

# **Course Requirement Guide Book**

**(October 2010)**

**Master's Program Given in English**

**TOYOHASHI UNIVERSITY OF TECHNOLOGY**

# I Requirements for graduation

## 1. Requirements for graduation

To complete the master's course, a student must participate in the Master's course for two or more years, and must acquire the minimum credits required as follows. Also, the student must carry out a research under a proper guidance by faculty members and must submit a master's thesis, and pass the review and final examination.

Note that students showing excellent achievements may finish in a shorter study period.

| Classification                                          | Required credits<br>for graduation | Remarks   |                                                                                                                                                                                                                                                   |
|---------------------------------------------------------|------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Courses                                         | 6                                  |           |                                                                                                                                                                                                                                                   |
| Specialized Courses                                     |                                    |           |                                                                                                                                                                                                                                                   |
| Mechanical Engineering major                            | 24                                 | 6 credits | (1) When considered appropriate by the supervisor, the credits shown on the left (6 credits) can be substituted in other majors.<br><br>(2) When considered appropriate by the supervisor, courses held in Japanese can be taken up to 6 credits. |
| Electrical and Electronic Information Engineering major | 24                                 | 6 credits |                                                                                                                                                                                                                                                   |
| Computer Science and Engineering major                  | 24                                 | 6 credits |                                                                                                                                                                                                                                                   |
| Environmental and Life Science major                    | 24                                 | 6 credits |                                                                                                                                                                                                                                                   |
| Architecture and Civil Engineering major                | 24                                 | 6 credits |                                                                                                                                                                                                                                                   |
| Grand total                                             | 30                                 |           |                                                                                                                                                                                                                                                   |

## 2. Application for degree

Only a student who has acquired the credits required for finishing, or who is expected to acquire the credits can apply for a master's degree. Submission procedures of thesis for master's degree shall be posted on a bulletin board before the submission period.

## II Class registration, examination, attendance period

### 1. Class registration method

Classes shall be registered according to the program schedule of the respective major.

#### (1) Making a study plan

Read this manual thoroughly, and follow the instructions and advice given during the orientation at the beginning of the academic year or that given by the supervisor, and set your class schedule in the course timetable.

Provide enough time-allowance to your schedule.

Note that some elective courses may be held in once in two year only.

The course timetable will be provided at the beginning of each academic year.  
Schedule for special intensive courses will be posted up on a bulletin board as soon as the details are fixed.

#### (2) Class registration

The student must register the classes by the sheet of "Course Registration List" or by Dream Campus (through TUT website) during the designated date. (<https://www.ead.tut.ac.jp/portal/>)

Those courses not registered will not be accredited in any case.

NOTE:

- 1 To take classes of other majors in the English Course or regular course given in Japanese, the student must obtain approval from the supervisor and course instructor with the "Other Major Course Approval Form", before registering the course.
- 2 If the student does not attend the class nor take the examinations, credits will not be given even if the registration is made.
- 3 A student can not re-register the courses once credits are given.
- 4 Courses held at the same class time cannot be registered. Note that this does not apply for courses being taken again for examinations only, or intensive courses.

#### (3) Confirming and amending the registration

To confirm your class registration and to amend it, please access to Dream Campus. Please refer to the manuals of Dream Campus for how to use .

#### (4) Repeating courses

Basically, a student who has failed in a class with the regular examination, or some other reasons, must take again the class in the next academic year.

The student must make registration again even if the class is a compulsory course for graduation and for the repeating.

#### (5) Repeating courses by examination, etc.

Only when the course instructor approves of crediting by passing the examination only without re-attend the classes, the student can submit and register the class with the "Request for repetition through examination".

## 2. Examination

Examination includes regular examination and makeup examination.

### (1) Regular examination

As a principle, regular examination shall be held during the set period at the end of each semester. Note that examination may be held at any time when found necessary by the course instructor.

The regular examination period and examination timetable, etc., will be posted up on a bulletin board.

### (2) Make-up examination

a) Make-up examination shall be held only when the student could not take the regular examination for the concerned course due to the following reasons. The student must gain the approval of the course instructor with the "Request for makeup examination" before taking the examination.

- 1) When the student is sick (doctor's medical certificate must be submitted)
  - 2) When considered appropriate due to accidents or disaster (certificate of proof must be submitted), and other special reasons (a letter explaining the reason must be submitted).
- b) The "Request for makeup examination" must be submitted to the Educational Affairs Division within one week from the final date of regular examination.
- c) If the student fails to take the makeup examination, further examination will not be held.

### (3) Approval of credits and evaluation

The course instructor shall approve the credits for the course through the means of examinations, etc.

Examinations are basically conducted at the end of each semester.

All students are to check the exam schedules on the academic calendar on Dream Campus (through TUT website), bulletin board at A-bldg. or printed calendar at the office of Academic Affairs Section. In addition, your instructor may schedule extra tests. All tests scheduling will be placed on the bulletin boards at lecture hall of A-bldg. 2 weeks before the day of start.

