



University of the Ryukyus
Graduate School of Engineering and Science
Graduate School code: 56A

Web site: <http://www.sci.u-ryukyu.ac.jp/index.php?id=387>

1. Graduate School code	56A	
2. Maximum number of participants	Participants per year: 4	
3. Fields of Study	<input checked="" type="checkbox"/> Environmental Science <input checked="" type="checkbox"/> Marine Science <input checked="" type="checkbox"/> Meteorology <input checked="" type="checkbox"/> Natural Disaster/ Disaster Prevention Science <input type="checkbox"/> Tourism <input type="checkbox"/> Politics <input type="checkbox"/> Economics <input type="checkbox"/> Sociology <input type="checkbox"/> Education <input type="checkbox"/> Engineering <input type="checkbox"/> Agriculture (incl. Fisheries) <input type="checkbox"/> Geology <input type="checkbox"/> ICT <input type="checkbox"/> Medical Science <input checked="" type="checkbox"/> Others(Earth Science)	
Sub Fields	< Physics and Earth Sciences > Subduction Zone Magmatism, Tectonics, Marine Geology, Oceanography & Paleo-Oceanography < Chemistry, Biology and Marine Science > Ecology, Taxonomy and Morphology, Cell Biology, Genetics, Functional Biology, Fisheries Biology, Coral Reef Biology, Tropical Biology	
4. Program and Degree	Program	Physics and Earth Sciences Chemistry, Biology and Marine Science
	Degree	Master's degree
5. Standard time table(Years needed for graduation)	2 years	
6. Language of Program	(1) Lecture: All lectures in English (2) Text: English but Japanese text will be used partially while English instructions are given orally. (3) Laboratory work: Generally instructed by the supervisor in English. (4) Seminar: Seminars with Japanese students are generally in Japanese with support in English.	
7. Desirable English level and Necessary Academic background	Linguistic Ability	TOEFL PBT:550 iBT:79-80
	EJU, IELTS, GRE or else	At least 16 years of academic background or equivalent
8. Prior Inquiry From Applicants (Before Submission of Application Documents)	Before deciding the field and the topic of research, applicants are encouraged and recommended to contact appropriate supervisor(s) listed in the Faculty Members (Attach 1).	
9. Website	Graduate School of Engineering and Science http://www.sci.u-ryukyu.ac.jp/index.php?id=387	
10. Professors and Associated	Name	Research Subject, Contact (e-mail), Special message for the Future students

Professors	*Please see Attach 1 for information about Faculty Members
11 . Features of University	<p>Okinawa was the site of the final battle of the Pacific War, which resulted in the loss of a great number of lives as well as heavy destruction to its nature and cultural heritage. To this day, vast U.S. bases still remain in Okinawa. For these reasons, the University of the Ryukyus has followed its guiding principles of "Freedom and Equality, Tolerance and Peace" since its founding. The quest for truth, and the desire to make a broader and meaningful contribution to both our immediate region and to global society continue to be our primary objectives.</p> <p>The mission of the University of the Ryukyus is to send promising individuals out into society with a high-quality education. We aim to cultivate individuals with the following qualities:</p> <ol style="list-style-type: none"> 1. Those who can make contributions at the local level as well as on a larger societal scale 2. Those who can take an active role both nationally and globally 3. Those who will strive to accomplish their dreams 4. Those who possess drive and are open-minded 5. Those who can learn from Okinawan history and the university's guiding principles and take advantage of them <p><i>Reference) Educational Philosophy of the University of the Ryukyus</i></p> <p>URL: http://www.u-ryukyu.ac.jp/en/mains/aboutus/edu-philosophy-ur.php</p>
12 . Features of Graduate School	<p>The Graduate School of Science was merged with the Graduate School of Engineering in FY1998 to form the Graduate School of Engineering and Science. At this time we also added a Doctoral Degree Program to our Master's Degree Program. Our graduate studies science programs work to foster researchers as well as individuals capable of adapting to our current times with a scientific perspective. We also have numerous special courses to accommodate exchange students from around the world, giving our Graduate School students the opportunity to interact with international students.</p>
13 . Features and Curriculum of Program	<p>●Physics and Earth Science</p> <p>This major is comprised of two areas: physics and earth sciences. In the area of physics, we study the diverse characteristics of basic particles and atoms that comprise matter as well as of molecular aggregates, using theoretical and experimental methodology as well as simulation. In the field of the earth sciences, our educational and research initiatives are concerned with the island arc as well as the sea bed, ocean, and atmosphere surrounding it.</p> <p>●Chemistry, Biology, and Marine Sciences</p> <p>This major is divided into the fields of chemistry and biology. In the field of chemistry, in addition to conventional chemistry, we implement broad-based education and research including tropical environment chemistry and natural products chemistry. In the field of biology, our education and research is concerned with biology including conservation of the environment and biological resources, on all levels ranging from genetics to ecosystems.</p>
14 . Academic Schedule	*Please see Attach 2 for more about Academic Schedule
15. Supporting service to International Students	
International Students	The International Student Center provides education in Japanese, as well as Japanese and

