

**APPLICATION PROCEDURE  
FOR FOREIGN STUDENT ADMISSION TO  
THE GRADUATE SCHOOL OF SCIENCES  
AND TECHNOLOGY FOR INNOVATION**

**MASTER'S PROGRAM  
OCTOBER 2016**

**2016年10月入学**

**山口大学大学院創成科学研究科  
博士前期課程  
学生募集要項  
(外国人留学生特別選抜)**

**THE GRADUATE SCHOOL OF SCIENCES  
AND TECHNOLOGY FOR INNOVATION  
YAMAGUCHI UNIVERSITY**

**山口大学大学院創成科学研究科**

## I. Division and Enrollment Limits

Department	Division	Accepted Enrollments
Science	Fundamental Sciences	Several students in each division
	Earth Science, Biology, and Chemistry	
Engineering	Mechanical Engineering	
	Construction and Environmental Engineering	
	Applied Chemistry	
	Electrical, Electronic, and Information Engineering	
Agriculture	Agricultural Sciences	

## II. Qualifications for Applicants

Applicants must have non-Japanese nationality and meet either of the following requirements.

(Applicants for the Division of Agricultural Sciences must meet also the application requirements of the "3".)

1. Have completed 16 years' of schooling in countries other than Japan, or be expecting to complete this schooling by September 2016.

(Applicable only for the applicants for the Division of Agricultural Sciences: Person who graduated from a Japanese university or is expecting to graduate by September 2016.)

2. Be judged by Yamaguchi University to have academic standards equivalent to those who have completed 16 years' of schooling in countries other than Japan.
3. Applicants must have taken English language proficiency tests (TOEIC, TOEFL, or IELTS) within two years prior to their applications. The minimum score required for admission is 55% of the total. As for TOEIC, the score of "TOEIC public test" is only valid; the results of a "TOEIC Institutional Program (IP) test" are not acceptable.

Note: Applicants seeking to apply for admission according to 2 must have obtained confirmation of the relevant qualification before applying. Please contact the appropriate Admission Office (III.4.).

Note: TOEIC public test is a test fully constituted by renewed questions and conducted only in Japan and South Korea. Please keep note that "TOEIC tests" conducted in the other countries are not considered as "TOEIC public test."

## III. Application Procedure

**\* Applications made without first consulting with the prospective academic adviser will be denied.**

1. Application Period

Application documents must be submitted to the appropriate Admission Office during the following periods.

Department	Application Period
Science	July 4(Mon.) through July 8(Fri), 2016
Engineering	July 4(Mon.) through July 6(Wed.), 2016
Agriculture	July 4(Mon.) through July 8(Fri.), 2016

Admission offices are open Monday to Friday, 8:30 – 17:15

2. Application Documents

Submit the following documents completed in either Japanese or English.

Application for Admission	Fill out the prescribed form.
Identification Card for Examinations (Photograph Card)	Fill out the prescribed form and paste a photograph taken within the last 3 months (head and shoulders, hatless, facing forward, 4cm × 3cm) on the Photograph Card.
Graduation Certificate	Certificate of graduation or expected graduation from the university
Academic Transcript	Official transcript from the university
Recommendation Letter	It is advised that a recommendation letter written by the last academic adviser be submitted.
Personal History	Fill in the prescribed form.
Research Plan	Write details of the subject, aim, method, and schedule for the intended research plan on the prescribed form. See Note 1.
Proof of English proficiency (Applicable only for applicants for the Division of Agricultural Sciences)	A copy of TOEIC, TOEFL, or IELTS score certificate, which is valid for the application date (issued within two years prior to the application)
Application Fee	30,000 yen Fill in the postal transfer form and send the fee to the specified account. Paste the receipt on the reverse side of the application form. See Note 2.
Others	1. For the Science department, attach any documents that prove the applicant's proficiency in Japanese. For the Engineering department, attach any documents that prove the applicant's proficiency in Japanese or English. 2. Certificate of visa status (e. g. photocopy of passport)

Note 1: The research plan should be about 800 characters in length in Japanese (or 200 words in English). Use the prescribed form. It is recommended that this document be typed using a computer.

Note 2: Japanese Government (*Monbukagakusho*) Scholarship Students are exempted from the application fee.

The personal information collected through the application procedure is not used for any other purpose and will not be provided to any third parties without the applicant's consent.

### 3. Application

All application documents must reach the Admission Office during the application period. If mailed, they should be sent by registered express mail with "Application for Foreign Student Admission to the Master's Program" written in red on the envelope.

### 4. Admission Offices

Open Monday to Friday, 8:30 – 17:15

Science Department Admission Office	Faculty of Science, Yamaguchi University 1677-1 Yoshida, Yamaguchi 753-8512 Japan TEL: (083)933-5215 FAX: (083)933-5768 Email: hc135@yamaguchi-u.ac.jp
Engineering Department Admission Office	Faculty of Engineering, Yamaguchi University 2-16-1 Tokiwadai, Ube 755-8611 Japan TEL: (0836)85-9009 FAX: (0836)85-9019 Email: en304@yamaguchi-u.ac.jp

Agriculture Department Admission Office	Faculty of Agriculture, Yamaguchi University 1677-1 Yoshida, Yamaguchi 753-8515, Japan TEL:(083)933-5811 FAX:(083)933-5812 E-mail: ag295@yamaguchi-u.ac.jp
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#### 5. Other Notices

- (1) Before applying, contact your prospective academic adviser about the intended research and study program.
- (2) Changes to application form content cannot be made after submitting the application.
- (3) For further inquiries concerning admission, please contact the “Admission Offices” as noted in 4.

### IV. Screening

#### 1. Examination and Interview

Department	Division	Examination Subjects	Interview
Science	Fundamental Sciences (Mathematical Sciences)		Interview (See Note 1.)
	Fundamental Sciences (Physics)	Major Subjects	
	Fundamental Sciences (Informatics)	Major Subjects	
	Earth Science, Biology, and Chemistry (Biology)	Major Subjects	
	Earth Science, Biology, and Chemistry (Chemistry)	Japanese and English Major Subjects	
	Earth Science, Biology, and Chemistry (Earth Sciences)		
Engineering	Mechanical Engineering	Mathematics (See Note 2.) Major Subjects	
	Construction and Environmental Engineering		
	Applied Chemistry		
	Electrical, Electronic, and Information Engineering		
Agriculture	Agricultural Sciences	Major Subjects	

Note 1: Interviews concerning 1) the intended research subject and 2) the objective and motivation for graduate study are held with each applicant by the relevant division.

Applicant's language skills (Japanese or English) are evaluated in the interview.

Note 2: In the Division of Construction and Environmental Engineering (Architecture Course), the examinees who select Architectural Planning as a major do not need to take Mathematics.

#### 2. Examination Code

Department	Division	Course	Examination Code
Science	Fundamental Sciences	Mathematical Sciences	41
		Physics	42
		Informatics	43
	Earth Science, Biology, and Chemistry	Biology	44
		Chemistry	45
		Earth Sciences	46
Engineering	Mechanical Engineering	Biomedical Engineering	55
		Aerospace and Thermal Engineering	55
		Mechanosystems Design Engineering	55



Engineering	Construction and Environmental Engineering	Civil and Environmental Engineering	56
		Civil and Environmental Engineering International	56
		Environmental System Engineering	52
		Architecture	57
	Applied Chemistry	Materials Chemistry	51
		Bioengineering and Chemistry Engineering	51
		Environmental Chemistry and Chemical Engineering	52
	Electrical, Electronic, and Information Engineering	Electronic Devices Engineering	53
		Electronic Systems Engineering	53
		Intelligent Systems and Media Engineering	54
		Information Systems Engineering	54
	Agriculture	Agricultural Sciences	Agriculture
Applied Bioscience			61

Note 1: Choose one examination code and write the code on the Application Form.

Note 2: Examinations must be supervised by your academic adviser.

