# **Syllabus**

## for Study

in Special Program for Foreign Postgraduate Students in Agriculture, Forestry and Fisheries in Asia, Africa and the Pan-Pacific Region

Shikoku International Student Education Consortium

<sup>\*</sup> If time schedule or other items are not specified, ask about them to the lecturer <u>after</u> <u>consulting your advising professor.</u>

<sup>(\*</sup> 開講時期その他の事項が明示されていない場合は、<u>指導教員に相談したうえで</u>授業担当教員に確認すること。)

# KOCHI UNIVERSITY

(高知大学)

Crop physiology

## Course Subject Code (申請コード)

18B00

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1<sup>st</sup> year

Semester (履修期間)

Spring term

## Day/Period(時間割)

Friday/5<sup>th</sup>

## Professor (Lecturer or Instructor)(担当教員名)

Akira MIYAZAKI

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Crop science

## Professor (Telephone)(担当教員電話)

088-864-5123

#### Professor (E-Mail)(担当教員)

miyazaki@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Food crop, Rice, Yield component, Photosynthesis, Nitrogen absorption

## Content and Objective (授業テーマと目的)

Physiology and function related with yield production in field crops.

## Teaching Materials (教科書·参考書)

Printed synopsis

## Evaluation of Results (成績評価の方法)

Environmental stress physiology

#### Course Subject Code (申請コード)

18B01

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture/Exercise

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Shinzo YAMANE

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Tropical vegetable crop science

#### Professor (Telephone)(担当教員電話)

088-864-5206

#### Professor (E-Mail)(担当教員)

yamane@kochi-u.ac.jp

## Keyword for the subject $(\not= \neg \neg \vdash)$

Vegetable crop, Environmental stress

## Content and Objective (授業テーマと目的)

Nature of environmental stress on vegetable crop such as chilling, freeze, heat, drought, excess water, and physiology of plant responses and resistance mechanisms.

## Teaching Materials (教科書·参考書)

Computer projector

#### Evaluation of Results (成績評価の方法)

Advanced crop science

#### Course Subject Code (申請コード)

18B02

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Friday/3rd (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Yoshinori YAMAMOTO

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Crop Science

#### Professor (Telephone)(担当教員電話)

088-864-5119

#### Professor (E-Mail)(担当教員)

yamayosi@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Crop physiology, Crop ecology, Field crops, Cultivation technique

## Content and Objective (授業テーマと目的)

Physiological and ecological aspects of field crops and current cultivation techniques in Japan

## Teaching Materials (教科書·参考書)

Printed synopsis

## Evaluation of Results (成績評価の方法)

Tropical crop science

#### Course Subject Code (申請コード)

18B03

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

2nd year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Friday/3rd (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Yoshinori YAMAMOTO

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Crop science

#### Professor (Telephone)(担当教員電話)

088-864-5119

#### Professor (E-Mail)(担当教員)

yamayosi@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Crop physiology, Crop ecology, Field crops, Cultivation technique

## Content and Objective (授業テーマと目的)

Physiological and ecological aspects of field crops and current cultivation techniques in the tropics

#### Teaching Materials(教科書·参考書)

Printed synopsis

#### Evaluation of Results (成績評価の方法)

Advanced forest tree ecophysiology

#### Course Subject Code (申請コード)

18B04

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Tomoaki ICHIE

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Tree ecophysiology

#### Professor (Telephone)(担当教員電話)

088-864-5149

#### Professor (E-Mail)(担当教員)

ichie@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg \vdash )$

Flowering, Photosynthesis, Environmental stress, Tree ecophysiology

## Content and Objective (授業テーマと目的)

Physiological and morphological properties of tropical trees will be described from the view point of environmental adaptation.

#### Teaching Materials(教科書·参考書)

Computer projector/Printed synopsis

#### Evaluation of Results (成績評価の方法)

Submitting report after the course

Advanced forest planning

Course Subject Code (申請コード)

18B05

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

Day/Period(時間割)

Thursday/4th

Professor (Lecturer or Instructor)(担当教員名)

Zen'ichiro SHIBAYAMA

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Forest operation

Professor (Telephone)(担当教員電話)

088-864-5135

Professor (E-Mail)(担当教員)

shiba@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Private forest, Small scale forestry, Japanese cypress (Hinoki), Forest operation, Excellent timber

Content and Objective (授業テーマと目的)

Introduction to small scale forestry and explanation on forest operation and forestry income.

Teaching Materials (教科書·参考書)

OHP/Printed synopsis

Evaluation of Results (成績評価の方法)

Paper test or Submitting paper (report) after the course

Rice breeding and cultivars

#### Course Subject Code (申請コード)

18B06

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Thursday/5th

#### Professor (Lecturer or Instructor)(担当教員名)

Masayuki MURAI

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/ Plant breeding

#### Professor (Telephone)(担当教員電話)

088-864-5120

#### Professor (E-Mail)(担当教員)

muraim@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Rice, Plant breeding, Genetics

## Content and Objective (授業テーマと目的)

Genetical basis and researches in plant breeding for developing rice cultivars. Seminar style class together with other students.

#### Teaching Materials(教科書·参考書)

Recent journal papers selected by Professor Murai.

## Evaluation of Results (成績評価の方法)

Report and performance in the class.

