<table>
<thead>
<tr>
<th><strong>Study Area</strong></th>
<th>B. Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>University</strong></td>
<td><strong>University of the Ryukyus</strong> (National)</td>
</tr>
<tr>
<td><strong>Graduate School</strong></td>
<td>Graduate School of Engineering and Science</td>
</tr>
</tbody>
</table>
| **Field of Study** *Category by PEACE Project* | 1. Urban and Transportation Planning  
2. Structure / Bridge / Vibration Engineering  
3. Civil Engineering Material  
4. Environmental Engineering  
5. Mine Engineering / Geological Engineering / Geographical Information System  
6. Computer Science  
7. Electrical Power Engineering / Electrical Engineering  
Others : **Tunnel** |
| **Actual Study and Research Field**  
*Category by University based on PEACE Project* | Urban Environmental Engineering, Urban Climate  
Urban Community and Dwelling Planning and Design  
Public and Personal Transportation System and Planning  
Thermal Sensation and Air-conditioning in Buildings  
Global Warming and Energy Management  
Solid and Fluid Waste management and Recycle Engineering  
Concrete Material in Civil Engineering  
Steel Bridge Structure Design  
Electric Power Supply and Control  
Electric Safety Design |
| **Degrees** | Master of Engineering |
| **Status** | Research Student (6～12 months)  
→ Graduate School Student (2 years) |
| **Credits and years needed for graduation (In the case of Graduate School Student)** | 30 credits, 2 years |
| **Subjects with English as the language of instruction** | We are providing the Special Program for international students. All the subjects are presented in English in this program. However, Japanese language is spoken partially in several subjects. **It depends upon the lecturers.** |
| **Selling Point** | University of the Ryukyus is located in Okinawa Island. It is almost another country from Japan. We have a lot of effects from the United States, China, Japan and other Asian countries. We can easily accept various people and culture. Okinawa is a very comfortable place for oversea people to stay and study. There are many US military bases in Okinawa and about 50,000 American military people are living here. You can find English signs very easily. |
| **Others should be noted** | Pork is a very popular food in Okinawa. It is not suitable for Moslem people, but we have various food materials other than pork. |
2. Features of University

Reference) Educational Philosophy of the University of the Ryukyus

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.

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:

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

3. Features of Graduate School

Reference) URL: http://www.u-ryukyu.ac.jp/en/mains/grad_schools/sci_tec.php
http://www.u-ryukyu.ac.jp/faculty/grad/tec/index.html

The Graduate School of Engineering and Science aims to educate and produce creative researchers, practical engineers and scientists; each with a broad background, international outlook, and a high degree of specialization. The Graduate School of Engineering and Science offer Master's programs in seven majors. In the Graduate School of Engineering and Science, activities such as carrying out basic scientific researches and developing disaster prevention technologies to solve environmental problems with natural clean energy are proceeding in collaboration with the Disaster Prevention Research Center for Island Regions, which was established in April 2008 at the University of the Ryukyus.

It is preferred for the Afghan participants to be graduates of the fields of engineering and science. A good working level of English is required to attend lectures and write theses.

4. Features of the Program and Curriculum in each Field of Study

All the study fields are based on the research fields of faculty members. High level topics of each study field are provided by the faculty members. Graduate students should focus on their specialized area of study, but our program supplies much wider range of the study fields. For example, we provide a curriculum with various aspects of buildings including architectural design, structural design and environmental performances of buildings for the students who want to study on urban planning.

At the first stage of the study in our university, all the students have to be research students for 6 or 12 months. The students allot this period for training and preparation to stay and study in Japan and to take the entrance examination for the graduate school. We do not provide the special examination only for Afghan students, and the students have to take the ordinary entrance examination to enroll in the graduate school.

Please refer to the Attached Syllabus.
5. **Academic Schedule**

Please refer to the Attachment 1.

6. **Facilities**

**Student Dormitory**

URL: [http://w3.u-ryukyu.ac.jp/gakusaibu/kokusai/english-accommodations/?lang=en](http://w3.u-ryukyu.ac.jp/gakusaibu/kokusai/english-accommodations/?lang=en)

There are student dormitories available for Japanese and international students. Male and Female dormitories have single rooms and residents share kitchen and bathroom.