1) Your grades are calculated according to the following basis.

| Grade | Scores   | Approval                   |
|-------|----------|----------------------------|
| A     | Over 80  | Units certified            |
| B     | 65-79    | Units certified            |
| C     | 55-64    | Units certified            |
| D     | Under 55 | Units <b>NOT</b> certified |

2) The new grades will be available on Dream Campus after the certain days of the examination.

## 3. Maximum years of attendance

It is not possible for a student to be in the master's course at the university exceeding four years.

#### 4. Leave of absence

If the student cannot attend classes for two or more months successively due to illness or other special reasons, the student may submit "Request for leave of absence" to the Educational Affairs Division after getting the approval from the supervisor and department head. Upon approval from the President, the student may have a leave of absence (within two years in total).

The period that the student is absent will not be counted in the above "3. Maximum years of attendance".

To return to school after the end of the approved period, the student must submit the "Notification of return to school".

To return to school before the approved period due to the elimination of the reason, the student must submit the "Request to return to school" and obtain approval.

#### 5. Withdrawal

If the student wants to withdraw from the university, the student must submit "Request for withdrawal" to the Educational Affairs Division after getting the approval from the supervisor and department head. Upon approval from the President, the student may have withdrawal from the university.

#### 6. Elimination from the university

The student will be eliminated from the university for following reasons.

- 1) When the student exceed the period mentioned in above "3. Maximum years of attendance"
- 2) When the student cannot return to school after the period mentioned in above "4. Leave of absence."
- 3) When the student is died, or disappeared.
- 4) Those who are approved for the admission fee half exemption or postponement and who did not pay for the admission fee before the designated period.
- 5) Those who failed to pay for the tuition and did not pay for it even after the warning.

#### 7. Information about canceled or makeup classes.

All students may need to double-check about your class schedule and other information onfollowing bulletin boards:

| Location                                       |                                                                                                                                                           | information                                     |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Lecture hall at 1 <sup>st</sup> floor, A-bldg. | Central Bulletin Board (panel board)                                                                                                                      | Class schedule change (all semester)            |
|                                                | Electronic Bulletin Board (LCD)                                                                                                                           | Canceled or makeup classes, rescheduled notices |
|                                                | Glass-covered Bulletin Board                                                                                                                              | Others                                          |
| TUT website                                    | <a href="http://annai00.gakumu.tut.ac.jp/adlight/adlightwww/conduct_list_a.asp">http://annai00.gakumu.tut.ac.jp/adlight/adlightwww/conduct_list_a.asp</a> | Canceled or makeup classes                      |
|                                                | <a href="http://annai00.gakumu.tut.ac.jp/adlight/adlightweb/conduct_list_b.asp">http://annai00.gakumu.tut.ac.jp/adlight/adlightweb/conduct_list_b.asp</a> | Class schedule or classroom change              |
| TUT website for mobile phones                  | <a href="http://osirabe.net/tut/">http://osirabe.net/tut/</a><br>*Mobile tagging by camera phones                                                         | Canceled or makeup classes                      |

**\* TUT's policy for conducting classes/exams in case A STORM WARNING is announced.**

In case a Storm Warning (*Bo-fu Keiho*) is announced in South East Aichi Prefecture, TUT will conduct classes or examinations as follows:

- 1) In order to prevent any accident, All classes will be CANCELED (exams will be RESCHEDULED) during the Storm Warning.
- 2) If the Storm Warning is CLEARED BEFORE AM7:00, all classes (and tests) are on SCHEDULE.
- 3) If the Storm Warning is CLEARED Between AM7:00 and AM11:00, all classes (and tests) STARTS on 4<sup>TH</sup> HOUR (\*1st, 2nd and 3rd hr will be CANCELED)
- 4) If the Storm Warning is still ANNOUNCED AFTER AM11:00, ALL classes will be CANCELED (and tests will be RESCHEDULED).

**\*Information about RESCHEDULED CLASSES/EXAMS**

TUT will reschedule classes/exams canceled by natural disasters on occasional dates. The dates may also be used for makeup classes, students may check the schedules TWO WEEKS BEFORE THE DATES at lecture hall at A-Bldg.

However, rescheduled classes (tests) will COME FIRST on the occasional dates and scheduled makeup classes on the dates will be canceled. You must double check the information from TUT especially on unusual cases.

## III Curriculum

### 1. Classes and credits.

#### (1) Classes

Your classes are divided into General subjects and Specialized subjects. Numbers of credits are set for each subject.

( For the details of classes, see the General subjects and Specialized subjects written in the following pages.  
See the separate booklet or web syllabus for details of the classes. )

#### (2) Compulsory subjects and elective subjects

- 1) Compulsory subjects are the subjects that must be completed as the requirement of the major.
- 2) Elective subjects can be selected and taken from those subjects being offered for the designated numbers of credits.

#### (3) Calculating credits

Classes whose teaching type is lectures, seminars, experiments, practical or hands-on training, are offered individually or in combination among them. The class time for one credit is calculated under the following standards.

- 1) For lectures, one credit requires 15 hours of classes.
- 2) For exercise, one credit requires 30 hours of classes.
- 3) For experiments, practical or hands-on training, one credit requires 45 hours of classes.