Plant breeding and genetics

#### Course Subject Code (申請コード)

18B07

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Thursday/5th

#### Professor (Lecturer or Instructor)(担当教員名)

Masayuki MURAI

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Plant breeding

#### Professor (Telephone)(担当教員電話)

088-864-5120

#### Professor (E-Mail)(担当教員)

muraim@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Plant breeding, Genetics, Crop, Rice

## Content and Objective (授業テーマと目的)

Genetical basis and researches in plant breeding for developing rice and other crops. Seminar style class together with other students.

#### Teaching Materials(教科書·参考書)

Recent journal papers selected by Professor Murai.

#### Evaluation of Results (成績評価の方法)

Reports and performance in the class.

Topographical aspects of forest tree ecology

#### Course Subject Code (申請コード)

18B08

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Monday/3rd

#### Professor (Lecturer or Instructor)(担当教員名)

Jiro TSUKAMOTO

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Forest Ecology

#### Professor (Telephone)(担当教員電話)

088-864-5204

#### Professor (E-Mail)(担当教員)

tukamoto@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Forest trees, Distribution, Growth, Topography, Mountain slope

## Content and Objective (授業テーマと目的)

Ecology of forest trees is discussed with special reference to site conditions.

#### Teaching Materials (教科書·参考書)

Printed synopsis

## Evaluation of Results (成績評価の方法)

Tropical ornamental plant science

Course Subject Code (申請コード)

18B09

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

Day/Period(時間割)

Wednesday/3rd (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Professor Kazuhiko SHIMASAKI

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Floriculture

Professor (Telephone)(担当教員電話)

088-864-5130

Professor (E-Mail)(担当教員)

shim@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg \vdash )$ 

Tropical ornamentals, Growth control, Propagation

Content and Objective (授業テーマと目的)

Introduction to ornametal plant sciences and explanation on control of plant growth

Teaching Materials(教科書·参考書)

Computer projector/Printed synopsis

Evaluation of Results (成績評価の方法)

Advanced tropical fruit science I

#### **Course Subject Code**(申請コード)

18B10

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Monday, 2nd

## Professor (Lecturer or Instructor)(担当教員名)

Tsuneo OGATA

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Pomology and citriculture

#### Professor (Telephone)(担当教員電話)

088-864-5124

#### Professor (E-Mail)(担当教員)

fsogata@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Tropical and subtropical fruit trees, Propagation, Vegetative growth, Pruning and training, Juvenility

## Content and Objective (授業テーマと目的)

Physiological problems associated with tree propagation, vegetative growth and flower formation in tropical and subtropical fruit trees.

## Teaching Materials(教科書·参考書)

Printed synopsis

## Evaluation of Results (成績評価の方法)

Advanced Tropical Fruit Science II

Course Subject Code (申請コード)

18B11

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

2nd year

Semester (履修期間)

Spring term

Day/Period(時間割)

Monday, 2nd

Professor (Lecturer or Instructor)(担当教員名)

Tsuneo OGATA

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Pomology and citriculture

Professor (Telephone)(担当教員電話)

088-864-5124

Professor (E-Mail)(担当教員)

fsogata@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Tropical and subtropical fruit trees, Fertilization and seed formation, Parthenocarpy, Fruit

Content and Objective (授業テーマと目的)

Physiological problems associated with fertilization, seed formation and fruit growth in tropical and subtropical fruit trees.

Teaching Materials (教科書·参考書)

Printed synopsis

Evaluation of Results (成績評価の方法)

Advanced food production process engineering

#### Course Subject Code (申請コード)

18B12

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Friday/3rd (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Toshio KAWANO

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Food production process engineering

#### Professor (Telephone)(担当教員電話)

088-864-5132

#### Professor (E-Mail)(担当教員)

tkawano@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Food production process, Food analysis, Heat and mass transfer, Chemical engineering Unit operations

## Content and Objective (授業テーマと目的)

Advanced study on the food production process, including physical and chemical reaction during the process

## Teaching Materials(教科書·参考書)

F. P. Incropera, D. P. DE WITT: Fundamentals of Heat and Mass Transfer 3<sup>rd</sup> Ed., John Wiley & Sons Inc.

#### Evaluation of Results (成績評価の方法)

Energy engineering in agriculture

Course Subject Code (申請コード)

18B13

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

2nd year

Semester(履修期間)

Fall term

Day/Period(時間割)

Friday/2nd (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Kiyoshi MIYAUCHI

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Agricultural process engineering

Professor (Telephone)(担当教員電話)

088-864-5212

Professor (E-Mail)(担当教員)

kmiya@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Energy saving, Energy utilization, Natural energy, Protected horticulture

Content and Objective (授業テーマと目的)

Natural energy, a fossil fuel, electric power energy and the biomass required for agricultural production.