### 3.Examinations in Major Subjects

Department	Code	Major Subject Examinations	Memo
Science	41		
	42	Select four questions from the categories listed below: Mechanics, Electromagnetism, Quantum Mechanics, Thermodynamics and Statistical Physics, Physical Mathematics, General Physics	
	43	Questions are based on the subject areas of Basic Mathematics, Applied Mathematics, and Basic Information Science; two questions in the area of Basic Mathematics are obligatory. Three other questions are based on the subject areas of Applied Mathematics, and Basic Information Science, from which two questions must be answered.	
	44	Select four questions from Biology	
	45	Analytical Chemistry and Inorganic Chemistry, Organic Chemistry, Quantum Chemistry and Physical Chemistry	Bring a function calculator.
	46		
Engineering	55	Machine Dynamics and Classical Control Theory, Hydraulics, Thermodynamics, and Strength of Materials	Select one subject from the four. Bring a function calculator.
	56	Structural Mechanics, Soil Mechanics and Hydraulics	Select one subject from the three. Bring a function calculator.
	51	Physical Chemistry, Inorganic Chemistry, Organic Chemistry, and Biochemical Engineering (includes Chemical Engineering)	Select two subjects from the four. Bring a function calculator.
	53	Electromagnetics and Electrical Circuit	Requiring two subjects
	54	Data structures and algorithms, Programming (C language), Computer architecture (includes Boolean Algebra, Logic Design, Logic Circuit, and Computer System)	Requiring three subjects
	57	Building Structures, Building Environments, Architectural Planning	Select one subject from the three. Bring a function calculator.
	52	Physical Chemistry, Organic Chemistry, Chemical Engineering (Transport Phenomena and Unit Operation) and Purification Technology for Environment	Select one subject from the four. Bring a function calculator.
Agriculture	61	*Major subjects must be different in each supervisor. The range of an examination is therefore based on the major subject of prospective supervisor. Refer to prospective supervisor's teaching and research area on page	

#### 4. Examination Dates

Department	Examination Dates
Science	August 7 (Sun.), 2016
Engineering	August 10 (Wed.), 2016
Agriculture	August 8 (Mon), 2016

[Science]

Examination Subjects	Time
Major Subjects	9:00 – 12:00
Japanese and English	13:30 – 15:00
Interview	16:00 –

[Engineering]

Examination Subjects	Time
Mathematics	10:30 – 12:00
Major Subjects	13:00 –
Interview	16:40 –

[Agriculture]

Examination Subjects	Time
Major Subjects	11:00 – 12:30

#### 5. Examination Sites

See the map on the back cover.

- (1) Science Department: Faculty of Science, Yamaguchi University; 1677-1 Yoshida, Yamaguchi
- (2) Engineering Department: Faculty of Engineering, Yamaguchi University; 2-16-1 Tokiwadai, Ube
- (3) Agriculture Department: Faculty of Agriculture, Yamaguchi University 1677-1 Yoshida, Yamaguchi

### V. Announcement of Results

Department	Announcement of Results
Science	August 26(Fri.), 2016 12:00
Engineering	
Agriculture	

The examination results will be announced on the bulletin board of the Graduate School of Science and Engineering Yamaguchi University and also is mailed to successful applicants.

### VI. Admission Procedure

1. Period:

The Admission forms must be submitted between September 5 and September 7, 2016.

2. Admission Fee: 282,000 yen

Note1: The Admission fee, once paid, will not be refunded even if the applicant is denied admission for any reason.

Note2: In the event that Yamaguchi University decides to revise the admission fee for 2016 entrants after the publication of this document, the revised amount will be applied.

## **VII. Others**

### 1. Date of Admission

October 1, 2016

### 2. Master's Program: 2 years

### 3. Tuition Fee

First Semester (April – September): 267,900 yen by the end of May

Second Semester (October – March): 267,900 yen by the end of November

Note 1: In the event that Yamaguchi University decides to revise the tuition fee for 2016 entrants after the publication of this document, the revised amounts will be applied.

Note 2: If tuition fees are revised while a student is in a program, the new tuition amount must be paid.

## I. 専攻及び募集人員

区分	専攻	募集人員
理学系	基盤科学系専攻	若干名
	地球圏生命物質科学系専攻	
工学系	機械工学系専攻	
	建設環境系専攻	
	化学系専攻	
	電気電子情報系専攻	
農学系	農学系専攻	

## II. 出願資格

日本国籍を有しないで、次の要件のいずれかを満たす者。

(ただし、農学系専攻志願者の方は「3」の出願要件も満たさなければいけません。)

1. 外国において学校教育における16年の課程を修了した者、又は2016年3月までに修了見込みの者  
(農学系専攻志願者のみ該当：日本の大学を卒業した者及び2016年9月卒業見込みの者。)
2. 本学において、外国の学校教育における16年以上の課程を修了した者と同等以上の学力があると認められた者
3. 出願時において過去2年以内に、英語能力テスト（TOEIC（公開テスト（注）のみ有効、IPテストは不可）、TOEFL又はIELTS）を受験し、その得点が総得点の55%以上であること。

(注) 出願資格2. により出願を希望する者は、あらかじめ出願資格の認定を受けて出願してください。  
出願資格に関する詳細は「III. 4. 提出先」に問い合わせてください。

(注) 公開テストとは、新規問題のみで構成されるテストであり、日本と韓国でしか実施されておりません。  
他の国で受験された「TOEIC」は、ここでいう公開テストに該当しませんのでご注意ください。

## III. 出願手続

**※出願期間開始日までに研究指導を希望する教員に事前相談を行っていない場合、出願を認めないことがあります。**

### 1. 出願期間

区分	出願期間
理学系	2016年7月4日（月）～2016年7月8日（金）必着
工学系	2016年7月4日（月）～2016年7月6日（水）必着
農学系	2016年7月4日（月）～2016年7月8日（金）必着

(注) 持参する場合は、平日8時30分から17時15分まで受け付けます。

## 2. 出願書類

下記の出願書類を、日本語または英語で作成してください。

入 学 志 願 票	本研究科所定の用紙（本募集要項とじ込み）に、必要事項を記入してください。
写 真 票 受 験 票	本研究科所定の用紙（本募集要項とじ込み）に、必要事項を記入してください。写真票の 所定欄に、出願前3ヶ月以内に撮影した上半身・無帽・正面向きの写真（4cm×3cm） をはってください。
卒 業（ 見 込 ） 証 明 書	出身大学の卒業（見込）証明書
成 績 証 明 書	出身大学が作成したもの
推 薦 書	出身大学の指導教員の推薦書があることが望ましい。
履 歴 書	本研究科所定の用紙（本募集要項とじ込み）に、必要事項を記入してください。
研 究 計 画 書	本研究科所定の用紙（本募集要項とじ込み）に、研究を希望するテーマ、その目的及び 研究方法などを記入してください。（注1）
英語能力を証明するもの （農学系専攻志願者のみ該当）	出願時において有効な（取得後2年以内）TOEIC（公開テストのみ）、TOEFL 又はIELTSのスコア認定証の写
検 定 料	30,000円 本研究科所定の払込み用紙に必要事項を記入のうえ、最寄りのゆうちょ銀行(郵便局)で 本学指定の口座に払い込んだ後、ゆうちょ銀行(郵便局)から受け取った振替払込受付証 明書(お客さま用)を所定欄にはり付けてください。（注2）
そ の 他	1. 理学系の志願者は、日本語能力を証明するものを添付してください。 工学系の志願者は、日本語または英語の能力を証明するものを添付してください。 2. 旅券の写し等、在留資格を証明する書類を添付してください。

（注1）研究計画書は、本研究科所定の用紙に日本語では800字程度、英語では200語程度で記入し  
てください。なお、できるだけパソコン等を使用し作成してください。

（注2）国費外国人留学生（日本政府から奨学金を支給されている者）は、検定料を免除します。

出願書類等については、本研究科入学者選抜において必要なためご提出いただくものであり、これによって得  
た個人情報を、独立行政法人等の保有する個人情報の保護に関する法律第9条に規定されている場合を除き、  
出願者本人の同意を得ることなく他の目的で使用又は第三者に提供することはありません。

## 3. 出願方法

入学志願者は、出願期間中に書類を下記「4. 提出先」に提出してください。郵送の場合は、必ず「速  
達書留」とし、封筒の表に「博士前期課程出願書類(外国人留学生) 在中」と朱書してください。

## 4. 提出先

平日8:30～17:15

理学系	山口大学理学部学務係	〒753-8512 山口市吉田1677-1 電話(083)933-5215 FAX(083)933-5768 E-mail : hc135@yamaguchi-u.ac.jp
工学系	山口大学工学部学務課入試係	〒755-8611 宇部市常盤台2丁目16-1 電話(0836)85-9009 FAX(0836)85-9019 E-mail : en304@yamaguchi-u.ac.jp
農学系	山口大学農学部学務係	〒753-8515 山口市吉田1677-1 電話(083)933-5811 FAX(083)933-5812 E-mail: ag295@yamaguchi-u.ac.jp

5. 注意事項

- (1) 出願前に研究指導を希望する教員と研究内容、履修方法等について相談してください。
- (2) 出願手続き後の出願書類について、内容の変更は認めません。
- (3) 入学試験に関する照会は、上記「4. 提出先」にお問い合わせください。