#### (4) Class period

The class period is determined according to the academic year calendar, and consists of two semesters; Spring semester (from April 1 until September 30) and Fall semester (from October 1 until March 31)

| Compulsory<br>/<br>Elective | Subject Name                                       | Code No. | Credits | Classes/Week            |        |                         |           | Instructor                  | note |
|-----------------------------|----------------------------------------------------|----------|---------|-------------------------|--------|-------------------------|-----------|-----------------------------|------|
|                             |                                                    |          |         | 1st grade               |        |                         | 2nd grade |                             |      |
|                             |                                                    |          |         | Fall 1                  | Fall 2 | Spring 1                | Spring 2  |                             |      |
|                             |                                                    |          |         | 2010.10<br>-<br>2011. 3 |        | 2011. 4<br>-<br>2011. 9 |           |                             |      |
| Compulsory                  | Seminar on Mechanical Engineering I                | 4161001  | 4       | 4                       |        |                         |           | Supervisor                  |      |
|                             | Seminar on Mechanical Engineering II               | 4161002  | 2       |                         |        |                         | 2         | Supervisor                  |      |
|                             | Thesis Research on Mechanical Engineering          | 4161003  | 6       | 9                       |        |                         |           | Supervisor                  |      |
| Elective                    | Vibration and Impact Mechanics                     | 4163001  | 1       |                         |        |                         | 0.5       | S. Kawamura,<br>H. Minamoto |      |
|                             | Deformation Processing Technology                  | 4163002  | 1       | 1                       |        |                         |           | K. Mori                     |      |
|                             | Applied Mechanics of Materials                     | 4163003  | 1       |                         |        | 1                       |           | T. Adachi                   |      |
|                             | Micromachining Engineering                         | 4163004  | 1       |                         |        |                         | 0.5       | T. Shibata                  |      |
|                             | Biomechanics of Human Locomotion                   | 4163005  | 1       |                         |        |                         | 0.5       | Y. Yasuda                   |      |
|                             | Practical Surface Analysis                         | 4163006  | 1       |                         |        | 1                       |           | Y. Takeichi                 |      |
|                             | Joining and Surfacing of Materials                 | 4163007  | 1       |                         |        |                         | 0.5       | M. Fukumoto                 |      |
|                             | Science and Technology of Thin Films               | 4163008  | 1       |                         |        |                         | 1         | M. Izaki                    |      |
|                             | Deformation and Fracture of Materials              | 4163009  | 1       | 1                       |        |                         |           | H. Toda                     |      |
|                             | Phase Transformation in Materials                  | 4163010  | 1       |                         | 1      |                         |           | M.Umemoto                   |      |
|                             | Engineering Safety                                 | 4163011  | 1       |                         |        |                         | 0.5       | R. Batres                   |      |
|                             | Time-frequency Analysis and Wavelet Transform      | 4163012  | 1       |                         |        |                         | 0.5       | Z. Zhang                    |      |
|                             | Modeling and Analysis of Dynamical Control Systems | 4163013  | 1       |                         |        |                         | 0.5       | K. Terashima                |      |
|                             | Robotics                                           | 4163014  | 1       |                         |        |                         | 1         | N. Uchiyama                 |      |
|                             | Flight Mechanics                                   | 4163015  | 1       |                         |        |                         | 1         | S. Suzuki                   |      |
|                             | Applied Thermal Engineering                        | 4163016  | 1       | 1                       |        |                         |           | K.Kitamura                  |      |
|                             | Advanced Applied Fluid Engineering                 | 4163017  | 1       |                         |        |                         | 0.5       | M.Nakagawa,<br>H.Yanada     |      |
|                             | Applied Fluid Dynamics                             | 4163018  | 1       |                         |        |                         | 0.5       | A.Iida,<br>N.Sekishita      |      |
|                             | Applied Combustion Engineering                     | 4163019  | 1       |                         |        |                         | 0.5       | S.Noda                      |      |
|                             | Advanced Environmental Engineering for Metals      | 4163020  | 1       |                         |        |                         | 0.5       | S.Yokoyama                  |      |
|                             | Advanced Mechanical Systems Design I               | 4163021  | 2       | 1                       |        |                         | (1)       | Supervisor                  |      |
|                             | Advanced Mechanical Systems Design II              | 4163022  | 2       |                         |        | 1                       | (1)       | Supervisor                  |      |
|                             | Advanced Materials and Manufacturing Process I     | 4163023  | 2       | 1                       |        |                         | (1)       | Supervisor                  |      |
|                             | Advanced Materials and Manufacturing Process II    | 4163024  | 2       |                         |        | 1                       | (1)       | Supervisor                  |      |
|                             | Advanced System, Control and Robotics I            | 4163025  | 2       | 1                       |        |                         | (1)       | Supervisor                  |      |
|                             | Advanced System, Control and Robotics II           | 4163026  | 2       |                         |        | 1                       | (1)       | Supervisor                  |      |
|                             | Advanced Energy and Environmental Engineering I    | 4163027  | 2       | 1                       |        |                         | (1)       | Supervisor                  |      |
|                             | Advanced Energy and Environmental Engineering II   | 4163028  | 2       |                         |        | 1                       | (1)       | Supervisor                  |      |

◆ Those subjects whose numbers marked with "( )" will be held every year. Those subjects without "( )" will be held every two years.