Teaching Materials(教科書·参考書)

Computer projector/Printed synopsis

Evaluation of Results (成績評価の方法)

Sustainable forest operations and environmental protection

Course Subject Code (申請コード)

18B14

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided

Professor (Lecturer or Instructor)(担当教員名)

Jun-ichi GOTOU

Professor (Affiliation/Research field)(担当教員所属)

Professor (Telephone)(担当教員電話)

Professor (E-Mail)(担当教員)

**Keyword for the subject**  $( + \neg \neg )$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Agricultural meteorology

Course Subject Code (申請コード)

18B15

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided

Professor (Lecturer or Instructor)(担当教員名)

Makito MORI

Professor (Affiliation/Research field)(担当教員所属)

Kochi Univewrsity

Professor (Telephone)(担当教員電話)

Professor (E-Mail)(担当教員)

**Keyword for the subject**  $( + \neg \neg )$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Biological and environmental systems

Course Subject Code (申請コード)

18B16

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

Day/Period(時間割)

Monday/2nd

Professor (Lecturer or Instructor)(担当教員名)

Professor Katsumi ISHIKAWA

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/ Biological and environmental systems

Professor (Telephone)(担当教員電話)

088-864-5192

Professor (E-Mail)(担当教員)

ikatsumi@kochi-u.ac.jp

Keyword for the subject  $(\not= \neg \neg \vdash)$ 

Non-thermal energy, Water treatment, Greenhouses, Functional water, Eco-systemic agriculture

Content and Objective (授業テーマと目的)

Environmental situations for mass and quality plant production in greenhouses

Teaching Materials (教科書·参考書)

Printed synopsis

Evaluation of Results (成績評価の方法)

Submitting report after the course

Statistical analysis methods in forestry

#### Course Subject Code (申請コード)

18B17

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

## Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Friday/2nd (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Yasushi SUZUKI

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Forest engineering

#### Professor (Telephone)(担当教員電話)

088-864-5137

#### Professor (E-Mail)(担当教員)

ysuzuki@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

ANOVA, Design of experiment, Nonparametric method, Regression, Statistical analysis

## Content and Objective (授業テーマと目的)

Basic statistical methods and advanced statistical methods, including design of experiments and analysis of variance (ANOVA), with practical application examples of these methods on data analysis of forest operation systems.

## Teaching Materials (教科書·参考書)

Printed synopsis/ Text: Zar, J.H. (1999) Biostatistical analysis, 4th ed. 663 pp, Prentice-Hall Inc., Upper Saddle River, NJ.

#### Evaluation of Results (成績評価の方法)

Submitting report after the course

Advanced fish nutrition

**Course Subject Code**(申請コード)

18B18

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided

Professor (Lecturer or Instructor)(担当教員名)

Toshiro MASUMOTO

Professor (Affiliation/Research field)(担当教員所属)

Kochi University

Professor (Telephone)(担当教員電話)

Professor (E-Mail)(担当教員)

**Keyword for the subject**  $( + \neg \neg )$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Cryobiology

**Course Subject Code** (申請コード)

18B19

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

Day/Period(時間割)

Intensive course in the spring term (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Magosaburo KASAI

Professor (Affiliation/Research field)(担当教員所属)

Kochi University

Professor (Telephone)(担当教員電話)

088-864-5194

Professor (E-Mail)(担当教員)

mkasai@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Advanced fish ecology

**Course Subject Code** (申請コード)

18B20

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided

Professor (Lecturer or Instructor)(担当教員名)

Kosaku YAMAOKA

Professor (Affiliation/Research field)(担当教員所属)

Kochi University

Professor (Telephone)(担当教員電話)

088-864-5148

Professor (E-Mail)(担当教員)

yamaoka@kochi-u.ac.jp

Keyword for the subject  $( \div \neg \neg \neg \vdash)$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Animal resources technology

Course Subject Code (申請コード)

18B21

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Keisuke EDASHIGE

Professor (Affiliation/Research field)(担当教員所属)

Kochi University

Professor (Telephone)(担当教員電話)

088-864-5195

Professor (E-Mail)(担当教員)

keisuke@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Production ecology of coastal marine zooplankton

#### Course Subject Code (申請コード)

18B22

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture/Exercise

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Hiroshi UEDA

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/ Zooplanktology

#### Professor (Telephone)(担当教員電話)

088-856-2553

#### Professor (E-Mail)(担当教員)

hueda@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Zooplankton, Copepoda, Biomass, Secondary production

## Content and Objective (授業テーマと目的)

Introduction to zooplankton taxonomy and ecology, and exercise of quantitative zooplankton ecology and secondary productivity of coastal waters.

#### Teaching Materials(教科書·参考書)

Computer projector

#### Evaluation of Results (成績評価の方法)

Submitting report after the course

Advanced fish biochemistry

#### Course Subject Code (申請コード)

18B23

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Haruhisa FUKADA

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Fish nutrition

#### Professor (Telephone)(担当教員電話)

088-864-5156

#### Professor (E-Mail)(担当教員)

fukaharu@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Fish, nutrition, Metabolism, Hormone, Growth

## Content and Objective (授業テーマと目的)

Introduction to fish biochemistry and explanation on nutrient metabolism and growth

## Teaching Materials (教科書·参考書)

Computer projector

## Evaluation of Results (成績評価の方法)

Fish health management

#### Course Subject Code (申請コード)

18B24

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Intensive course in the spring term (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Kenji KAWAI

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Fish disease

#### Professor (Telephone)(担当教員電話)

088-864-5147

#### Professor (E-Mail)(担当教員)

kenkawai@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Fish disease, Infection, Vaccine, Chemotherapy, Pathogrn

## Content and Objective (授業テーマと目的)

Introduction to fish diseases and explanation on preventive measures against infectious diseases.