## IV. 選 抜 方 法

1. 学力検査等

区 分	専 攻	学 力 検 査	面 接
理学系	基盤科学系専攻（数理科学コース）	課さない。	面接 (注1)
	基盤科学系専攻（物理学コース）	専門科目	
	基盤科学系専攻（情報科学コース）	専門科目	
	地球圏生命物質科学系専攻（生物学コース）	専門科目	
	地球圏生命物質科学系専攻（化学コース）	語学（日本語，英語），専門科目	
	地球圏生命物質科学系専攻（地球科学コース）	課さない。	
工学系	機械工学系専攻	数学(注2)，専門科目	
	建設環境系専攻		
	化学系専攻		
	電気電子情報系専攻		
農学系	農学系専攻	専門科目	

(注1) 面接は、各専攻において、学習意欲、希望する研究課題等について行います。

なお、面接では語学力（日本語または英語）についても評価します。

(注2) 建設環境系専攻（建築学コース）においては、専門科目において建築計画系を選択した受験者は、数学を課しません。

2. 学力検査（専門科目）の受験区分コード

区 分	専 攻	コ ー ス	受 験 区 分 コ ー ド
理学系	基盤科学系専攻	数理科学コース	41
		物理学コース	42
		情報科学コース	43
	地球圏生命物質科学系専攻	生物学コース	44
		化学コース	45
		地球科学コース	46
工学系	機械工学系専攻	応用医工学コース	55
		航空宇宙エネルギーコース	55
		メカノシステムデザインコース	55
	建設環境系専攻	社会建設工学コース	56
		国際建設技術コース	56
		環境システム工学コース	52
		建築学コース	57
	化学系専攻	物質化学コース	51
		生命化学コース	51
		環境化学・化学工学コース	52

工学系	電気電子情報系専攻	電子デバイス工学コース	53
		電子システム工学コース	53
		知能情報工学コース	54
		情報システム工学コース	54
農学系	農学系専攻	農学コース	61
		生命科学コース	61

(注1) 受験する専攻・コースの受験区分コードから1つの受験区分を選択し受験することとなります。

(注2) 学力検査(専門科目)は、志望する教育研究分野の教員と事前に相談し、志願票に受験区分コードを記入してください。

### 3. 学力検査(専門科目)の内容

区分	受験区分コード	専門科目	備考
理学系	41		
	42	力学, 電磁気学, 量子力学, 統計熱力学, 物理数学, 物理一般から4問を選択して解答する。	
	43	基礎数学, 応用数学, 情報基礎の各分野から出題する。基礎数学分野から出題する2問は必修, 応用数学分野と情報基礎分野からは3問出題し, その中から2問を選択して解答する。	
	44	生物学の分野から4問を選択して解答する。	
	45	分析・無機化学, 有機化学, 物理・量子	関数電卓特参
	46		
工学系	55	機械力学及び制御工学(古典), 水力学, 熱力学, 材料力学	4分野の中から試験時 1分野選択 関数電卓特参
	56	構造力学, 土質力学, 水理学	3分野の中から試験時 1分野選択 関数電卓特参
	51	物理化学, 無機化学, 有機化学, 生物工学(化学工学含む。)	4分野の中から試験時 2分野選択 関数電卓特参
	53	電磁気学, 電気回路	2分野必修
	54	データ構造とアルゴリズム, プログラミング(C言語), 計算機アーキテクチャ(ブール代数, 論理設計, 論理回路, 電子計算機を含む。)	3分野必修
	57	建築構造系, 建築環境系, 建築計画系	3分野の中から1分野 選択 関数電卓特参
	52	物理化学, 有機化学, 化学工学(移動現象・単位操作), 環境浄化技術	4分野の中から試験時 1分野選択 関数電卓特参
農	61	※農学系専攻では、希望する指導教員によって専門科目の内容が異なります。その範囲は希望する指導教員の研究分野から出題します。詳しくは「14ページの教育研究分野」を参考にしてください。	

### 4. 試験日時

区分	期 日
理学系	2016年 8月 7日(日)
工学系	2016年 8月 10日(水)
農学系	2016年 8月 8日(月)

[理学系]

試験科目	時 間
専門科目	9:00～12:00
語 学	13:30～15:00
面 接	16:00～

[工学系]

試験科目	時 間
数 学	10:30～12:00
専門科目	13:00～
面 接	16:40～

[農学系]

試験科目	時 間
専門科目	11:00～12:30

5. 試験場

試験場及び試験場への道順は、裏表紙の案内図を参照してください。

- (1) 理学系 山口大学理学部 山口市吉田1677-1
- (2) 工学系 山口大学工学部 宇部市常盤台2丁目16-1
- (3) 農学系 山口大学農学部 山口市吉田1677-1

V. 合格者発表

区分	合格発表日
理学系	2016年8月26日(金)正午予定
工学系	
農学系	

合格者受験番号を本研究科(理学部及び工学部並びに農学部)に掲示するとともに、本人に郵便で通知します。

VI. 入学手続

1. 入学手続期間

2016年9月5日(月)～9月7日(水)

2. 入学料: 282,000円

- (注1) 入学手続を行った者が入学を辞退したときは、納付済の入学料はいかなる理由があっても返還しません。
- (注2) 本募集要項公表後、2016年度入学者に係る入学料の改定を本学が決定した場合は、改定後の額となります。また、既に納入されていた場合は、改定額との差額を納入していただくことになります。



## VII. その他

1. 入学年月日

2016年10月1日

2. 博士前期課程修学年数 2年

3. 授業料

前期分（4～9月） 267,900円（納付期限：5月末）

後期分（10～3月） 267,900円（納付期限：11月末）

（注1）本募集要項公表後、2016年度入学者に係る授業料の改定を本学が決定した場合は、改定後の額を納入していただきます。また、既に納入されていた場合は、改定額との差額を納入していただきます。

（在2）在学中に授業料が改定された場合、改定後の額を納入していただくことになります。

(博士前期課程)

基盤科学系専攻 [Division of Fundamental Sciences]

Course	Research Field	Academic Staff	
Mathematical Sciences	Complex Analysis, Analytic Number Theory, Fourier Analysis, and Partial Differential Equations.	Professor	Makoto Masumoto
		Professor	Isao Kiuchi
		Professor	Fumihiko Hirokawa
		Associate Professor	Yasushi Hataya
	Commutative Ring Theory, Noncommutative Ring Theory, Module Theory, and Number Theory.	Professor	Isao Kikumasa
		Associate Professor	Yosuke Kuratomi
		Associate Professor	Kazuho Ozeki
		Associate Professor	Makoto Minamide
	Geometry of Manifolds, Geometric Analysis, Variational Problems on Manifolds, Geodesic Theory.	Professor	Nobumitsu Nakauchi
		Associate Professor	Kei Kondo
	Topology, Knot Theory, Structure of Lie Groups.	Professor	Yasuyuki Miyazawa
		Associate Professor	Shizuo Kaji
	Groups, Algebras and Representations.	Professor	Toshiharu Ikeda
	Complex Analysis, Conformal Mappings, Bloch and Landau Constants.	Professor	Hiroshi Yanagihara
Mathematical Analysis of Partial Differential Equations.	Associate Professor	Mari Okada	
Mathematical Approaches to Hydrodynamics and Electrodynamics.	Associate Professor	Takahiro Nishiyama	
Fundamentals and Applications of Analytic Functions of One Complex Variable.	Associate Professor	Ikkei Hotta	
Physics	Particle Cosmology and Field Theoretical Analyses of Interacting Many-Particle Systems.	Professor	Kiyoshi Shiraishi
	Theoretical study of black holes and structural evolution of the Universe.	Professor	Nobuyuki Sakai
	Structure and phase transition in long-chained molecules and polymers.	Professor	Koji Nozaki
	Study on magnetism, transport properties and phase transition in strongly correlated electrons system.	Associate Professor	Tetsuya Fujiwara
	The electronic structure of organic molecules in solution and soft materials.	Assistant Professor	Yuka Horikawa
	Structural Study on Physical Properties and Phase Transitions in Dielectrics, Ferroelectrics and Ferroelastics.	Professor	Takanao Asahi
		Associate Professor	Hironobu Kasano
Observational study of astrophysics based on analytical approach of electromagnetic signal.	Professor	Kenta Fujisawa (The Research Institute for Time Studies)	
	Associate Professor	Kotaro Niinuma	
Informatics	Brain Function Based Intelligent Systems and Intelligent Signal/Image Processing.	Professor	Eiji Uchino
	Brain Computing, Biomechanics, Skill Science.	Professor	Jun Nishii
	Application of wireless LAN system and understanding of biological systems with simulations.	Professor	Hiroshi Matsuno
	Intelligent Image Processing and Computational Photography.	Professor	Noriaki Suetake
	Emergent properties of regulatory networks.	Assistant Professor	Adrien Fauré
	Coding theory and its applications; theory of communication systems.	Assistant Professor	Takayuki Nozaki
	Experimental and simulation studies of polymer materials.	Professor	Takashi Yamamoto
	Computer simulation of soft matter.	Associate Professor	Naohito Urakami
	Theoretical study of mathematical models for information processing.	Associate Professor	Masaki Kawamura