# Electrical and Electronic Information Engineering

2010.10

| Compulsory<br>/<br>Elective | Subject Name                                                         | Code No. | Credits | Classes/Week            |                         |              | Instructor                                                           | note                  |
|-----------------------------|----------------------------------------------------------------------|----------|---------|-------------------------|-------------------------|--------------|----------------------------------------------------------------------|-----------------------|
|                             |                                                                      |          |         | 1st grade               |                         | 2nd<br>grade |                                                                      |                       |
|                             |                                                                      |          |         | Fall                    | Spring                  |              |                                                                      |                       |
|                             |                                                                      |          |         | 2010.10<br>-<br>2011. 3 | 2011. 4<br>-<br>2011. 9 |              |                                                                      |                       |
| Compulsory                  | Seminar on Electrical and Electronic Information Engineering         | 4261001  | 3       | 3                       |                         |              | Supervisor                                                           |                       |
|                             | Thesis Research on Electrical and Electronic Information Engineering | 4261002  | 6       | 9                       |                         |              | Supervisor                                                           |                       |
|                             | Advanced Mathematics for EEI                                         | 4261003  | 1.5     | 1                       |                         | (1)          | Supervisor                                                           |                       |
| Elective                    | Applied Physics                                                      | 4262001  | 1.5     | 1                       |                         | (1)          | Supervisor                                                           | Choose one<br>subject |
|                             | Applied Materials Chemistry                                          | 4262002  | 1.5     | 1                       |                         | (1)          | Supervisor                                                           |                       |
|                             | Applied Circuit Theory                                               | 4262003  | 1.5     | 1                       |                         | (1)          | Supervisor                                                           |                       |
|                             | Material Science for Electronics                                     | 4263001  | 2       | 1                       |                         |              | A. Matsuda,<br>Y. Nakamura,<br>T. Hattori,<br>K. Hattori,<br>H. Muto |                       |
|                             | Physics for Electronics                                              | 4263002  | 2       |                         |                         | 1            | A. Oota,<br>M. Fukuda,<br>M. Inoue                                   |                       |
|                             | Electrical Energy Systems                                            | 4263003  | 2       |                         | 1                       |              | M. Nagao,<br>H. Takikawa,<br>Y. Sakurai                              |                       |
|                             | Electrical Technology and Materials                                  | 4263004  | 2       |                         |                         | 1            | Y. Murakami,<br>Y. Suda                                              |                       |
|                             | Semiconductor Physics                                                | 4263005  | 2       | 1                       |                         |              | A. Wakahara,<br>K. Pak                                               |                       |
|                             | LSI Process                                                          | 4263006  | 2       |                         |                         | 1            | K. Sawada,<br>T. Kawano,<br>H. Okada                                 |                       |
|                             | Information and Communication Technology                             | 4263007  | 2       |                         | 1                       |              | T. Ohira,<br>H. Uehara                                               |                       |
|                             | Advanced Electronic Information System                               | 4263008  | 2       |                         |                         | 1            | S. Ichikawa,<br>K. Wada                                              |                       |
|                             | Methodology of R & D                                                 | 4263009  | 2       | 1                       |                         | (1)          | Supervisor                                                           |                       |

◆ Those subjects whose numbers marked with "( )" will be held every year. Those subjects without "( )" will be held every two years.