**Room Rent & Utilities (as of 2011)**

<table>
<thead>
<tr>
<th>Dorm</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>Female Dorm</td>
<td>4,300 yen</td>
<td>according to the quantity consumed</td>
<td>4,400 yen</td>
</tr>
<tr>
<td>Konju-To</td>
<td>4,700 yen</td>
<td>according to the quantity consumed</td>
<td>8,400 yen</td>
</tr>
<tr>
<td>Shin-Konju-To</td>
<td>15,000 yen</td>
<td>according to the quantity consumed</td>
<td>4,000 yen</td>
</tr>
</tbody>
</table>

Due to the limited number of rooms for on-campus housing, there is no guarantee for one to be admitted. There are number of private apartments around the campus. In general, housing cost is lower in Okinawa than in big cities in Japan.

**University Library** URL: [http://www.lib.u-ryukyu.ac.jp/?p=389](http://www.lib.u-ryukyu.ac.jp/?p=389)

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.

**Health Administration Center**

Health Administration Center equip to offer the campus community various health services, such as routine medical examinations, health consultations, counseling, basic medical treatment and medication, as well as first-aid treatment including injuries. Currently, we offer annual medical examinations carried in April of each year, health consultations by school doctors for the health maintenance of students, as well as measures for infection control for students going to have clinical training.

7. **List of faculty members (supervisors) capable of guiding Afghan participants in English**

Please refer to the Attachment 2 for the list of the faculty.
2012 Academic Calendar

(Spring Term)
Apr 1 (Sun) ・・・・・・・・・・ Start of the Spring Term
Apr 2 (Mon) ・・・・・・・・・・ Distribution of Grades and Timetables
Apr 3 (Tue) ～ Apr 5 (Thu) ・・・・・・ New Students Orientation
Apr 3 (Tue) ～ Apr 5 (Thu) ・・・・・・ Spring Term Registration
Apr 6 (Fri) ・・・・・・・・・・ Entrance Ceremony
Apr 9 (Mon) ～ Apr 23 (Mon) ・・・・・・ Medical Examination Period
Apr 9 (Mon) ・・・・・・・・・・ Distribution of the Spring Term Registration Card
Apr 10 (Tue) ・・・・・・・・・・ Start of the Spring Term Classes
Apr 10 (Tue) ～ Apr 23 (Mon) ・・・・・・ Registration Adjustment Period
Apr 25 (Wed) ・・・・・・・・・・ Substitution Day for the Monday classes  *Note 1
May 22 (Tue) ・・・・・・・・・・ Sports Day (No classes)
May 22 (Tue) ・・・・・・・・・・ University Anniversary Day (No Classes)
Jun 23 (Sat) ・・・・・・・・・・ Okinawa War Memorial Day
Jul 23 (Sat) ・・・・・・・・・・ Open Campus
Jul 31 (Tue) ～ Aug 6 (Mon) ・・・・・・ Spring Term Examinations
Aug 7 (Tue) ・・・・・・・・・・ Preliminary Examination Day  *Note 2
Aug 10 (Fri) ～ Sep 24 (Mon) ・・・・・・ Summer Break
Sep 25 (Tue) ・・・・・・・・・・ Distribution of Grades and Timetables
Middle of Sep ・・・・・・・・・・ Graduation Ceremony
Sep 25 (Tue) ～ Sep 28 (Fri) ・・・・・・ Fall Term Registration
Sep 29 (Sat) ～ Sep 30 (Sun) ・・・・・・ University Festival
Sep 30 (Sun) ・・・・・・・・・・ End of the Spring Term

(Fall Term)
Oct 1 (Mon) ・・・・・・・・・・ Start of the Fall Term
Oct 2 (Tue) ・・・・・・・・・・ Distribution of the Fall Term Registration Card
Oct 3 (Wed) ・・・・・・・・・・ Start of the Fall Term Classes
Oct 3 (Wed) ～ Oct 17 (Wed) ・・・・・・ Registration Adjustment Period
Oct 17 (Wed) ・・・・・・・・・・ Substitution Day for the Monday classes  *Note 1
Dec 4 (Tue) ・・・・・・・・・・ Entrance Examination Day (No classes)
Dec 27 (Thu) ・・・・・・・・・・ Substitution Day for the Monday classes  *Note 1
Dec 29 (Sat) ～ Jan 6 (Sun) ・・・・・・ Winter Break

(2013)
Jan 7 (Mon) ・・・・・・・・・・ Fall Term Classes Restart
Jan 18 (Fri) ・・・・・・・・・・ No classes (Preparation for National Center Test )
Jan 19 (Sat) ～ Jan 20 (Sun) ・・・・・・ National Center Test for University Admissions
Jan 30 (Wed) ～ Jan 31 (Thu) ・・・・・・ Fall Term Examinations
Feb 4 (Mon), 5 (Tue), 8(Fri)
Feb 13 (wed) ・・・・・・・・・・ Preliminary Examination Day  *Note 2
Feb 14 (Thu) ～ Mar 31 (Sun) ・・・・・・ Spring Break
Feb 25 (Mon) ～ Feb 26 (Tue) ・・・・・・ The 2nd Selective Examination (First Program)
Mar 12 (Tue) ～ Mar 13 (Wed) ・・・・・・ The 2nd Selective Examination (Latter Program)
Mar 21 (Thu) ・・・・・・・・・・ Graduation Ceremony
Mar 31 (Sun) ・・・・・・・・・・ End of the Fall Term