(博士前期課程)

## 地球圏生命物質科学系専攻 [Division of Earth Science, Biology, and Chemistry]

Course	Research Field	Academic Staff	
Biology	Study on the structure and dynamics of organelles in eucaryotic cells.	Professor	Isamu Miyakawa
	Study on circadian rhythms and chronotherapy.	Professor	Makoto Akashi The Reseachi Institute for Time Studies
	Study on behavior and ciliary functions in Ciliates.	Associate Professor	Manabu Hori
	Study on molecular mechanisms for cell motility and cell division.	Professor	Shigehiko Yumura
	Study on cell motility under light microscopy.	Associate Professor	Yoshiaki Iwadate
	Study on environmental response and metabolism in microalgae.	Associate Professor	Osami Misumi
	Study on molecular mechanisms in animal fertilization and embryonic development.	Professor	Yasuhiro Iwao
	Study on developmental mechanisms of Drosophila embryo.	Professor	Ryutaro Murakami
	Study on the physiological mechanisms concerning the environmental adaptation and phenotypic plasticity in insects.	Professor	Akira Yamanaka
	Study on cell cycle and organelle construction during early embryogenesis of <i>Xenopus</i> .	Associate Professor	Shuichi Ueno
	Plant environmental sensing and signal transduction	Associate Professor	Atsushi Takemiya
Chemistry	Education and study on development and application of organic photochemical or electron-transfer reactions toward functional materials.	Professor	Katsuya Ishiguro
	Education and study of the novel organic compounds for synthesis and properties.	Associate Professor	Hiroyuki Fujii
	Solid state chemistry of molecular crystals and assemblies.	Associate Professor	Ryo Tsunashima
	Photo-functional organic materials.	Professor	Jun Kawamata
	Electronic Structure and Optical Property of Molecules.	Associate Professor	Seiji Tani
	Low dimensional compound based functional material.	Associate Professor	Yasutaka Suzuki
	Education and study about physical property and electrochemical reactivity at a solid surface.	Professor	Kensuke Honda
	Development of Functional Carbon-based Materials and its Application.	Assistant Professor	Hiroshi Naragino
	Physical properties and reactivity of photo-functional inorganic materials.	Professor	Suzuko Yamazaki
	Studies on Optical and Spectroscopic Properties of Organic/Inorganic Hybrid Nanomaterials.	Associate Professor	Kenta Adachi
	Study of the adsorption on inorganic-organic materials of metal ions or inorganic substances.	Associate Professor	Yoshiko Murakami
	The study of molecular recognitionable functional polymers.	Associate Professor	Isamu Fujiwara
	Construction of novel organic molecules comprised of typical element and nonalternant conjugation.	Professor	Toshihiro Murafuji
	Development of new molecular transformations to streamline organic synthesis.	Associate Professor	Shin Kamijyo
Earth Sciences	Petrology, petrochemistry (including isotope geochemistry), and geochronology of igneous rocks of eastern Asia.	Professor	Teruyoshi Imaoka
	Systematic understanding of behavior of transition elements and hydrogen-bonding system in minerals, and its effect on crystal structures and physical properties.	Associate Professor	Mariko Nagashima
	Study on formation mechanism of various hydrothermal deposits related to Cenozoic volcanic activity.	Associate Professor	Osao Sawai
	Study on growth and decomposition of mineral materials depending on physical and chemical conditions.	Associate Professor	Toshiya Abe
	Magma processes in orogenic belts: Implications for crust-mantle interaction.	Professor	Masaaki Owada
	Metamorphic P-T condition and tectonics.	Professor	Toshiaki Shimura
	Accretion and subduction seismogenesis sciences on land and the ocean.	Professor	Arito Sakaguchi

(博士前期課程)

地球圏生命物質科学系専攻[Division of Earth Science, Biology, and Chemistry]

Course	Research Field	Academic Staff	
Earth Sciences	Sedimentation and soft-sediment deformation.	Professor	Yuichiro Miyata
	Geoinformatics and international standard for geoinformation.	Professor	Koji Wakita
	Sedimentation, consolidation, accretion and collapse at seabed.	Associate Professor	Kiichiro Kawamura
	Study on geologic hazard mechanism and ground-groundwater environmental analysis.	Associate Professor	Takehiro Ota
	Study on physical properties and deformation mechanisms of crustal rocks.	Associate Professor	Kiyokazu Oohashi

(博士前期課程)

## 機械工学系専攻 [Division of Mechanical Engineering]

Course	Research Field	Academic Staff	
Biomedical Engineering	Education and research on analysis/estimation model and measurement/control for dynamics systems	Professor	Takashi Saito
	Education and research on nonlinear finite element method, Biomechanical simulation and its applications in medicine	Professor	Xian Chen
	Education and research on human interface of medical and welfare equipment	Professor	Osamu Morikawa
	Education and research on biomechanical simulation and evaluation of mechanical properties of biomaterials	Associate Professor	Junji Ohgi
	Education and research on measurement methods for living tissue using ultrasonic and design of medical devices using numerical simulation	Associate Professor	Koji Mori
Aerospace and Thermal Engineering	Education and research on the characterization and numerical analysis in the more complex heat and mass transfer phenomena at the surface of the inorganic or organic microparticles body in chemical equipment machinery	Professor	Yasuo Katoh
	Education and research on characteristics of multiphase flow, heat and mass transfer and combustion in gas phase and in solid phase, energy system analysis and production process analysis	Professor	Tatsuo Nishimura
	Education and research on combustion, exhaust emission and noise in internal combustion engines, combustion of sprays and droplet cloud, microcombustion, and noise reduction by mufflers	Professor	Masato Mikami
	Education and research on the canonical turbulent flows such as boundary layer, jet and wake often seen in engineering application	Professor	Shinsuke Mochizuki
	Education and research on satellite remote sensing technology, processing algorithm, and application to the Earth's environment monitoring	Associate Professor	Keiji Imaoka (Media and Information Technology Center)
	Education and research on the advanced aerospace engineering of atmospheric entry vehicles, and beaming and electromagnetic propulsion	Associate Professor	Hiroshi Katsurayama
	Education and research on ignition and combustion phenomena in the internal combustion engine and fundamental study of atomization and spray combustion	Associate Professor	Takehiko Seo
	Education and research on thin film coating by thermal chemical vapor deposition, nanoparticle formation due to combustion and gasification and solidification from woody biomass	Associate Professor	Kenichiro Tanoue
Mechanosystems Design Engineering	Education and research on instrumentation and system identification for non-linear control systems	Professor	Kakuji Ogawara
	Education and research on development of smart mechatronic system, sensing technology, microactuator and structure for engineering and medical applications	Professor	Zhongwei Jiang
	Education and research on deformation, strength and reliability analysis of engineering materials	Professor	Koichi Goda
	Education and research on the design and fabrication of micro mechanical devices, which is suitable for living body, and the development of microfabrication technology that is necessary for fabrication of the micro devices, and the their application to characterization and operation of living body/cell and medical care	Professor	Kazuyuki Minami
	Education and research on design theories and methodologies of mechanical systems including strategy planning, identifying needs, generating-evaluating concepts, and computational optimization	Associate Professor	Tsuyoshi Koga
	Study on microbial metabolism and enzyme Study on enzyme complex in biomembrane	Associate Professor	Mamiko Koshiba
	Education and research on the development of mold processing and its fracture mechanism for green composites	Associate Professor	Junji Noda
	Education and research on dynamic interfacing of human-machine systems, system integration with control/computation technology and control system synthesis	Associate Professor	Fumitake Fuji

(博士前期課程)