# Computer Science and Engineering

2010.10

| Compulsory<br>/<br>Elective | Subject Name                                        | Code No. | Credits | Classes/Week            |                         |                         | Instructor                   | note |
|-----------------------------|-----------------------------------------------------|----------|---------|-------------------------|-------------------------|-------------------------|------------------------------|------|
|                             |                                                     |          |         | 1st grade               |                         | 2nd<br>grade            |                              |      |
|                             |                                                     |          |         | Fall                    | Spring                  |                         |                              |      |
|                             |                                                     |          |         | 2010.10<br>-<br>2011. 3 | 2011. 4<br>-<br>2011. 9 | 2011.10<br>-<br>2012. 9 |                              |      |
| Compulsory                  | Seminar on Computer Science and Engineering I       | 4361001  | 4       | 4                       |                         |                         | Supervisor                   |      |
|                             | Seminar on Computer Science and Engineering II      | 4361002  | 2       |                         |                         | 2                       | Supervisor                   |      |
|                             | Thesis Research on Computer Science and Engineering | 4361003  | 6       | 9                       |                         |                         | Supervisor                   |      |
| Elective                    | Technical English Presentation                      | 4363001  | 2       | 2                       |                         | (2)                     | Supervisor                   |      |
|                             | System Design Project                               | 4363002  | 2       | 3                       |                         | (3)                     | Supervisor                   |      |
|                             | Speech and Language Processing                      | 4363003  | 2       |                         | 1                       | (1)                     | S. Nakagawa,<br>T. Akiba     |      |
|                             | Networking, Advanced                                | 4363004  | 2       | 1                       |                         | (1)                     | K. Umemura,<br>R. Ohmura     |      |
|                             | Advanced Robotics and Informatics                   | 4363005  | 2       | 1                       |                         | (1)                     | M. Okada,<br>J. Miura        |      |
|                             | Web Data Engineering                                | 4363006  | 2       |                         | 1                       | (1)                     | S. Kuriyama,<br>M. Aono      |      |
|                             | Applied Informatics                                 | 4363007  | 2       |                         | 1                       |                         | H. Kato                      |      |
|                             | Computers and Education                             | 4363008  | 2       |                         |                         | 1                       | K. Kawai                     |      |
|                             | Multimodal Information Processing                   | 4363009  | 2       |                         | 1                       |                         | T .Nitta,<br>K. Katsurada    |      |
|                             | Image Processing, Advanced                          | 4363010  | 2       |                         | 1                       | (1)                     | Y. Kanazawa,<br>Y. Sugaya    |      |
|                             | High Performance Computing                          | 4363011  | 2       |                         |                         | 1                       | H. Goto                      |      |
|                             | Software Engineering, Advanced                      | 4363012  | 2       |                         |                         | 1                       | S. Isoda                     |      |
|                             | Communication Systems, Advanced                     | 4363013  | 2       |                         | 1                       |                         | T. Ohira,<br>H. Uehara       |      |
|                             | Algorithm Engineering, Advanced                     | 4363014  | 2       | 1                       |                         | (1)                     | S. Masuyama,<br>T. Fujito    |      |
|                             | Computer Systems, Advanced                          | 4363015  | 2       | 1                       |                         | (1)                     | M. Sugihara,<br>R. Kobayashi |      |
|                             | Quantum Biology and Materials Science               | 4363016  | 2       |                         | 1                       | (1)                     | H. Sekino,<br>N. Kurita      |      |
|                             | Complex Systems and Intelligent Informatics         | 4363017  | 2       | 1                       |                         | (1)                     | Y. Ishida,<br>K. Murakoshi   |      |
|                             | Chemometrics                                        | 4363018  | 2       |                         |                         | 1                       | Y. Takahashi                 |      |
|                             | Bio-physical Information Systems                    | 4363019  | 2       |                         |                         | 1                       | J. Horikawa,<br>N. Fukumura  |      |
|                             | Advanced Topics in Brain and Cognitive Sciences     | 4363020  | 2       |                         |                         | 1                       | S. Nakauchi,<br>M. Kitazaki  |      |

◆ Those subjects whose numbers marked with "( )" will be held every year. Those subjects without "( )" will be held every two years.