*Note 1: No other examination, make-up class, or training shall be scheduled on these days.
*Note 2: Classes canceled because of a typhoon/something else or a periodic exam shall be held.
Faculty and Research Fields

Civil Engineering and Architecture

Professors:

**Arizumi, Yasunori**: Dr. Eng., Nagoya University, 1984
- Structural Engineering, Steel-structural Engineering, Structural Analysis, Structural Stability.
- E-mail: arizumi@tec.u-ryukyu.ac.jp

**Iraha, Shigeo**: Dr. Eng., University of Tokyo, 1993
- Structural Engineering, Concrete Engineering.
- E-mail: iraha@tec.u-ryukyu.ac.jp

**Nakaza, Eizo**: Dr. Eng., Tokyo Institute of Technology, 1990

**Ogura, Nobuyuki**: Ph.D., Tokyo University of Fine Arts and Music, 1988
- E-mail: oguranob@tec.u-ryukyu.ac.jp

**Tsutsumi, Jun-ichiro**: Dr. Eng., Kyushu University, 1987
- E-mail: jzutsumi@tec.u-ryukyu.ac.jp

**Yamada, Yoshitomo**: Dr. Eng., Utsunomiya University, 2000
- Construction Materials (Buildings), Concrete Engineering, Fresh Concrete Rheology.
- E-mail: b985553@tec.u-ryukyu.ac.jp

Associate Professors:

**Ando, Tetsuya**: Dr. Eng., University of Tokyo, 1992
- Urban and Regional Planning, Urban and Landscape Design.
- E-mail: tando@tec.u-ryukyu.ac.jp

**Hara, Hisao**: Dr. Eng., University of the Ryukyus, 2004
- Soil mechanics, Environmental geo-engineering.
- E-mail: soil@tec.u-ryukyu.ac.jp

**Irie, Toru**: Dr. Eng., Yokohama National University, 2002
- Architectural Design, Architectural Theory
- E-mail: irie@tec.u-ryukyu.ac.jp

**Matsui, Toru**: Ph.D., University of Tsukuba, 1990
- Applied Microbiology, Biochemical Engineering.
- E-mail: tmatsui@comb.u-ryukyu.ac.jp
Morishita, Youichi: Dr. Eng., Kyushu University, 1983
Structural Engineering.
E-mail: morisita@tec.u-ryukyu.ac.jp

Shimizu, Hajime: Dr. Eng., Kyoto University, 1994
Urban and Regional Planning.
E-mail: shimizu@tec.u-ryukyu.ac.jp

Shimozato, Tetsuhiro: Dr. Eng., University of the Ryukyus, 2008
Structural Engineering, Steel-structural Engineering, Bridge-maintenance Engineering
E-mail: simozato@tec.u-ryukyu.ac.jp

Tokashiki, Takeshi: Dr. Eng., Shinshu University, 2005
Environmental Engineering, Room Acoustics.
E-mail: ttake@tec.u-ryukyu.ac.jp

Tomiyama, Jun: Dr. Eng., University of the Ryukyus, 2000
Computational Mechanics, Concrete Engineering.
E-mail: jun-t@tec.u-ryukyu.ac.jp

Electrical and Electronics Engineering

Professors:

Kaneko, Eiji: Dr. Eng., Nagoya University, 1989
High Power and High Voltage Engineering, Power System Engineering, Pulsed Power Engineering, Electrical Discharges and Plasma Engineering.
E-mail: kaneko@eee.u-ryukyu.ac.jp

Senjyu, Tomonobu: Dr. Eng., Nagoya University, 1994
E-mail: b985542@tec.u-ryukyu.ac.jp URL: http://pesc.eee.u-ryukyu.ac.jp/
Advanced Urban Planning

This class aims to draw a comparison international urban planning policies.

Attendance, group discussion and presentation

Attendance, group discussion and presentation

In this class, there will be some group assignment. So it requires a certain ability of communication.