## 建設環境系専攻[Division of Construction and Environmental Engineering]

Course	Research Field	Academic Staff	
Civil and Environmental Engineering	Study on corrosion analysis and maintenance technique of steel bridges	Professor	Toshihiko Aso
	Rock mechanics modelling and rock engineering design; field monitoring and numerical analysis	Professor	Norikazu Shimizu
	Study on mechanical characteristics of geomaterial and numerical analysis for geotechnical engineering	Professor	Yukio Nakata
	Basic Study on Flow and Material Transportation of the Natural World and its Application to Energy Use, Water Environmental Improvement, and Flood Problems	Professor	Kesayoshi Hatano
	Education and research on natural environment and disaster prevention in river basin	Associate Professor	Yoshihisa Akamatsu
	Study on planning and Management Process of urban/regional Infrastructure	Associate Professor	Hiroyuki Sakakibara
	Study on Development of Unconventional Resources as Concrete material and its Acceleration on High-Performance	Associate Professor	Katsuhiko Takami
	Education and research on the technology development for the rich water environment and environmental friendly city	Associate Professor	Koichi Yamamoto
	Education and research on exploitation and effective use of resources in geotechnical engineering	Associate Professor	Norimasa Yoshimoto
	Education and research of the development of seismic design and maintenance of bridge structures	Associate Professor	Gakuho Watanabe
Civil and Environmental Engineering International	Fundamental research on hydraulics and its application for disaster prevention and environmental issues	Professor	Koji Asai
	Education and research on design and construction methodology of underground structure	Professor	Masato Shinji
	Education and research on evaluation of geotechnical characteristics of ground subjected to rainfall and earthquake and their resistant design	Professor	Motoyuki Suzuki
	Education and research on conserving natural environment and building sustainable society	Professor	Masahiko Sekine
	Study and education on factors affecting the geotechnical stability under the construction of infrastructure	Professor	Hiroshi Matsuda
	Study on purifying soil contaminated by natural disaster using microorganism	Associate Professor	Md.Azizul Moqsud
	Regional and transportation planning based on attitude and behavior analysis	Associate Professor	Haruna Suzuki
	Design and construction method of composite structures using cementitious materials	Associate Professor	Isamu Yoshitake
Environmental System	Education and research on optimum management and/or treatment including resources recovery of wastewater and organic solid waste for sustainable society.	Professor	Tsuyoshi Imai
	Environmental Cleanup and Resource Recycling Based on Separation Technology	Professor	Masakazu Niinae
	Education and research on evaluation and control of environmental contamination and waste management	Associate Professor	Takaya Higuchi
	Education and research on environmental remediation and resource recycling technologies	Associate Professor	Tasuma Suzuki
Architecture	City Planning and Urban Design Methods for Compact Cities	Professor	Shinji Ikaruga
	Research on Evaluation Method for Structural Performance and Seismic Performance of Buildings / Development of Rational Structural Systems.	Professor	Eiichi Inai
	The Education and Research on Practical Theory and Techniques of Space Design based on Regional History and Natural Environment	Professor	Fumio Uchida
	Optimization of Indoor and Outdoor Thermal Environment, Development of Advanced HVAC Systems	Professor	Makoto Koganei
	Planning and Design of Social Welfare Facilities	Professor	Mahito Nakazono
	Building Steel Structures Aiming to Reduce Environmental Burdens, Building System for a Composite Steel-Timber Structure	Professor	Masanori Fujita
	Study on Human Casualty Related to Physical Damages due to Earthquakes and Planning for Optimum and Resilient Disaster Mitigation	Associate Professor	Hitomi Murakami
	Investigation on Various Performances, Numerical Method of Mechanical Behaviors, and Environment-Conscious Design Method for Building Materials	Associate Professor	Li Zhuguo
	Research on Evaluation Method for Structural Performance and Seismic Performance of Buildings / Development of Rational Structural Systems.	Associate Professor	Tomofusa Akita
	Study on Urban Design and Architectural Planning	Associate Professor	Koh Syohken

(博士前期課程)

## 化学系専攻 [Division of Applied Chemistry]

Course	Research Field	Academic Staff	
Materials Chemistry	Education and Research on Synthesis and Development of New Organic Materials for Electronic Devices	Professor	Kenjiro Onimura
	Development and evaluation of optical functional organic materials such as fluorescence materials	Professor	Kazuo Kasatani
	Research and education for growth, growth mechanism and application of functional crystals	Professor	Ryuichi Komatsu
	Research and education of catalysis for production of renewable energy, selective conversion and environmental protection	Professor	Yoshihisa Sakata
	Education and Research on Synthesis of Inorganic and Inorganic-Organic Composite Materials for Energy and Environmental Applications	Professor	Masaharu Nakayama
	Studies on Materials Designing, Developments and Analyses for Batteries, Capacitors, and Fuel Cells for Energy Conversion and Power Storage	Professor	Masayuki Morita
	Education and Research on analyses Using Electrochemical Reaction	Professor	Nobuko Yoshimoto
	Education and study related to synthesis and application of organic functional material such as organic gelators and liquid crystal materials	Associate Professor	Hiroaki Okamoto
	Solid state chemistry and physical properties of functional inorganic materials	Associate Professor	Akihiko Nakatsuka
	Thermodynamics and Structure of Electrolyte Solution and Gel Systems	Associate Professor	Kenta Fujii
Bioengineering and Chemistry	Development of advanced ceramics and spectroscopy	Associate Professor	Hiroataka Fujimori
	Education and research for genetic engineering and gene function analysis contributing to foods, energy, and medicine	Professor	Rinji Akada
	Organic synthesis toward development of green methodologies, new materials innovation, and bioactive products synthesis.	Professor	Akio Kamimura
	Preparation and application of new functional polymer materials and application of electrospun nanometer-sized fibers to energy storage devices	Professor	Hiromori Tsutsumi
	Bioseparation and biochemical engineering for bio-, medical and food processing	Professor	Shuichi Yamamoto
	The development of new organic synthesis using a transition metal catalyst	Associate Professor	Takashi Nishigata
	Research on life sciences and development of biotechnology for medical, energy, food and environmental applications	Associate Professor	Hisashi Hoshida
Environmental Chemistry and Chemical	Bioreaction and biochemical engineering for bio-, medical and food processing	Associate Professor	Makoto Yoshimoto
	Education and research for the intensification, optimization, and energy saving of chemical processes with transport phenomenon and process design	Professor	Takashi Saeki
	Understanding of the filtration mechanism about water environmental conservation and life science, and education and research on filtration process design	Professor	Hideo Nakakura
	Development and application of functional polymer materials (separation membranes, gel materials and polymer electrolyte membranes) for energy saving	Professor	Mitsuru Higa
	Education and investigations on synthetic route design and environmental chemistry using theoretical chemistry and chemoinformatics	Professor	Kenji Hori
	Education and research on the removal and reduction techniques of environmental pollutants in the chemical process	Associate Professor	Shigetoshi Kobuchi
	Education and research by computational chemistry on search of reaction mechanisms for catalysis and molecular design of new functional materials	Associate Professor	Michinori Sumimoto
	Studies on Energy-Efficient Chemical Processes and Advanced Materials to Achieve the Processes	Associate Professor	Kazuhiro Tanaka
	Education and study on design of the environmentally friendly chemical process using biocatalysts	Associate Professor	Eiichi Torisaka
	Study and discovery of novel chiral catalysts for asymmetric organic synthesis.	Associate Professor	Hidetoshi Yamamoto
	Development of novel catalysts for the synthesis of functional resin materials.	Associate Professor	Izumi Kumakiri
	Education and research on membrane technology for green energy and chemical production processes	Associate Professor	Izumi Kumakiri
Development of electrochemical processes using polymer materials and electrolytes	Associate Professor	Nobutaka Endo	



(博士前期課程)

## 電気電子情報系専攻 [Division of Electrical, Electronic and Information Engineering]

Course	Research Field	Academic Staff	
Electronic Devices	Production of ionic plasmas and investigation of their characteristics	Professor	Wataru Oohara
	Development of new functional materials for electron, spin and phonon engineering	Professor	Tsuyoshi Koyanagi
	Theoretical and computer simulation study of properties of various materials	Professor	Shuji Shimamura
	Crystal growth and characterization of nitride semiconductor and precision processing technology for nitride semiconductor devices	Professor	Kazuyuki Tadatomo
	Optical properties and functionalities of wide-bandgap semiconductor low-dimensional quantum structures	Professor	Yoichi Yamada
	R&D of electronic materials and devices, based on microstructure design and computational science, for wireless communication, data storage and energy harvesting	Professor	Setsuo Yamamoto
	Design, fabrication and characterization of opto-electronic devices using compound semiconductors	Professor	Toshiya Yokokawa
	R&D of electronic materials and devices, based on microstructure design and computational science, for wireless communication, data storage and energy harvesting	Associate Professor (Faculty of Global and Science Studies)	Koji Akai
	Development of new functional materials for electron, spin and phonon engineering	Associate Professor	Hironori Asada
	Theoretical study of properties of various materials by means of computer simulation and experimental study of optical properties of amorphous semiconductors	Associate Professor	Chisato Ogihara
	Characterization of lattice defects and their effects on functional properties of wide-bandgap materials	Associate Professor	Ayako Kai
	Vacuum science and technology. Development of vacuum apparatus for advanced device fabrication	Associate Professor	Hiroki Kurisu
	Studies on plasma science and technology for material processing	Associate Professor	Satoshi Sakiyama
	Theoretical study of properties of various materials by means of computer simulation and experimental study of optical properties of amorphous semiconductors	Associate Professor	Yasuhiro Senda
Development of metallic or oxide superconducting wires, and design and applications of superconducting coils	Associate Professor	Naoyuki Harada	
Electronic Systems Engineering	New functional wave-type devices in microwave Electromagnetic metamaterials in microwave	Professor	Hiroshi Kubo
	Research include theory and its application of control engineering	Professor	Kanya Tanaka
	Power electronics applications for the active power line conditioners, LED power supplies and ubiquitous power for great disaster	Professor	Toshihiko Tanaka
	Research and Development of Electromagnetic Field Analysis Using Finite Element Method and Computer Aided Analysis System.	Professor	Mitsuo Hano
	Theory and applications of intelligent sensing system	Associate Professor	Seiji Nishifuji
	Research and Development on High-Performance Wireless Power Transfer System and Theoretical Study on Mode in Guided-Wave Structure for Optical-Wave and/or Microwave and its Application for Communication Devices	Associate Professor	Masashi Hotta
	Theory and applications of systems engineering	Associate Professor	Yuji Wakasa
	Research and education on theory and application of control engineering	Associate Professor	Shota Nakashima
	Power electronics applications for the active power line conditioners, LED power supplies and ubiquitous power for great disaster	Associate Professor	Hiroaki Yamada