#### Teaching Materials (教科書·参考書)

Computer projector/Printed synopsis

## Evaluation of Results (成績評価の方法)

Submitting report after the course

Virology

Course Subject Code (申請コード)

18B25

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided

Professor (Lecturer or Instructor)(担当教員名)

Shun-ichirou OSHIMA

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Fish disease, Fish immunology, Virology

Professor (Telephone)(担当教員電話)

088-864-5214

Professor (E-Mail)(担当教員)

s-oshima@kochi-u.ac.jp

Keyword for the subject  $( \not= \neg \neg \vdash)$ 

Fish disease, Fish immunology, Virology, Vaccine

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Fish ecology of the tropics

Course Subject Code (申請コード)

18B26

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided

Professor (Lecturer or Instructor)(担当教員名)

Izumi KINOSHITA

Professor (Affiliation/Research field)(担当教員所属)

Kochu University/

Professor (Telephone)(担当教員電話)

088-856-0633

Professor (E-Mail)(担当教員)

muhomatu@kochi-u.ac.jp

Keyword for the subject  $( \not= \neg \neg \vdash)$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Enhancement science for aquaculture

#### Course Subject Code (申請コード)

18B27

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year or 2nd year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Shingo SEKI

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Fish genetics

#### Professor (Telephone)(担当教員電話)

088-864-5153

#### Professor (E-Mail)(担当教員)

seki@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Genetics, Breeding science, Chromosome manipulation, Molecular markers, Conservation genetics

## Content and Objective (授業テーマと目的)

Introduction to fish genetics and breeding science with a focus on chromosome manipulation of fish.

## Teaching Materials (教科書·参考書)

Computer projector

## Evaluation of Results (成績評価の方法)

Forest resources and environment economics

Course Subject Code (申請コード)

18B28

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided

Professor (Lecturer or Instructor)(担当教員名)

Yasushi FURUKAWA

Professor (Affiliation/Research field)(担当教員所属)

Kochi Univesity/Forest economics

Professor (Telephone)(担当教員電話)

088-864-5141

Professor (E-Mail)(担当教員)

furukawa@kochi-u.ac.jp

Keyword for the subject  $( \div \neg \neg \neg \vdash)$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Theory of farm support system

Course Subject Code (申請コード)

18B29

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided

Professor (Lecturer or Instructor)(担当教員名)

Takanori MATSUSHIMA

Professor (Affiliation/Research field)(担当教員所属)

Kochi Univesity/Agriculture economics

Professor (Telephone)(担当教員電話)

088-864-5126

Professor (E-Mail)(担当教員)

takasan@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Food science and technology

#### Course Subject Code (申請コード)

18B30

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Hiroyuki UKEDA and Tomoko SHIMAMURA

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Food science

## Professor (Telephone)(担当教員電話)

088-864-5193 (Tomoko SHIMAMURA)

#### Professor (E-Mail)(担当教員)

tomokos@kochi-u.ac.jp (Tomoko SHIMAMURA)

#### **Keyword for the subject** $( + \neg \neg \vdash )$

Food, Heating, Maillard reaction, Reactive oxygen species

#### Content and Objective (授業テーマと目的)

The interaction between components in foods is discussed in relation with food processing and advanced food processing technology.

#### Teaching Materials(教科書·参考書)

Computer projector /Printed synopsis

#### Evaluation of Results (成績評価の方法)

Post-harvest science and technology of fish

#### Course Subject Code (申請コード)

18B31

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Intensive course in the spring term (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Katsuji MORIOKA

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Aquatic Product Utilization

#### Professor (Telephone)(担当教員電話)

088-864-5160

#### Professor (E-Mail)(担当教員)

morioka@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg \vdash )$

## Content and Objective (授業テーマと目的)

Lecture on the changes in quality during storage of fisheries foods and their preservation methods.

#### Teaching Materials (教科書·参考書)

Computer projector/OHP/Printed synopsis

#### Evaluation of Results (成績評価の方法)

Food resources utilization

Course Subject Code (申請コード)

18B32

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Fall term

Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Takehiro KASHIWAGI

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Food science

Professor (Telephone)(担当教員電話)

088-864-5184

Professor (E-Mail)(担当教員)

tkashi@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Food science, Food chemistry, Food processing, Functional food

Content and Objective (授業テーマと目的)

Recent topic researches on the chemical properties of bioresources and the technology of their processing and utilization

Teaching Materials(教科書·参考書)

Computer projector/ Printed synopsis

Evaluation of Results (成績評価の方法)

Submitting report after the course

Experimental course in applied chemistry of bioresources

Course Subject Code (申請コード)

18B33

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Experiment

Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

Day/Period(時間割)

Intensive course in the spring term (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Hiroyuki UKEDA, Takehiro KASHIWAGI, Tomoko SHIMAMURA

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Food science

Professor (Telephone)(担当教員電話)

088-864-5193 (Tomoko SHIMAMURA)

Professor (E-Mail)(担当教員)

tomokos@kochi-u.ac.jp (Tomoko SHIMAMURA)

**Keyword for the subject**  $( + \neg \neg \vdash )$ 

Food analysis, Food science, Food chemistry, Functional food

Content and Objective (授業テーマと目的)

Instruction of recent chemical and instrumental analyses of natural products.