2011/4/11 1st Introduction
2011/4/18 2nd Drawing a comparison between Okinawa and Hawaii
2011/4/25 3rd The tourism policies of Hawaii
2011/5/2 4th The history of the development Waikiki
2011/5/9 5th The tourism policies of Okinawa
2011/5/16 6th The history of the development Okinawa
2011/5/23 7th-8th Field survey at Kinjocho and Ryutan street
2011/5/30 9th-10th Field survey at Ameku
2011/6/13 11th ‘Sense of place’
2011/6/27 12th Group presentation
2011/7/4 13th Group presentation
2011/7/11 14th Group presentation
2011/7/18 holiday
2011/7/25 15th General overview

None

None

None
Advanced Thermal Environmental Engineering

授業内容と方法
The topics of this subject are thermal environments in various sizes, for example, thermal sensation of human body, architectural thermal control, urban climate and the global warming, and the relations between these thermal environments and energy consumption. Classes of this subject are ordinary lecture style. Main language is English.

達成目標
To understand the mechanisms of thermal environments in various sizes is the main target of this subject. This subject is also aiming at understanding the relations between these thermal environments each other and between these thermal environments and energy consumption. Especially, the difference and the relation between heat island phenomena and the global warming are important point. Moreover, to connect these thermal environments with majoring fields of the students is a further objective.

評価基準と評価方法
Graduate students in this classes are asked to make oral presentations about topics in this subject. Oral presentations in English are preferable, but in Japanese are acceptable. Students can design the presentation anyway, just speaking, using slides and so on. The presentation is regarded as a test of accomplishment level. Therefore, the results are decided on the basis of the oral presentations.

履修条件
Every graduate student who wants to study about thermal environment.

授業計画
1. Introductions of this subject and lecturer
2. General concepts of various thermal environments around our living spaces
3. Various environmental problems around us, from human body to the Earth
4. Relation between our ordinary lives and the global environment
5. Theoretical background of thermal sensation on a human body
6. Relation between climate and shape of houses and other buildings
7. Energy consumption in living environment
8. Introduction of environmental conscious houses and buildings
9. General topics of urban climate, especially heat island phenomena
10. Mechanism of the global warming and energy consumption
11. Relation between urban heat island and the global warming
12. Presentations by students on thermal environmental topics 1
13. Presentations by students on thermal environmental topics 2
14. Presentations by students on thermal environmental topics 3
15. Presentations by students on thermal environmental topics 4

事前・事後学習
Special preparations for the classes are not required. Students are required to obtain recent topics and information of new technology about city planning, architecture and energy. Reviews after the classes are important for deeper understanding. Recommended way of reviewing is to collect and examine data and/or

2011/12/16
articles related with the classes on the official web sites, newspaper, other mass media and so on.

■教科書  ISBN

(Textbook is not used in this subject. Documents required in the classes will be provided.)

■参考書  ISBN

(None)

■備考(メッセージ)

This subject is a common subject with the special course, which is why this is entirely English class. Enjoy English lectures and conversations.

■オフィスアワー

Lunch time breaks on Tuesday, Thursday and Friday

■メールアドレス

jzutsumi@tec.u-ryukyu.ac.jp

■URL
Advanced Theory of Architectural Design

It is intended in this class to promote a deep understanding of architectural planning and design corresponding to its environmental circumstance including climatic and cultural conditions. The class is run by a seminar style and requires each student’s report and presentation.

Understanding of design concepts and their expression in architectural works

Evaluation of the understanding by student’s report and presentation

1. Registration and the outline of the class
2. Architecture and climate
3. Modern architecture in the tropics
4. Development of design vocabularies
5. Case study 1
6. Case study 2
7. Case study 3
8. Presentations by themes
9. Summary

ISBN

ISBN

oguranob@tec.u-ryukyu.ac.jp

2011/12/16
Advanced Fluid Dynamics of Ocean

Class teaching and discussion

to estimate waves and current deformation on the reef flat
to understand the fundamental fluid dynamics on currents and waves in coral sea

oral test report and discussion

Non particular

basic equations of continuum mechanics
relativity
waves, near shore currents and tides
internal tides

ISBN

ISBN

Tue, period 3, 2-4pm

enakaza at tec.u-ryukyu.ac.jp

2011/12/16
Advanced Regional Planning

授業内容と方法
Report and discussion on books which are listed below.

達成目標
To understand history of Okinawa and tourism development in small islands.

評価基準と評価方法
Reports and presentations.