(博士前期課程)

## 電気電子情報系専攻 [Division of Electrical, Electronic and Information Engineering]

Course	Research Field	Academic Staff	
Intelligent Systems and Media Engineering	Intellectual calculation model building on learning, adaptation and storage of biological information processing and its application	Professor	Masanao Oobayashi
	Education and study for computer-aided diagnosis which support radiologists' diagnosis by extracting useful information from medical images such as CT and MRI.	Professor	Shoji Kido
	Development of rendering methods for generating realistic images by CG and application systems of virtual reality	Professor	Katsumi Tadamura
	Bioinformatics based on Statistical Pattern Recognition	Professor	Yoshihiko Hamamoto
	Investigation of vision mechanisms by techniques in nonlinear science and vision psychology and their applications to imaging technologies	Associate Professor	Atsushi Osa
	Study on design psychology, design education and design method in relation to contents of information media.	Associate Professor	Takeshi Kinoshita
	Statistical Analysis, Evaluation and Prediction of Stochastic Audio Sound Fields	Associate Professor	Tetsuro Saeki
	Mathematical analysis and modeling for the regulation of artificial genetic circuits based on the system of biological gene expression	Associate Professor	Manabu Suzuki Faculty of Global and Science Studies
	Analysis, Understanding, Reproduction and Applications of Auditory Phenomenon.	Associate Professor	Takahiro Tamesue (Media and Information Technology Center)
	Education and research on computer-aided diagnosis system for medical images, analysis of inner structure of human bodies, and image-based computational simulation	Associate Professor	Yasushi Hirano
	Fundamental research and applications of pattern recognition and image processing	Associate Professor	Yusuke Fujita
	Visual computing including image processing and pattern recognition, and its implementation on general processing units for fast parallel computation	Associate Professor	Yoshiki Mizukami
	Study on computer vision generating human vision using computer	Associate Professor	Satoru Morita
Information Systems Engineering	Mathematical Modeling, Simulation Analyses and the Optimal Control of Various Phenomena including Natural, Social and Physical Phenomena	Professor	Masaaki Ishikawa
	Computer Simulation Study of Plasma Science and Nuclear Fusion by Using Modern Parallel Architectures	Professor	Hiroshi Naitoh
	Development of information system for social infrastructure maintenance Evolutionary Algorithms for Optimization and their Application to Engineering	Professor	Hideaki Nakamura
	Sequence Design and its Application in Communications	Professor	Shinya Matsufuji
	Innovation and Improvement in the Fascinating Field of Computing	Associate Professor	Akira Itoh
	Innovation and Improvement in the Fascinating Field of Computing	Associate Professor	Wang Yue (Media and Information Technology Center)
	Applied informatics for civil infrastructure	Associate Professor	Kei Kawamura
	Education and research on development of effective ways and system for disaster risk mitigation and reduction concerning natural and man-made disasters.	Associate Professor	Koichi Takimoto
	Software Engineering and Quality-Oriented Software Management	Associate Professor	Yoshinobu Tamura
	Education and research about radiowave and lightwave wideband wireless communication systems, and development of their communication systems using field programmable gate arrays.	Associate Professor	Takahiro Matsumoto
	Dependable parallel and distributed systems and networks	Associate Professor	Masaru Fukushi
	Software Engineering and Systems Engineering	Associate Professor	Shingo Yamaguchi

(博士前期課程)  
農学系専攻 [Division of Agricultural Sciences]

Course	Research Field	Academic Staff
Agriculture	Molecular mechanisms of plant-pathogen interactions Application of studies of plant immune systems for plant protection	Professor Shin-ichi Ito
	Plant image analysis Environmental control in plant production	Professor Yasuomi Ibaraki
	The development of genome informatics-based technologies for the utilization and management of insects Establishment of insect cell culture system for valuable material production	Professor Jun Kobayashi
	High efficiency and value added production system in plant factory Development of novel vegetable variety suitable for cultivation under global warming effects	Professor Masayoshi Shigyo
	Physiological and ecological analysis on harvest yield and products quality for crop Establishment of sustainable system on crop cultivation with additional value	Professor Tadashi Takahashi
	Biodiversity, taxonomy and nestmate recognition of termites in Asia	Professor Yoko Takematsu
	Study on measurement and control of the meteorological environment in the biosphere Study on occurrence elucidation and disaster prevention of meteorological disasters	Professor Haruhiko Yamamoto
	Ecological and physiological mechanisms of tolerance to environmental stresses of crops Crop cultivating methods to alleviate negative impacts of environmental stresses	Associate Professor Hideki Araki
	Observational study on microphysics of precipitating clouds Study on rain/snow associated with agricultural disasters	Associate Professor Kenji Suzuki
	Study on the distribution and consumption of agricultural and livestock products Study on Enterprise and Business Administration and food industry	Associate Professor Yutaka Taneichi
	Agricultural use of by-product gypsum Amelioration of subsoil acidity	Associate Professor Mitsuru Toma
	Animal Ecology and Wild Animal Damage Prevention Genetic Diversity of Local Animal Populations	Associate Professor Eiji Hosoi
	Studies on self-incompatibility in Citrus Expression mechanism of self-incompatibility on Fruit tree	Assistant Professor Jung-Hee Kim
	Monitoring and computer simulation of soil water flux, and its application to crop production Relationship between aggregates and soil water stability in farmlands	Assistant Professor Atsushi Sakaguchi
	Measurement and modeling of plant physiology in plant factory. Utilization of unused resources for energy-saving control of greenhouse environment.	Assistant Professor Yuuki Sago
	Studies on pathogenicity factor of soilborne plant pathogen Comparative genome analysis of plant pathogenic fungi	Assistant Professor Kazunori Sasaki
	Characterization and breeding of plant genetic resources Archaeobotanical study of ancient agriculture, recording of traditional agriculture	Assistant Professor Kenichi Tanno
	Dynamics of soil organic matter by microorganisms Interactions between the soil organic matter and the microorganisms	Assistant Professor Yukiko Yanagi
Applied Bioscience	Investigation and synthesis of physiologically active compounds (pheromones and allelochemicals) Elucidation of mechanistic pathway for the biogenesis of volatile aroma compounds and its physiological roles	Professor Yoshihiko Akakabe
	Molecular mechanisms of bacterial colonization to host surface Bacterial communication and its application to medicine and industry	Professor Hiroyuki Azakami
	Analysis and application of posttranslational modification of protein. Development and application of cell-free protein synthesis system.	Professor Toshihiko Utsumi
	Studies on structure-function relationship of metalloproteins Rational design of artificial enzymes	Professor Shin-ichi Ozaki
	Ecophysiological evolution of plant chemical defenses. Metabolism of plant functional compounds and its applications.	Professor Kenji Matsui
	Investigation of anti-oxidative defense mechanism and its application in crop improvement Investigation of food ingredients to detoxify aldehydes and its application to health improvement	Professor Jun'ichi Mano
	Physiological and biochemical studies on neuromuscular adaptation in mammalian Optimal training stimulation for muscle adaptations during development and aging	Professor Hirofumi Miyata