Teaching Materials (教科書·参考書)

Computer projector/Printed synopsis

Evaluation of Results (成績評価の方法)

Submitting report after the course

Molecular nutrition

#### Course Subject Code (申請コード)

18B34

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Not decided (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Makoto ASHIUCHI

# Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Tropical bioengineering

#### Professor (Telephone)(担当教員電話)

088-864-5215

#### Professor (E-Mail)(担当教員)

ashiuchi@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Molecular biology, Biochemistry, Nutritional chemistry, Food microbiology

# Content and Objective (授業テーマと目的)

The aim of this lesson is to enrich the knowledge of new nutritional science that flowers with the advance of molecular genetics in human, animals and microorganisms.

#### Teaching Materials(教科書·参考書)

Computer projector/Printed synopsis

#### Evaluation of Results (成績評価の方法)

Applied microbiology in extreme environments

#### Course Subject Code (申請コード)

18B35

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture/Experiment

# Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Shinji NAGATA

### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Applied Microbiology

#### Professor (Telephone)(担当教員電話)

088-864-5190

#### Professor (E-Mail)(担当教員)

nagashin@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Microbioligy, Enzymology, Fermentation, Food production, Applied microbiology

# Content and Objective (授業テーマと目的)

Characteristics, the application, and the current state of the art regarding the microbes and its enzymes in extreme environments.

#### Teaching Materials(教科書·参考書)

Computer projector/Printed synopsis

# Evaluation of Results (成績評価の方法)

Report and presentation after the course

Advanced chemical ecology

Course Subject Code (申請コード)

18B36

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided(Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Chul-Sa KIM

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/

Professor (Telephone)(担当教員電話)

088-864-5185

Professor (E-Mail)(担当教員)

cs-kim@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Evaluation of Results (成績評価の方法)

Advanced biomaterial science

## Course Subject Code (申請コード)

18B37

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Monday/1st

### Professor (Lecturer or Instructor)(担当教員名)

Hideaki ICHIURa

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Biomaterial chemistry

# Professor (Telephone)(担当教員電話)

088-864-5142

#### Professor (E-Mail)(担当教員)

ichirua@kochi-u.ac.jp

# Keyword for the subject $(\not= \neg \neg \vdash)$

Pulp, Paper

#### Content and Objective (授業テーマと目的)

This lecture is that the functional materials produced from forest resources will be introduced.

# Teaching Materials (教科書·参考書)

Computer projector

## Evaluation of Results (成績評価の方法)

Advanced instrumental analytical chemistry

#### Course Subject Code (申請コード)

18B38

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture/Exercise

#### Year of commencement (履修開始年次)

1st year or 2nd year

Semester (履修期間)

all term

#### Day/Period(時間割)

(Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Shinichi TEBAYASHI

# Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Bioorganic chemistry

#### Professor (Telephone)(担当教員電話)

088-864-5203

#### Professor (E-Mail)(担当教員)

tebayasi@kochi-u.ac.jp

# Keyword for the subject $(\not= \neg \neg \vdash)$

NMR, MS, UV, IR

# Content and Objective (授業テーマと目的)

The practice of the structure elucidation method of the organo-chemical using ultraviolet-visible spectroscopy, infrared spectroscopy, mass spectroscopy and nuclear-magnetic-resonance spectroscopy.

# Teaching Materials (教科書·参考書)

Printed synopsis

## Evaluation of Results (成績評価の方法)

Paper test and presentation

Biofunction of deep seawater

#### Course Subject Code (申請コード)

18B39

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year or 2nd year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Haruhiko UEHIGASHI

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi Prefectural Industrial Technology Center / Food processing

#### Professor (Telephone)(担当教員電話)

088-846-1652

#### Professor (E-Mail)(担当教員)

haruhiko\_uehigashi@ken2.pref.kochi.lg.jp

#### **Keyword for the subject** $( + \neg \neg )$

Deep seawater, Fermentation, Food, Beer, Sake

# Content and Objective (授業テーマと目的)

On the effect of the addition of deep seawater on the fermentation of foods: sake, beer, wine, soy sauce and so on. Visiting deep seawater-related companies.

#### Teaching Materials(教科書·参考書)

Computer projector/Printed materials

#### Evaluation of Results (成績評価の方法)

Attendance and submitting reports after the course

Applied Enzymology

**Course Subject Code**(申請コード)

18B40

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

Day/Period(時間割)

Not decided (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Hisashi MURAMATSU

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Applied enzymology

Professor (Telephone)(担当教員電話)

088-864-5187

Professor (E-Mail)(担当教員)

hmura@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Application of enzyme, Screening for enzyme, Structure and mechanism in enzyme, Industrial application

Content and Objective (授業テーマと目的)

An overview of the use of enzymes in industrial applications. Includes a background, a discussion of structure and reactivity.

Teaching Materials(教科書·参考書)

Computer projector/ Printed synopsis

Evaluation of Results (成績評価の方法)

Molecular Breeding of protein

#### **Course Subject Code** (申請コード)

18B41

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Fall term

### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Kouhei OHNISHI

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Molecular genetics

#### Professor (Telephone)(担当教員電話)

088-864-5213

#### Professor (E-Mail)(担当教員)

kouheio@kochi-u.ac.jp

# **Keyword for the subject** $(\ddagger - \neg \neg \vdash)$

Molecular evolution, Breeding, Disease, Cloning

# Content and Objective (授業テーマと目的)

Molecular breeding based on evolutionary molecular engineering will be discussed with certain examples, such as improvement of thermostability.