履修条件

授業計画
1) guidance
2)−4) presentation and discussion on native countries of students
5)−9) Okinawan history
10)−15) tourism development in small islands

事前・事後学習

教科書

参考書

ISBN

備考(メッセージ)

オフィスアワー
every Thu.  10 am.  Engineer building room2-505

メールアドレス

URL

2011/12/16
Advanced Community Space Planning

Basic subject:
1. Theory of urban planning and regional planning with a point of view of community development
2. Theory investigation through case study
Development process and characteristic of community space in Okinawa as a case study of relationship between local culture and regional living space

Understanding characteristics of various community area with a point of view of development process.
Understanding basic theory to develop or improve community environment

Reports after each field trip should be submitted.
Proper understanding about characteristics of community space and improvement theory is required

1. introduction
2. field trip 1, Way of life in community
3. continued explanation about field trip
4. field trip 2, Water environment around the University
5. continued explanation about field trip
6. field trip 3, traditional community
7. continued explanation about field trip
8. outline of environment and community history in Okinawa
9. field trip 4, densely inhabited area developed without planning
10. continued explanation about field trip
11 characteristics of traditional community area
12. characteristics of developed without planning
13. outline of Japanese city planning for area development
14. field trip 5, newly developed area and public housing
15. area improvement programs in Japan

2011/12/16
<table>
<thead>
<tr>
<th>オフィスアワー</th>
<th>Wednesday 10-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>メールアドレス</td>
<td><a href="mailto:shimizu@eve.u-ryukyu.ac.jp">shimizu@eve.u-ryukyu.ac.jp</a></td>
</tr>
<tr>
<td>URL</td>
<td></td>
</tr>
</tbody>
</table>
Advanced Structural Mechanics

I give a lecture per week about the finite element analysis of structural mechanics.

Every graduate student can understand the finite element analysis of structural mechanics.

I carry out the examination test at the last week of the lecture term and evaluate the score of students.

The student must attend to the lecture over 2/3 of all lectures.

No.1 Introduction
No.2 The stiffness Method (plane truss) - 1
No.3 The stiffness Method (plane truss) - 2
No.4 Theory of Elasticity - 1
No.5 Theory of Elasticity - 2
No.6 The stiffness Method (beam element) - 1
No.7 The stiffness Method (beam element) - 2
No.8 Computer Methods and Computer Programs - 1
No.9 Computer Methods and Computer Programs - 2
No.10 Computer Methods and Computer Programs - 3
No.11 Theory of Finite Difference methods - 1
No.12 Theory of Finite Difference methods - 2
No.13 Finite Difference methods (computer Programs) - 1
No.14 Finite Difference methods (computer Programs) - 2
No.15 Examination test

ISBN

ISBN

After 12:20 in every Tuesday.

2011/12/16
iraha@tec.u-ryukyu.ac.jp

URL
Master’s Thesis in Civil Engineering and Architecture

<table>
<thead>
<tr>
<th>科目番号</th>
<th>理工学研究科 (前期) 環境建設工学専攻 特別 (環境)</th>
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<tbody>
<tr>
<td>開設学部等</td>
<td></td>
</tr>
<tr>
<td>その他</td>
<td></td>
</tr>
<tr>
<td>担当教員</td>
<td>小倉 慶之</td>
</tr>
<tr>
<td>履修年度</td>
<td>2011年後期</td>
</tr>
<tr>
<td>期間</td>
<td>後期 (時間割未定)</td>
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<tr>
<td>講義コード</td>
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</tbody>
</table>

■授業内容と方法

Topics and the methodologies for the Master thesis are carefully discussed and selected with each laboratory's supervisor and the research work is conducted in order to results in papers and so on.

■達成目標

■評価基準と評価方法

■履修条件

■授業計画

■事前・事後学習

■教科書

ISBN

■参考書

ISBN

■備考（メッセージ）

■オフィスアワー

■メールアドレス

■URL
**Special Seminars in Civil Engineering and Architecture III**

<table>
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<th>科目番号</th>
<th>理工学研究科（前期） 環境建設工学専攻 特別（環境）</th>
<th>履修年度</th>
<th>2011年後期</th>
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<tbody>
<tr>
<td>開設学部等</td>
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<td>期間</td>
<td>後期（時間割未定）</td>
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<tr>
<td>曜日時間</td>
<td>その他</td>
<td>営業</td>
<td>1.5</td>
</tr>
<tr>
<td>担当教員</td>
<td>小倉 希之</td>
<td>講義コード</td>
<td>R0086500</td>
</tr>
</tbody>
</table>

■授業内容と方法

In order to search the specific topics of the related field, the seminar is conducted by each laboratory’s supervisor by reading a variety of material.

■達成目標

■評価基準と評価方法

■履修条件

■授業計画

■事前・事後学習

■教科書

ISBN

■参考書

ISBN

■備考（メッセージ）

■オフィスアワー

■メールアドレス

■URL

2011/12/16