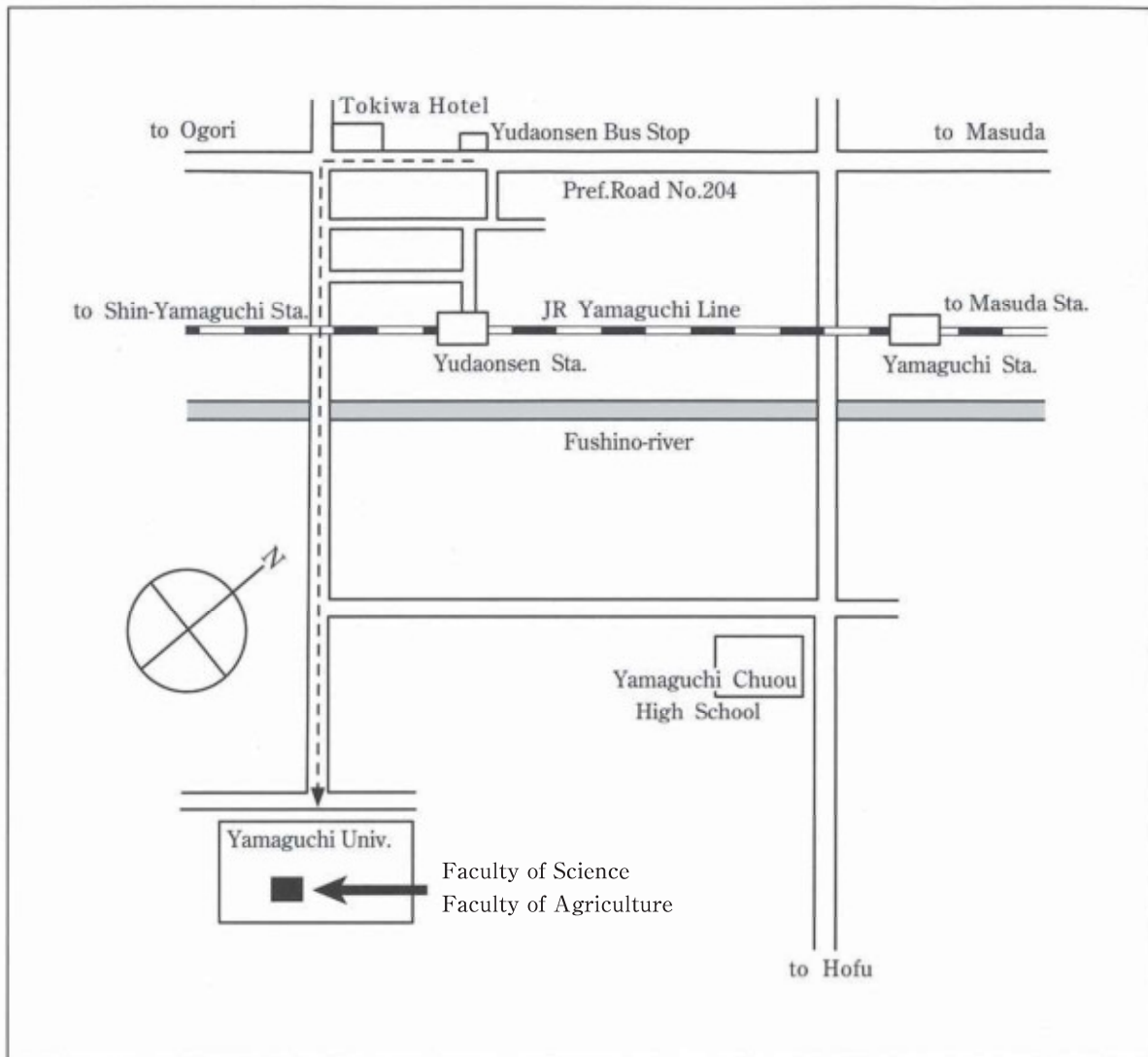
(博士前期課程)

農学系専攻 [Division of Agricultural Sciences]

Course	Research Field	Academic Staff
Applied Bioscience	Molecular biological study on bacterial survival and programmed cell death and their application Bioinformatics-based metabolic engineering and its application for high temperature fermentation	Professor Mamoru Yamada
	Molecular ecology of environmental microorganisms mediating nitrogen transformation. Ecological suppression of soil-born plant pathogens.	Professor Kazuhira Yokoyama
	Study on the benefits as well as the damages of ROS. Identifying functional food components for anti-aging.	Associate Professor Yoshihito Iuchi
	Regulation between assimilatory metabolisms in plant plastids Mechanisms for molecular interaction and electron transfer between ferredoxin and its dependent proteins	Associate Professor Yoko Kimata
	Characterization and application of microbes contributing to the carbon cycle	Associate Professor Katsuhiko Fujii
	Study on microbial metabolism and enzyme Study on enzyme complex in biomembrane	Associate Professor Toshiharu Yakushi
	Microbial fermentation physiology and metabolic engineering Bioproduction of useful compounds by microbes	Assistant Professor Naoya Kataoka
	Study on thermotolerant mechanisms of microorganisms based on genomic information Study on physiology and metabolism of syntrophic methane producing microorganisms community	Assistant Professor Tomoyuki Kosaka
	Biosynthetic mechanisms underlying formation of plant volatiles, Production of bioactive compounds from plants by metabolic engineering	Assistant Professor Takao Koeduka

**\* Science Department and Agriculture Department**

Guide Map of the Faculty of Science and  
Faculty of Agriculture, Yamaguchi University

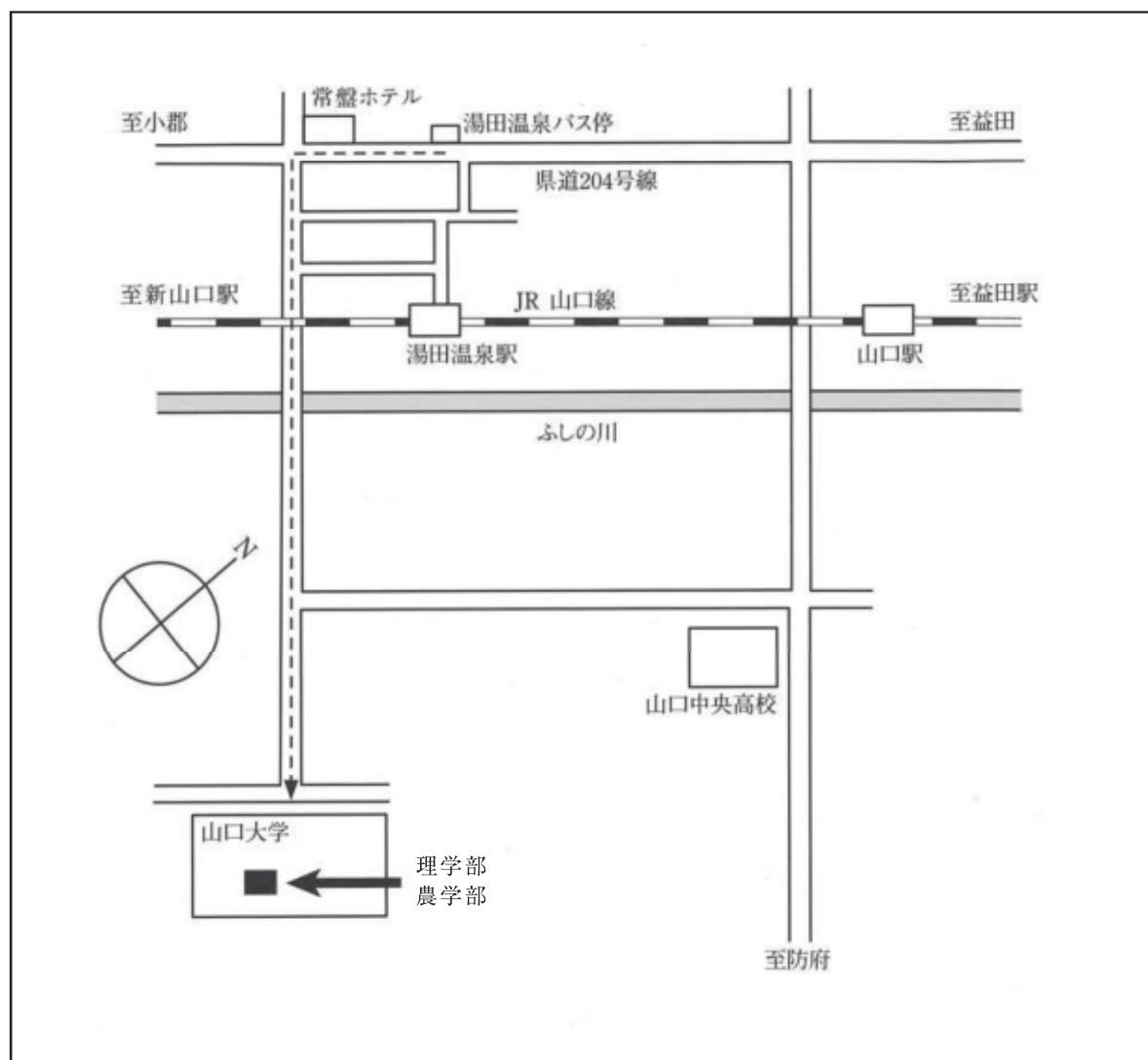


**[Transportation]**

Change to the JR Yamaguchi Line at Shin-Yamaguchi station and get off at Yudaonsen station. Then, about 25 min by walk to Faculty of Science and Faculty of Agriculture, Yamaguchi University.