# Environmental and Life Sciences

2010.10

| Compulsory<br>/ Elective | Subject Name                                                             | Code No. | Credits | Classes/Week            |                         |                         |                         |                         | Instructor                                               | note |
|--------------------------|--------------------------------------------------------------------------|----------|---------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|----------------------------------------------------------|------|
|                          |                                                                          |          |         | 1st grade               |                         |                         |                         | 2nd grade               |                                                          |      |
|                          |                                                                          |          |         | Fall 1                  | Fall 2                  | Spring 1                | Spring 2                |                         |                                                          |      |
|                          |                                                                          |          |         | 2010.10<br>-<br>2011. 3 | 2011. 4<br>-<br>2011. 9 | 2011. 4<br>-<br>2011. 9 | 2011. 4<br>-<br>2011. 9 | 2011.10<br>-<br>2012. 9 |                                                          |      |
| Compulsory               | Seminar on Environmental and Life Science I                              | 4461001  | 3       | 3                       |                         |                         |                         |                         | Supervisor                                               |      |
|                          | Seminar on Environmental and Life Science II                             | 4461002  | 3       |                         |                         |                         |                         | 3                       | Supervisor                                               |      |
|                          | Thesis Research on Environmental and Life Science                        | 4461003  | 6       | 9                       |                         |                         |                         |                         | Supervisor                                               |      |
| Elective                 | Advanced Separation Chemistry I                                          | 4463001  | 1       |                         |                         |                         |                         | 0.5                     | Y. Saito                                                 |      |
|                          | Advanced Separation Chemistry II                                         | 4463002  | 1       |                         |                         |                         |                         | 0.5                     | Y. Hirata                                                |      |
|                          | Applied Inorganic Chemistry I                                            | 4463003  | 1       | 1                       |                         |                         |                         |                         | N. Kakuta                                                |      |
|                          | Applied Inorganic Chemistry II                                           | 4463004  | 1       |                         |                         |                         | 1                       |                         | T. Mizushima                                             |      |
|                          | Applied Physical Chemistry I                                             | 4463005  | 1       |                         |                         |                         |                         | 0.5                     | A. Matsumoto                                             |      |
|                          | Applied Physical Chemistry II                                            | 4463006  | 1       |                         |                         |                         | 1                       |                         | T. Ogushi                                                |      |
|                          | Advanced Polymer Chemistry                                               | 4463007  | 1       | 1                       |                         |                         |                         |                         | S. Itsuno                                                |      |
|                          | Advanced Polymer Engineering                                             | 4463008  | 1       |                         | 1                       |                         |                         |                         | E. Yoshida                                               |      |
|                          | Advanced Composite Science                                               | 4463009  | 1       |                         |                         |                         |                         | 0.5                     | T. Takeichi                                              |      |
|                          | Special Topics in Applied Organic Chemistry                              | 4463010  | 1       |                         |                         | 1                       |                         |                         | S. Iwasa                                                 |      |
|                          | Developmental Neuroscience                                               | 4463011  | 1       |                         |                         |                         |                         | 0.5                     | S. Yoshida                                               |      |
|                          | Advanced Molecular Life Science                                          | 4463012  | 1       |                         | 1                       |                         |                         |                         | Y. Kikuchi,<br>T. Tanaka                                 |      |
|                          | Advanced Applied Biochemistry and Biotechnology                          | 4463013  | 1       |                         |                         |                         |                         | 0.5                     | A. Hiraishi,<br>T. Eki                                   |      |
|                          | Advanced Electrical and Electronic Technology for Ecological Engineering | 4463014  | 1       |                         |                         |                         |                         | 0.5                     | S. Tanaka,<br>Y. Hatsukade<br>A. Mizuno,<br>K. Takashima |      |
|                          | Advanced Environmental Numerical Engineering                             | 4463015  | 1       |                         |                         | 1                       |                         |                         | T. Kitada                                                |      |
|                          | Advanced Eco-Materials Engineering                                       | 4463016  | 1       |                         |                         |                         |                         | 0.5                     | H. Tsuji                                                 |      |
|                          | Advanced Environment Protection Engineering                              | 4463017  | 1       |                         |                         | 1                       |                         |                         | Y. Kiso                                                  |      |
|                          | Advanced Reaction Engineering                                            | 4463018  | 1       |                         |                         | 1                       |                         |                         | T. Oguchi                                                |      |
|                          | Advanced Sustainable Coordinator                                         | 4463019  | 1       |                         |                         |                         |                         | 0.5                     | N. Goto                                                  |      |
|                          | Advanced Supercritical Fluid Engineering                                 | 4463020  | 1       |                         |                         |                         |                         | 0.5                     | H. Daimon                                                |      |
|                          | ※ Advanced Life Science and Biotechnology I                              | 4463021  | 2       | 1                       |                         |                         |                         | (1)                     | Supervisor                                               |      |
|                          | ※ Advanced Life Science and Biotechnology II                             | 4463022  | 2       |                         |                         | 1                       |                         | (1)                     | Supervisor                                               |      |
|                          | ※ Advanced Environmental Technology I                                    | 4463023  | 2       | 1                       |                         |                         |                         | (1)                     | Supervisor                                               |      |
|                          | ※ Advanced Environmental Technology II                                   | 4463024  | 2       |                         |                         | 1                       |                         | (1)                     | Supervisor                                               |      |
|                          | ※ Advanced Environmental and Ecological Systems I                        | 4463025  | 2       | 1                       |                         |                         |                         | (1)                     | Supervisor                                               |      |
|                          | ※ Advanced Environmental and Ecological Systems II                       | 4463026  | 2       |                         |                         | 1                       |                         | (1)                     | Supervisor                                               |      |

※ Please ask your academic adviser about class schedule of this subject

◆ Those subjects whose numbers marked with "( )" will be held every year. Those subjects without "( )" will be held every two years.