<p>Support Center for Consulting or counseling about daily life, campus life, cross-cultural adjustment etc.</p>	<p>Okinawan culture. The Center also assists with students' academic and personal needs, in addition to providing career advice. In line with promoting academic and student exchange, the Center offers a variety of educational opportunities including student tutor system, shortterm student exchange programs with partner institutions overseas for incoming and outgoing students, education for students who minor in the Japanese language, and the International Student Festival which aims at deepening mutual understanding among international students, Japanese students, faculty and staff as well as local people.</p>																				
<p>Provision of Student Dormitory</p>	<p>There are student dormitories available for Japanese and international students. Within the Senbaru Student Dormitory complex are three different types of accommodation facilities. These buildings are separate for male and female students. Rooms are for single occupancy.</p> <p>Room Rent & Utilities (as of 2017)</p> <table border="1" data-bbox="387 801 1517 1059"> <thead> <tr> <th></th> <th>Room Rent per month</th> <th>Electric Charges per month</th> <th>Water and Gas Charges per month</th> </tr> </thead> <tbody> <tr> <td>Male Dorm</td> <td>4,300 yen</td> <td>according to amount used</td> <td>4,400 yen</td> </tr> <tr> <td>Female Dorm</td> <td>4,700 yen</td> <td>according to amount used</td> <td>8,400 yen</td> </tr> <tr> <td>Konju-To</td> <td>15,000 yen</td> <td>according to amount used</td> <td>4,000 yen</td> </tr> <tr> <td>Shin-Konju-To</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Please refer to our online guidebook for further details (page 20): http://isu.u-ryukyu.ac.jp/about/publications/?lang=en#Guidebook-for-InternationalStudents</p>		Room Rent per month	Electric Charges per month	Water and Gas Charges per month	Male Dorm	4,300 yen	according to amount used	4,400 yen	Female Dorm	4,700 yen	according to amount used	8,400 yen	Konju-To	15,000 yen	according to amount used	4,000 yen	Shin-Konju-To			
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<p>Japanese Language Education Program for International Students</p>	<p>There are classes for international students studying Japanese for the first time. Students can learn the first half of the basic patterns of sentences and vocabularies. Assuming that students do not have enough time to study Japanese, Roma-ji will be used in class. It aims to enable graduate students of science and engineering to communicate with Japanese in their daily life and research activities.</p> <p>Please refer to the website for details. <i>Reference)</i> http://isu.u-ryukyu.ac.jp/current-students/japanese_language_classes_for_research_and_graduate_students/?lang=en</p>																				
<p>Cultural Activities</p>	<p>-</p>																				
<p>Any special attention to Religious Practice</p>	<p>-</p>																				
<p>facilities (Library etc)</p>	<p>University Library The University Library houses a wide collection of books, databases, and journals, and offers access to over 20,000 electronic journals. Our holdings are searchable on-site or via our website. <i>Reference)</i> URL: http://www.lib.u-ryukyu.ac.jp/?p=389</p>																				

Health Administration Center

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Our university has the Health Administration Center which aims to preserve and promote the health of all staff and students. Please feel free to visit the Center if you require simple medical treatment or medication, a medical examination, first-aid treatment, or to seek medical advice. Services provided at the center are free.

For further information, please refer to our online guidebook (page 46):

<http://isu.u-ryukyu.ac.jp/about/publications/?lang=en#Guidebook-for-InternationalStudents>

Computing and Networking Center

The center aims to promote computer education and to offer information services for using ICT such as E-mail and WWW to all of students, faculty members, and staff by administering the campus computer network equipment. In addition, the center researches and develops information processing systems and next campus computer network system for the new generation. Recently the center is focusing the High bandwidth Internet connection and the wireless LAN services. Besides, the center provides advanced network applications such as E-learning system and also various technical supports for using ICT to all students, faculty members, and staff.

Tropical Biosphere Research Center

This Center aims to carry out research on aspects of biodiversity, coral reef ecology, the functional physiology of animals in coral reefs, applied plant science, the functional physiology of bioresources, and forest resource science. The Center consists of the Nishihara Station, Sesoko Station, and Iriomote

Station. The Center has 24 professional members, three foreign visiting research fellows and five domestic visiting research fellows. Visiting scientists and students are also welcome. In 2009, this Center has been combined with Center of Molecular Biosciences (COMB), and the research area has been extended to include functional genomics, molecular biotechnology, bioremediation, immunobiology and molecular microbiology. The Center is dedicated to higher education and the promotion of research in the field of tropical biosciences at cellular and molecular levels. All equipment and facilities are, in principle, available for use by students and faculty members from every school and department on campus.