## Teaching Materials(教科書·参考書)

Computer projector

## Evaluation of Results (成績評価の方法)

Chemistry of woody material utilization

#### Course Subject Code (申請コード)

18B42

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture/Exercise

# Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Wedensday/2nd

## Professor (Lecturer or Instructor)(担当教員名)

Yoshito OHTANI

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Wood chemistry

#### Professor (Telephone)(担当教員電話)

088-864-5143

#### Professor (E-Mail)(担当教員)

ohtani@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Woody components, Forest products, Naturally occurring compounds, Utilization

# Content and Objective (授業テーマと目的)

Explaining and discussing with some references to deepen the understanding

# Teaching Materials (教科書·参考書)

Teaching materials

# Evaluation of Results (成績評価の方法)

Submitting paper (report) during and after the course)

Advanced wood histology

Course Subject Code (申請コード)

18B43

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

Day/Period(時間割)

Thuesday/2nd

Professor (Lecturer or Instructor)(担当教員名)

Professor Shinji FUJIWARA

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Forest Products Science

Professor (Telephone)(担当教員電話)

088-864-5146

Professor (E-Mail)(担当教員)

s\_fujiwara@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Wood structure, Wood properties, Annual ring, Silvicultural management

Content and Objective (授業テーマと目的)

Introduction to anatomical structure and variation of wood properties

Teaching Materials(教科書·参考書)

「Forest Products and Wood Science」 by J.G. Haygreen & J.L. Bowyer, Iowa State University Press.1996

Evaluation of Results (成績評価の方法)

Applied Biological Chemistry

#### Course Subject Code (申請コード)

18B44

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Yagi TOSHIHARU

### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Applied biochemistry

#### Professor (Telephone)(担当教員電話)

088-864-5191

#### Professor (E-Mail)(担当教員)

yagito@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Proteins, Enzymes, Carbohydrates, Lipids, Nucleotides, Vitamins

# Content and Objective (授業テーマと目的)

Lecture on basic and applicable aspects of amino acids, proteins, enzymes, carbohydrates, lipids, nucleotides, vitamins and hormones.

#### Teaching Materials(教科書·参考書)

Computer projector

#### Evaluation of Results (成績評価の方法)

Experimental course in applied biological chemistry

## Course Subject Code (申請コード)

18B45

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Experiment

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

# Day/Period(時間割)

Monday/4th

### Professor (Lecturer or Instructor)(担当教員名)

Yagi TOSHIHARU

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Applied biochemistry

#### Professor (Telephone)(担当教員電話)

088-864-5191

#### Professor (E-Mail)(担当教員)

yagito@kochi-u.ac.jp

Keyword for the subject  $( \div \neg \neg \neg \vdash )$ 

# Content and Objective (授業テーマと目的)

Guidance of technical skills in biochemistry, molecular nutrition, and molecular biology

# Teaching Materials (教科書·参考書)

Printed synopsis

## Evaluation of Results (成績評価の方法)

Advanced soil conservation

Course Subject Code (申請コード)

18B46

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Taiichirow ATO

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/

Professor (Telephone)(担当教員電話)

088-864-5170

Professor (E-Mail)(担当教員)

satot@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Evaluation of Results (成績評価の方法)

Landslide and sediment discharge control

#### Course Subject Code (申請コード)

18B47

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Not yet fixed. Contact to the lecturer to determine the schedule

### Professor (Lecturer or Instructor)(担当教員名)

Katsuo SASAHARA

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Sediment Discharge and Erosion Control

#### Professor (Telephone)(担当教員電話)

088-864-5341

#### Professor (E-Mail)(担当教員)

sasahara@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Sediment yield, Rainfall infiltration, Landslide

# Content and Objective (授業テーマと目的)

To understand the mechanism of sediment yield and discharge from forested slope, and to understand the mechanism of landslide

#### Teaching Materials(教科書·参考書)

Printed synopsis

#### Evaluation of Results (成績評価の方法)

Submitting report during the course

Environmental facility engineering

#### Course Subject Code (申請コード)

18B50

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Spring term

#### Day/Period(時間割)

To be determined (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Shinsuke MATSUMOTO

### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Construction engineering

#### Professor (Telephone)(担当教員電話)

088-864-5169

#### Professor (E-Mail)(担当教員)

mazmoto@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Numerical simulation, Computational mechanics, Agricultural structures, Concrete engineering Content and Objective (授業テーマと目的)

# Numerical analysis technique and knowledge for designing agricultural facilities and structures

#### Teaching Materials(教科書·参考書)

Computer projector/Printed synopsis

# Evaluation of Results (成績評価の方法)

Groundwater hydraulics

Course Subject Code (申請コード)

18B51

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

Day/Period(時間割)

Monday/4th

Professor (Lecturer or Instructor)(担当教員名)

Professor Kunio OHTOSHI

Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Water disaster prevention

Professor (Telephone)(担当教員電話)

088-864-5172

Professor (E-Mail)(担当教員)

disaster@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Groundwater, Coastal aquifer, Saline water intrusion, Mahematical model

Content and Objective (授業テーマと目的)

Modeling of groundwater hydraulics and its application to coastal aquifer

Teaching Materials (教科書·参考書)

Computer projector/Printed synopsis

Evaluation of Results (成績評価の方法)

Submitting report during the course

Analytical Chemistry of Plant Root Environment

#### Course Subject Code (申請コード)

18B52

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture/Exercise

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Kozo IWASAKI

# Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Agro-environmental chemistry, Plant nutrition

#### Professor (Telephone)(担当教員電話)

088-864-5180

#### Professor (E-Mail)(担当教員)

kozo@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg \vdash )$

Rhizosphere, Nutrients, Heavy metals, Dynamics, Plant uptake

# Content and Objective (授業テーマと目的)

After taking this course, you should be able to understand basic aspects of nutrient dynamics in rhizosphere soils and nutrient uptake mechanism by plant roots.

