their research progress.</li> <li>• Interim evaluation shall be carried out by the instructors of different area of expertises in addition to chief supervisor and sub supervisors. In principle such evaluation shall be carried out at a combined annual reporting session by the relevant universities at the end of each fiscal year in order that students present research outcomes for interim evaluation.</li> <li>• In principle such evaluation shall be carried out at a combined annual reporting session by the relevant universities at the end of each fiscal year in order that students present research outcomes for preliminary examination. The committee for master's thesis review (human informatics) composed of one chief examiner and two or more sub examiners shall examine the thesis through dissertation examination and oral examination if the students have abilities suitable for master's degree (in mountain studies) in light of the above-mentioned degree awarding policy. Additionally, public presentation shall be carried out.</li> </ul>
<b>Admission Policy</b>	
Desired students	<ul style="list-style-type: none"> <li>• The persons who have interest in mountainous areas and motivation to contribute to solving problems that mountainous areas confront to are required.</li> <li>• The persons who have basic academic skill relating to natural science and social science, and motivation to acquire the knowledge and skills etc. over the plural areas of mountain studies in addition to specialized knowledge.</li> <li>• The persons from a broad areas shall be accepted including working professionals.</li> </ul>
Selection policy	<ul style="list-style-type: none"> <li>• The knowledge/quality, ability, motivation and English ability in the above-mentioned "Desired Students" shall be examined.</li> <li>• The students' abilities shall be observed regarding if they can logically and clearly explain the principle of research plan and relationship with the existing research etc.</li> </ul>