Instrumental Research Center

The Instrumental Research Center (IRC) is a university-affiliated institute for education and research. More than thirty instruments are housed in IRC, with introductions and workshops on their use provided to users. Internal as well as external requests for analyses are welcome. IRC also manages and conducts workshops on chemical substance handling, including storage, use and disposal. In order to manage chemical substances, IRC has introduced a chemical management support system. IRC also manages radioactive materials, provides training on their safe handling, and monitors/controls the radiation of workers and facility environments according to laws and ordinances.

Low Temperature Center

Liquid helium (-269°C) and liquid nitrogen (-196°C) are manufactured in the Low Temperature Center and are supplied to users in the University of the Ryukyus. The Center also supports and promotes research and education in the field of low temperature.

	<p>Foreign Language Center The Foreign Language Center provides language learning opportunities for all members of the University. It manages four language laboratories and carries audiovisual aids to promote language education and research in such foreign languages as English, French, German, Chinese, Spanish, Korean, Russian, Indonesian, etc. In addition, the Center makes Japanese language learning materials available to foreign students studying at the University.</p> <p>Counseling An intercultural mental health counselor is at hand to assist in concerns of any kind, be it studies, daily life or interpersonal relationships (sessions can be held in Japanese or English).</p> <p>For further information, please refer to our online guidebook (page 50): http://isu.u-ryukyu.ac.jp/about/publications/?lang=en#Guidebook-for-InternationalStudents</p>
Please state other particular supporting service you are endeavoring, if any.	-
16. Message to Prospective International Students	
Message from University	University of the Ryukyus is located in a subtropical island, and Okinawa has characteristic culture that has a long history of international exchange with neighboring and other countries. We can easily make friendship with various people and accept their cultures. Okinawa is a very comfortable place for oversea people to stay and study.
Voice of International Students	-

FACULTY MEMBERS AND THEIR RESEARCH INTERESTS

EARTH SCIENCES

Fujita, Kazuhiko

Professor, D.Sc., 1999, Tohoku University

Marine micropaleontology and coral-reef geosciences, paleoenvironmental analysis of quaternary reef deposits; ecology and paleoecology of large benthic foraminifers

E-mail: fujitaka@sci.u-ryukyu.ac.jp

Furukawa, Masahide

Professor, Ph.D., 1990, Kobe University

Marine and environmental geology, tectonics of the back-arc basin and radiation science of the earth's environment

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Hisaki, Yukiharu

Professor, D.Sc., 1996, Tohoku University

Physical oceanography, the dynamics of ocean currents and ocean waves near the coast, especially, observation and analysis of the ocean using the remotely sensed data and in-situ data

E-mail: hisaki@sci.u-ryukyu.ac.jp

Ito, Kosuke

Assistant Professor, Ph.D., 2011, Kyoto University

Numerical weather prediction, high-impact weather events such as tropical cyclones and local heavy rainfall, data assimilation, atmosphere-ocean coupled system, geophysical fluid dynamics

E-mail: itokosk@sci.u-ryukyu.ac.jp

Matsumoto, Takeshi

Professor, D.Sc., 1984, The University of Tokyo

Marine geophysics, gravity and geomagnetic measurement, its application to the ocean floor structure and dynamics.

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Nakamura, Mamoru

Professor, D.Sc., 1997, Kyoto University

Seismology, seismotectonics, crustal structure in Island arc, numerical modeling of tsunami

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Shinjo, Ryuichi

Professor, Ph.D., 1992, Tohoku University

Igneous petrology, mineralogy and isotope geochemistry

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Yamada, Hiroyuki

Associate Professor, Ph.D., 2000, Hokkaido University

Tropical meteorology, mesoscale meteorology, observations and numerical simulations of precipitation processes associated with disturbances and tropical cyclones

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BIOLOGY

Denda, Tetsuo

Professor, D.Sc., 1996, Kobe University
Biology, vascular plant phylogeny and evolution in the Ryukyus and adjacent areas
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Harii, Saki (Tropical Biosphere Research Center)

Associate Professor, D.Sc., 2001, The University of Tokyo
Marine biology, biology and ecology of marine invertebrates of coral reefs, with special focus on the reproductive biology and symbiosis of reef-building corals
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Hirose, Euichi