#### Teaching Materials(教科書·参考書)

Computer projector/Printed synopsis

#### Evaluation of Results (成績評価の方法)

Tropical agro-environmental chemistry

#### Course Subject Code (申請コード)

18B54

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Tuesday/1st

#### Professor (Lecturer or Instructor)(担当教員名)

Associate Professor Yumei KANG

# Professor (Affiliation/Research field)(担当教員所属)

Kochi University / Soil environmental science

#### Professor (Telephone)(担当教員電話)

088-864-5182

#### Professor (E-Mail)(担当教員)

kang@cc.kochi-u.ac.jp

# Keyword for the subject $( \not= \neg \neg \vdash)$

Soil, Water, Plant, Pollution, Heavy metals

# Content and Objective (授業テーマと目的)

Soil properties and contamination affected by the tropical environment will be described in terms of physicochemical view points.

#### Teaching Materials(教科書·参考書)

Printed synopsis

#### Evaluation of Results (成績評価の方法)

Applied entomology

#### Course Subject Code (申請コード)

18B55

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Intensive course in the spring term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Ryo ARAKAWA

# Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Applied Entomology

#### Professor (Telephone)(担当教員電話)

088-864-5122

#### Professor (E-Mail)(担当教員)

arakawar@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Entomology, Integrated pest management, Integrated biodiversity management, Biological control

# Content and Objective (授業テーマと目的)

Ecology of insect pests, and theory of integrated pest management (IPM) and integrated biodiversity management (IBM).

#### Teaching Materials(教科書·参考書)

Computer projector /Printed synopsis

#### Evaluation of Results (成績評価の方法)

Biological control

#### Course Subject Code (申請コード)

18B56

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

2nd year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Intensive course in the spring term (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Ryo ARAKAWA

# Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Applied entomology

#### Professor (Telephone)(担当教員電話)

088-864-5122

#### Professor (E-Mail)(担当教員)

arakawar@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Biological control, Natural enemies, Sustainable agriculture, Parasitoud, Predator

# Content and Objective (授業テーマと目的)

Principles and current issues in biological control of arthropod pests and life history of the major groups of parasitic and predaceous arthropods.

#### Teaching Materials(教科書·参考書)

Computer projector /Printed synopsis

#### Evaluation of Results (成績評価の方法)

Advanced environmental water management engineering

Course Subject Code (申請コード)

18B57

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

Not decided

Semester(履修期間)

Not decided

Day/Period(時間割)

Not decided (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Shushi SATO

Professor (Affiliation/Research field)(担当教員所属)

Kochi University

Professor (Telephone)(担当教員電話)

088-864-5150

Professor (E-Mail)(担当教員)

syu@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Content and Objective (授業テーマと目的)

Teaching Materials (教科書·参考書)

Evaluation of Results (成績評価の方法)

Remote sensing

#### Course Subject Code (申請コード)

18B58

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Masayuki MATSUOKA

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Remote sensing

#### Professor (Telephone)(担当教員電話)

088-864-5166

#### Professor (E-Mail)(担当教員)

msykmtok@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Remote sensing, Satellite, Image processing, Land surface

# Content and Objective (授業テーマと目的)

The utilization of remote sensing for land application is outlined in connection with the general features of remote sensing such as sensor type, mechanism of observation and characteristics of data.

# Teaching Materials (教科書·参考書)

Computer projector

#### Evaluation of Results (成績評価の方法)

Introduction of harmful algal blooms (HABs)

#### Course Subject Code (申請コード)

18B59

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Intensive course in the spring term (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Masao ADACHI

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Aquatic environmental science

#### Professor (Telephone)(担当教員電話)

088-864-5216

#### Professor (E-Mail)(担当教員)

madachi@kochi-u.ac.jp

# Keyword for the subject $(\not= \neg \neg \vdash)$

Harmful algal blooms, red tides, shellfish poisoning, Plankton

## Content and Objective (授業テーマと目的)

In this lecture, physiology, ecology and molecular biology of phytoplankton HAB(harmfulalgal bloom) species are introduced.

#### Teaching Materials(教科書·参考書)

Computer projector

#### Evaluation of Results (成績評価の方法)

Advanced environmental water quality engineering

#### Course Subject Code (申請コード)

18B60

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

### Year of commencement (履修開始年次)

2nd year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Associate Professor Taku FUJIWARA

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Sewage treatment

#### Professor (Telephone)(担当教員電話)

088-864-5163

#### Professor (E-Mail)(担当教員)

fujiwarat@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Sewage, Reactor, Mass balance, Microbial kinetics, The activated sludge process

# Content and Objective (授業テーマと目的)

Introduction of sewage treatment system

# Teaching Materials (教科書·参考書)

Computer projector/Printed synopsis

## Evaluation of Results (成績評価の方法)

Advanced plant molecular ecology

## Course Subject Code (申請コード)

18B61

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

#### Day/Period(時間割)

Intensive course in the fall term (Contact the lecturer to confirm the availability of the course.)