# Architecture and Civil Engineering

2010.10

| Compulsory<br>/<br>Elective | Subject Name                                           | Code No. | Credits | Classes/Week            |                         |                         | Instructor    | note |
|-----------------------------|--------------------------------------------------------|----------|---------|-------------------------|-------------------------|-------------------------|---------------|------|
|                             |                                                        |          |         | 1st grade               |                         | 2nd<br>grade            |               |      |
|                             |                                                        |          |         | Fall                    | Spring                  |                         |               |      |
|                             |                                                        |          |         | 2010.10<br>-<br>2011. 3 | 2011. 4<br>-<br>2011. 9 | 2011.10<br>-<br>2012. 9 |               |      |
| Compulsory                  | Seminar on Architecture and Civil Engineering I        | 4561001  | 3       | 3                       |                         |                         | Supervisor    |      |
|                             | Seminar on Architecture and Civil Engineering II       | 4561002  | 3       |                         |                         | 3                       | Supervisor    |      |
|                             | Thesis Research on Architecture and Civil Engineering  | 4561003  | 6       | 9                       |                         |                         | Supervisor    |      |
| Elective                    | Elasticity and Stability                               | 4563001  | 2       |                         |                         | 1                       | S. Yamada     |      |
|                             | Finite Element Method for Continua and Bar Structures  | 4563002  | 2       |                         | 1                       |                         | S. Nakazawa   | *    |
|                             | Seismic Evaluation of Existing Buildings               | 4563003  | 2       |                         |                         | 1                       | Y. Sanada     |      |
|                             | Geologic Hazard and Mitigation Planning                | 4563004  | 2       |                         |                         | 1                       | M. Kawamura   |      |
|                             | Geotechnical Analysis                                  | 4563005  | 2       | 1                       |                         |                         | K. Miura      | *    |
|                             | Building Science: Indoor Air Quality and Ventilation   | 4563006  | 2       | 1                       |                         |                         | H. Matsumoto  | *    |
|                             | Building Climate                                       | 4563007  | 2       |                         | 1                       |                         | Y. Masuda     | *    |
|                             | Wave Forces on Offshore and Coastal Structures         | 4563008  | 2       |                         | 1                       |                         | S. Aoki       | *    |
|                             | Coastal Hydraulics                                     | 4563009  | 2       |                         |                         | 1                       | S. Kato       |      |
|                             | Water Quality Analysis                                 | 4563010  | 2       |                         |                         | 1                       | T. Inoue      |      |
|                             | Computer Applications in Urban Planning                | 4563011  | 2       | 1                       |                         |                         | A. Ohgai      | *    |
|                             | Human Settlement: Its History and Theory               | 4563012  | 2       |                         |                         | 1                       | H. Izumida    |      |
|                             | Advanced Study on Housing System and Housing Policy    | 4563013  | 2       |                         | 1                       |                         | S. Matsushima | *    |
|                             | Advanced District Planning                             | 4563014  | 2       |                         |                         | 1                       | J. Asano      |      |
|                             | Advanced Transportation and Traffic Engineering        | 4563015  | 2       |                         |                         | 1                       | Y. Hirobata   |      |
|                             | Modeling Regional Environment                          | 4563016  | 2       | 1                       |                         |                         | Y. Miyata     | *    |
|                             | Management of Technology                               | 4563017  | 2       |                         | 1                       |                         | T. Fujiwara   | *    |
|                             | Advanced Computational Economics                       | 4563018  | 2       |                         |                         | 1                       | H. Shibusawa  |      |
|                             | ※ Advanced Structural System Planning and Design I     | 4563019  | 2       | 1                       |                         | (1)                     | Supervisor    |      |
|                             | ※ Advanced Structural System Planning and Design II    | 4563020  | 2       |                         | 1                       | (1)                     | Supervisor    |      |
|                             | ※ Advanced Environmental System Planning and Design I  | 4563021  | 2       | 1                       |                         | (1)                     | Supervisor    |      |
|                             | ※ Advanced Environmental System Planning and Design II | 4563022  | 2       |                         | 1                       | (1)                     | Supervisor    |      |
|                             | ※ Advanced Regional System Planning and Design I       | 4563023  | 2       | 1                       |                         | (1)                     | Supervisor    |      |
|                             | ※ Advanced Regional System Planning and Design II      | 4563024  | 2       |                         | 1                       | (1)                     | Supervisor    |      |
|                             | ※ Advanced Regional System Planning and Design III     | 4563025  | 2       |                         | 1                       | (1)                     | Supervisor    |      |

※ Please ask your academic adviser about class schedule of this subject

◆ Those subjects whose numbers marked with "( )" will be held every year. Those subjects without "( )" will be held every two years.

# General courses

2010.10

| Compulsory<br>/<br>Elective | Subject Name                 | Code No. | Credits | Classes/Week            |                         |                         |          | Instructor                | note |              |
|-----------------------------|------------------------------|----------|---------|-------------------------|-------------------------|-------------------------|----------|---------------------------|------|--------------|
|                             |                              |          |         | 1st grade               |                         |                         |          |                           |      | 2nd<br>grade |
|                             |                              |          |         | Fall 1                  | Fall 2                  | Spring 1                | Spring 2 |                           |      |              |
|                             |                              |          |         | 2010.10<br>-<br>2011. 3 | 2011. 4<br>-<br>2011. 9 | 2011.10<br>-<br>2012. 9 |          |                           |      |              |
| Elective                    | Management Science           | 4003001  | 2       |                         |                         | 1                       | (1)      | Y. Miyata,<br>T. Fujiwara |      |              |
|                             | Industrial Policies          | 4003002  | 2       |                         |                         | 1                       | (1)      | H. Shibusawa              |      |              |
|                             | Culture and Communication I  | 4003003  | 2       | 1                       |                         |                         |          | Y. Innami                 |      |              |
|                             | Culture and Communication II | 4003004  | 2       |                         |                         |                         | 1        |                           |      |              |
|                             | Japanese Life Today          | 4003005  | 2       |                         |                         | 1                       | (1)      | T. Hayashi                |      |              |
|                             | Intercultural Communication  | 4003006  | 2       |                         |                         | 1                       | ( 1 )    | Y. Muramatsu              |      |              |

◆ Those subjects whose numbers marked with "( )" will be held every year. Those subjects without "( )" will be held every two years.

# I カリキュラム及び修了要件等（英語コース）

## 1. 修了要件

博士前期課程の修了要件は、博士前期課程に2年以上在学し、課程修了に必要な最低修得単位数を以下のとおり修得し、かつ、必要な研究指導を受けた上、修士論文を提出し、その審査及び最終試験に合格することと定められています。ただし、優れた業績を上げた者については、在学期間を短縮して修了することができます。

| 区 分  |              | 修了要件単<br>位数 | 備 考  |                                                                                                                                            |
|------|--------------|-------------|------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 共通科目 |              | 6           |      |                                                                                                                                            |
| 専攻科目 | 機械工学専攻       | 24          | 6 単位 | ① 指導教員が適当と認めた場合は、<br>6 単位までに限り、他専攻の科目（特別<br>講義を除く）をもって代替できる。<br><br>② 指導教員が適当と認めた場合は、<br>①と合わせ、6 単位までに限り、日本語<br>で行われている専攻科目をもって、代<br>替できる。 |
|      | 電気・電子情報工学専攻  | 24          | 6 単位 |                                                                                                                                            |
|      | 情報・知能工学専攻    | 24          | 6 単位 |                                                                                                                                            |
|      | 環境・生命工学専攻    | 24          | 6 単位 |                                                                                                                                            |
|      | 建築・都市システム学専攻 | 24          | 6 単位 |                                                                                                                                            |
| 計    |              | 30          |      |                                                                                                                                            |