Bocho-buses for Kenchomae, Miyanoonsen, Sports-no-mori are also available from Shin-Yamaguchi station. Get off the buses at Yudaonsen bus stop. Then, about 35 min by walk to Faculty of Science and Faculty of Agriculture, Yamaguchi University.

## 試験場案内図（理学系・農学系）



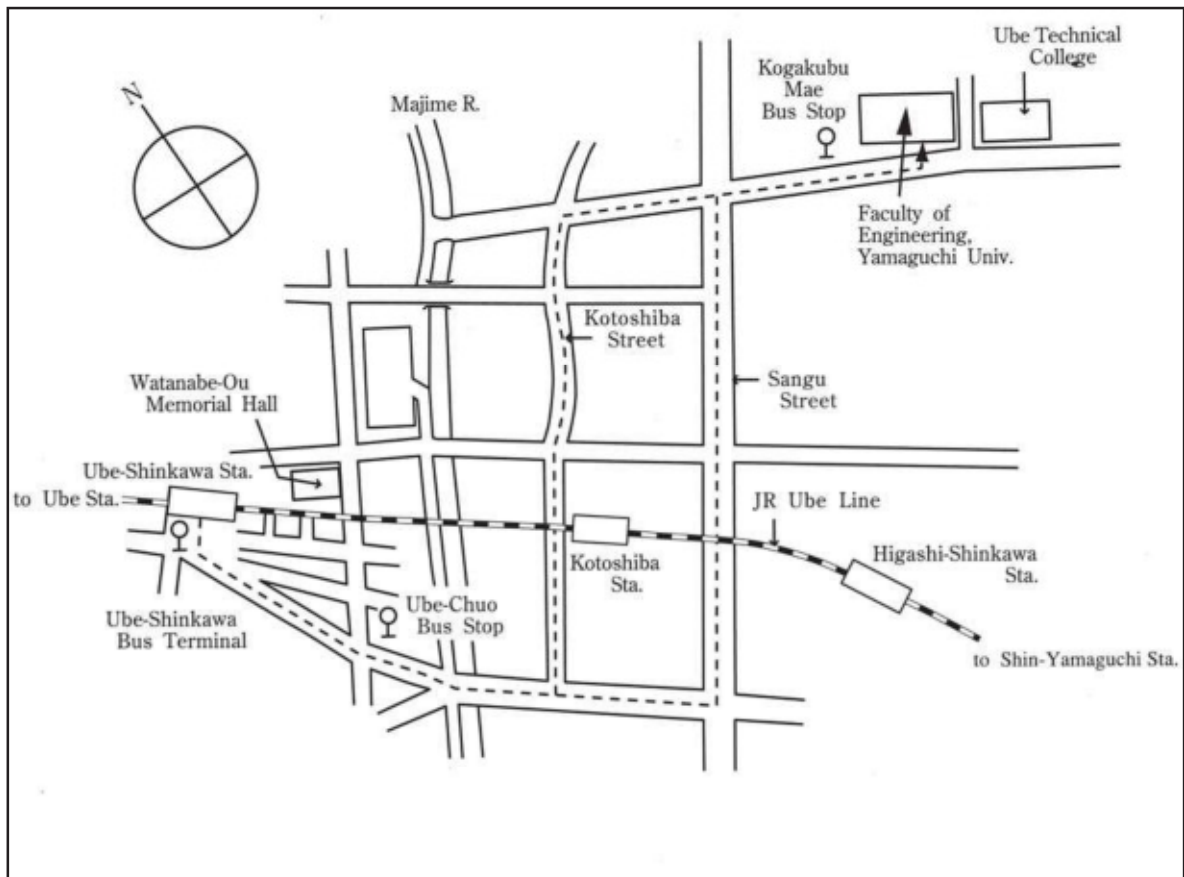
### 【交通】

山陽本線新山口駅から山口線「湯田温泉駅」下車，徒歩25分。

又は新山口駅前から防長バス県庁前行，宮野温泉行，スポーツの森行「湯田温泉」下車。  
徒歩35分。

**\* Engineering Department**

Guide Map of the Faculty of Science, Yamaguchi University

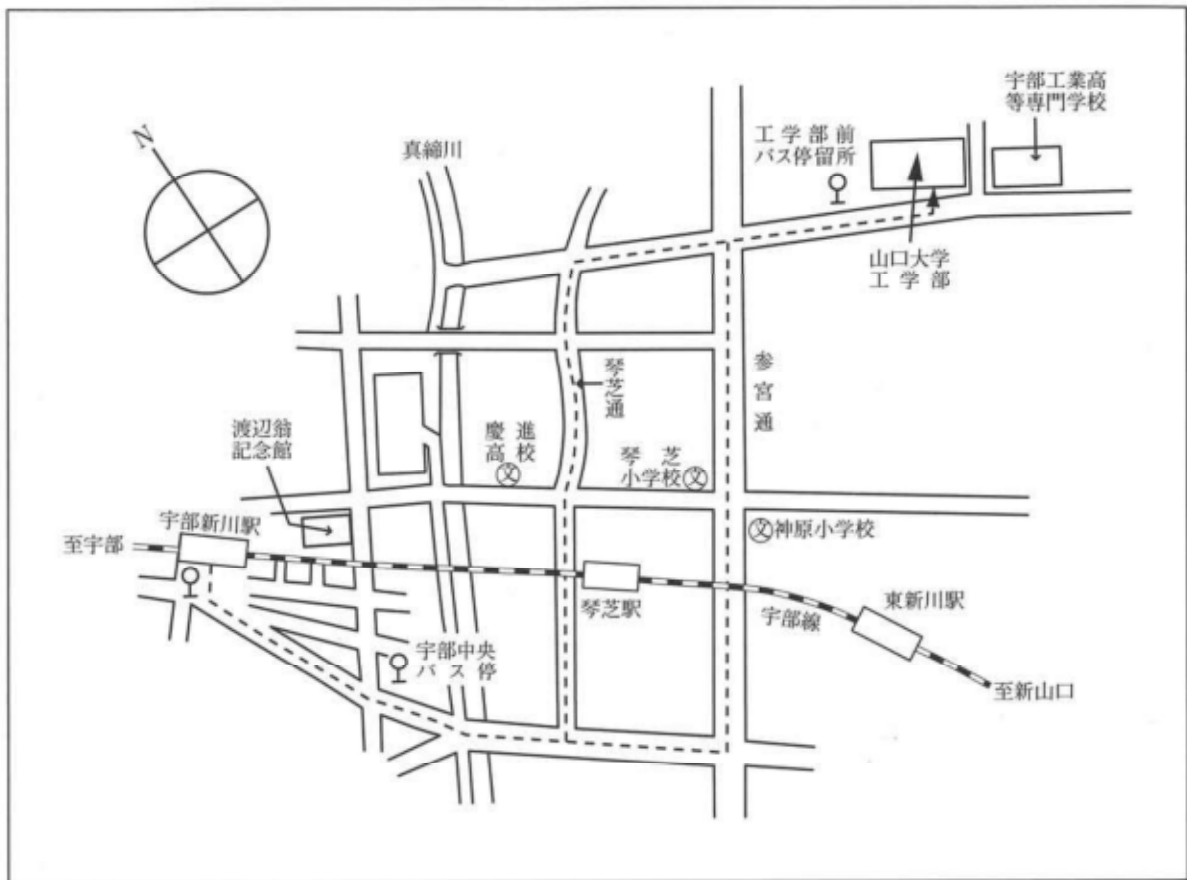


**Engineering Department**

**[Transportation]**

Change to the Ube Line at Shin-Yamaguchi or Ube from the JR Sanyo Line and get off at Ube-Shinkawa or Kotoshiba. About 10 minutes by taxi from Ube-shinkawa station.

## 試験場案内図（工学系）



### 工学系

#### [交通]

ＪＲ山陽本線「新山口駅」又は「宇部駅」からＪＲ宇部線「宇部新川駅」又は「琴芝駅」下車。  
タクシーで約10分