## Professor (Lecturer or Instructor)(担当教員名)

Tatsuya FUKUDA

# Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Molecular ecology

#### Professor (Telephone)(担当教員電話)

088-864-5140

#### Professor (E-Mail)(担当教員)

tfukuda@cc.kochi-u.ac.jp

# Keyword for the subject $(\not= \neg \neg \vdash)$

Ecology, Evolution, Plan

# Content and Objective (授業テーマと目的)

# Teaching Materials (教科書·参考書)

Printed synopsis

# Evaluation of Results (成績評価の方法)

Report after the course

Plant pathology

Course Subject Code (申請コード)

18B62

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

Day/Period(時間割)

Thursday/1st

Professor (Lecturer or Instructor)(担当教員名)

Akinori KIBA

Professor (Affiliation/Research field)(担当教員所属)

Professor (Telephone)(担当教員電話)

088-864-5196

Professor (E-Mail)(担当教員)

akiba@kochi-u.ac.jp

Keyword for the subject  $( \div \neg \neg \neg \vdash)$ 

Plant, Pathogen, Interactions, Defense responses

Content and Objective (授業テーマと目的)

Introduction to plant-microbe interactions.

Teaching Materials(教科書·参考書)

Computer projector/OHP/Printed synopsis

Evaluation of Results (成績評価の方法)

Presentation

Plant bacteriology

#### Course Subject Code (申請コード)

18B63

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Fall term orl spring term

Day/Period(時間割)

Friday/4th

### Professor (Lecturer or Instructor)(担当教員名)

Professor Yasufumi Hikichi

## Professor (Affiliation/Research field)(担当教員所属)

Kochi University/Plant Biotechnology & Biotechnology

Professor (Telephone)(担当教員電話)

088-864-5218

#### Professor (E-Mail)(担当教員)

yhikichi@kochi-u.ac.jp

# Keyword for the subject $(\not= \neg \neg \vdash)$

Plant, Pathology, Bacteriology, Plant-microbe interactions

# Content and Objective (授業テーマと目的)

Pathogenicity mechanism of plant bacteria, especially, gram negative bacteria, such as Ralstonia solanacearum, Burkholderia glumae, Pseudomonas cichorii et al.

#### Teaching Materials(教科書·参考書)

Computer projector

#### Evaluation of Results (成績評価の方法)

Environment control in agriculture

Course Subject Code (申請コード)

18B64

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

Day/Period(時間割)

Thursday/2nd (Contact the lecturer to confirm the availability of the course.)

Professor (Lecturer or Instructor)(担当教員名)

Daisuke YASUTAKE

Professor (Affiliation/Research field)(担当教員所属)

Kochi University

Professor (Telephone)(担当教員電話)

088-864-5127

Professor (E-Mail)(担当教員)

yasutake@kochi-u.ac.jp

**Keyword for the subject**  $( + \neg \neg )$ 

Measurement techniques, Plant response, Environment control, Plant production

Content and Objective (授業テーマと目的)

To study the transport processes in the plant-environment systems and their optimization.

Teaching Materials(教科書·参考書)

Computer projector/Printed synopsis

Evaluation of Results (成績評価の方法)

Ethnopharmacology and Natural Product Chemistry

# Course Subject Code (申請コード)

18B66

Credits (Units)(単位数)

1

## Class Work Type(授業種別)

Lecture

#### Year of commencement (履修開始年次)

1st year

Semester(履修期間)

Fall term

### Day/Period(時間割)

Not decided (Contact the lecturer to confirm the availability of the course.)

#### Professor (Lecturer or Instructor)(担当教員名)

Kazuhiro OHTANI

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi University

#### Professor (Telephone)(担当教員電話)

088-864-5177

#### Professor (E-Mail)(担当教員)

kazz@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg \vdash )$

Traditional medicine, Medical plants, Lifestyle-related disease

## Content and Objective (授業テーマと目的)

Lecture on ethnopharmacology, which is the study correlating ethnic groups, their health, and how it relates to their physical habits and methodology in creating and using medicines.

## Teaching Materials(教科書·参考書)

Computer projector /Printed synopsis

#### Evaluation of Results (成績評価の方法)

Advanced soil ecology

#### Course Subject Code (申請コード)

18B67

Credits (Units)(単位数)

1

# Class Work Type(授業種別)

Lecture

### Year of commencement (履修開始年次)

1st year

Semester (履修期間)

Spring term

#### Day/Period(時間割)

Monday/1st

#### Professor (Lecturer or Instructor)(担当教員名)

Associate Professor Sota TANAKA

#### Professor (Affiliation/Research field)(担当教員所属)

Kochi University / Soil ecology

#### Professor (Telephone)(担当教員電話)

088-864-5183

#### Professor (E-Mail)(担当教員)

sotatnk@kochi-u.ac.jp

#### **Keyword for the subject** $( + \neg \neg )$

Soil science, Soil ecology, Tropical agriculture

# Content and Objective (授業テーマと目的)

Fundamental soil science and ecology in terms of sustainable agriculture, especially the tropical region.

#### Teaching Materials(教科書·参考書)

Printed synopsis

#### Evaluation of Results (成績評価の方法)