Professor, D.Sc., 1991, University of Tsukuba
Biology, biology of tunicates: morphology, phylogeny, cell functions, photosymbiosis
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Ikeda, Yuzuru

Professor, D.Fish. Sc., 1993, Hokkaido University
Biology and aquaculture, learning and communication of cephalopods; laboratory culture of cephalopods
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Imai, Hideyuki

Associate Professor, D.Fish. Sc., 1999, Tokai University
Marine biology, population genetics of aquatic animals: molecular genetics, crustacean biology
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Itoh, Ryuichi

Associate Professor, D.Sc., 1999, The University of Tokyo
Biology, biology of plant organelles (plastids and mitochondria)
E-mail: ryuitoh@sci.u-ryukyu.ac.jp

Izawa, Masako

Professor, D.Sc., 1984, Kyushu University
Ecology, ecology of terrestrial mammals: social systems, habitat use, insular populations, conservation
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Kubota, Yasuhiro

Professor, D.Sc., 1996, Tokyo Metropolitan University
Plant ecology, maintenance mechanisms of biodiversity in forest ecosystems and their application to the conservation of nature
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Kurihara, Haruko

Assistant Professor, D.Sc., 2004, Kyoto University
Biology, marine environmental science, coral reef ecology, climate change, eco-physiology
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Morita, Masaya (Tropical Biosphere Research Center)

Associate Professor, Ph.D., 2003, The University of Tokyo
Biology, reproductive biology, cell biology, evolutionary biology
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Naiki, Akiyo

Associate Professor, D.Sc., 2003, Kyoto University
Biology, Systematics of angiosperms, reproductive ecology in heterostylous plants, reproductive interference in plants
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Nakamura, Soichi

Professor, D.Sc., 1986, Osaka University
Biology, genetics of plastid and mitochondria, cytology of cells, origin of sex, aging of cells
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Nakamura, Takashi

Lecturer, Ph.D., 2003 University of the Ryukyus
Biology, ecology and physiology of coral reef organisms. Photophysiology of plant-animal symbiosis
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Naruse, Tohru (Tropical Biosphere Research Center)

Assistant Professor, Ph.D., 2004, University of the Ryukyus
Biology, taxonomy, systematics, biodiversity, crustacean biology
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Otaki, Joji

Associate Professor, Ph.D., 2000, Columbia University
Biological sciences, color-pattern formation of butterfly wings, mammalian olfactory system, cellular regeneration and development, protein structure and function
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Reimer, James D

Associate Professor, Ph.D., 2004, Kagoshima University
Biology, marine invertebrate biodiversity, evolution, phylogenetics, taxonomy, ecology, symbiont diversity and ecology
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Sakai, Kazuhiko (Tropical Biosphere Research Center)

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Ecology, ecology and conservation biology of reef corals including studies of community and population ecology, life-history evolution, sex allocation, and population genetics
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Suda, Shoichiro

Professor, D.Agr., 2000, The University of Tokyo
Phycology, ultrastructure, taxonomy and phylogeny of microalgae
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Tachihara, Katsunori

Associate Professor, D.Agr., 1988, Kyushu University
Ichthyology, artificial seed production and life history of freshwater and marine fishes
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Takaso, Tokushiro (Tropical Biosphere Research Center)

Professor, Ph.D., 1982, Tokyo Metropolitan University
Plant morphology, reproductive morphology of subtropical plants such as mangrove plants and seagrasses
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Takemura, Akihiro

Professor, D.Fish. Sc., 1989, Hokkaido University

Biology and aquaculture, environmental biology of fishes; perception and utilization of cues in reef environments in tropical fishes, molecular and physiological aspects of biological clocks in relation to daily, tidal, lunar and annual rhythms

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Toda, Mamoru (Tropical Biosphere Research Center)

Associate Professor, Ph.D.2000, Kyoto University

Zoology, evolution, systematics, and biogeography of reptiles and amphibians

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Tokuda, Gaku (Tropical Biosphere Research Center)

Professor, D.Sc., 1997, The University of Tokyo

Zoology, digestive physiology, biochemistry, and symbiosis in xylophagous invertebrates

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Professor, Ph.D., 1996, Kyushu University

Evolutionary biology, evolution and ecology of tropical fishes

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Yamasaki, Hideo

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Biology, biology and biochemistry of active oxygen and nitrogen species

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Yamashiro, Hideyuki (Tropical Biosphere Research Center)

Professor, Ph.D., 1995, Mie University

Marine biology, coral and coral-associated animals, coral disease, calcification

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Yokota, Masatsugu

Professor, D.Sc., 1988, Hiroshima University

Biology, taxonomy and cytogenetics of vascular plants of the Ryukyus

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