## 2. 学位の申請

修了要件の単位を修得した者、又は修得見込みの者でなければ学位を申請することができません。なお、学位論文等の提出については、掲示で通知します。

# I カリキュラム及び修了要件等（ツイニング・プログラム）

## 1. 修了要件

博士前期課程の修了要件は、博士前期課程に1年以上在学し、課程修了に必要な最低修得単位数を以下のとおり修得し、かつ、必要な研究指導を受けた上、修士論文を提出し、その審査及び最終試験に合格することと定められています。ただし、優れた業績を上げた者については、在学期間を短縮して修了することができます。

| 区 分              |            | 修了要件単<br>位数 | 備 考  |  |
|------------------|------------|-------------|------|--|
| 共通科目             |            | 6           |      |  |
| 専<br>攻<br>科<br>目 | 機械工学専攻     | 24          | 6 単位 |  |
|                  | 生産システム工学専攻 | 24          | 6 単位 |  |
|                  | 電気・電子工学専攻  | 24          | 6 単位 |  |
|                  | 情報工学専攻     | 24          | 6 単位 |  |
|                  | 物質工学専攻     | 24          | 6 単位 |  |
|                  | 建設工学専攻     | 24          | 6 単位 |  |
|                  | 知識情報工学専攻   | 24          | 6 単位 |  |
|                  | エコロジー工学専攻  | 24          | 6 単位 |  |
| 計                |            | 30          |      |  |

ツイニングコースの学生は、本学の基準により、協定校で修得した単位数を上限10単位まで、本学で修得した単位数として認定しています。

## 2. 学位の申請

修了要件の単位を修得した者、又は修得見込みの者でなければ学位を申請することができません。なお、学位論文等の提出については、掲示で通知します。

## II 履修方法，試験，在学年限等

### 1. 履修方法

授業科目は，在学専攻の教育課程に従って履修してください。

#### (1) 履修計画

履修計画は，本書をよく読み，年度初めに行われるガイダンスや指導教員の指導・助言をもとに，授業時間割表により余裕をもって立ててください。

なお，選択科目は，都合により開講されない場合がありますので，十分注意してください。

① 授業時間割表については，各学年の初めに配付します。

なお，集中講義科目については開講時期等が決定次第，掲示等により通知します。

② 履修に関する連絡は，学年の始め及び学期の始めに集中するので，見落とさないように注意してください。

#### (2) 履修登録

履修しようとする授業科目は，次の学生用WEB画面から，各学期の所定の期日までにその学期から開始される科目で履修を希望する科目をすべて履修登録しなければいけません。

履修登録にあたっては，Dream Campus基本操作マニュアル（学生用）を参照してください。

なお，他専攻，試験等による再履修はWEB画面からではなく，紙様式による登録となります。履修登録していない授業科目の単位認定は，一切認められませんので注意してください。

学生用WEB <https://www.ead.tut.ac.jp/portal/>

① 他専攻及び他課程の授業科目を履修しようとする場合は，「他課程（専攻）科目受講許可願」により指導教員及び授業担当教員の許可を受けた上で履修登録してください。

② 履修登録したにもかかわらず，授業や試験を受けない場合は，その授業科目は不合格とします。

③ 単位を修得した授業科目は，再度履修登録できません。

④ 同一時間に開講される授業科目は，重複して履修できません。重複して履修登録した場合，両方の科目が登録されないの注意してください。ただし，試験等による再履修科目及び集中講義科目については，この限りではありません。

#### (3) 履修登録の確認

履修登録の確認は，各自学生用WEB画面から行ってください。

#### (4) 再履修

定期試験等で不合格となった授業科目のうち，修得を必要とする授業科目は，原則として次年度に再履修しなければなりません。

なお，再履修しようとする授業科目についても，履修登録をしてください。

#### (5) 試験等による再履修

再履修の場合で，授業科目担当教員が，試験等により単位認定すると認めた場合に限り，「試験等による再履修願」（紙様式）により授業科目担当教員の許可を受けた上で履修登録をしてください。

## 2. 試験

試験には、定期試験及び追試験があります。

### (1) 定期試験

定期試験は、原則として各学期末に一定の期間を定めて実施します。ただし、授業科目担当教員が必要と認めた場合は、随時に試験が行われます。

なお、定期試験の実施期間及び試験時間割等は、その都度掲示等で通知します。

### (2) 追試験

① 追試験は、学生が次の理由により、当該授業科目の定期試験を受けることができなかった場合に限り、「追試験受験許可願」に授業科目担当教員等の許可を受けた上で、受験することができます。

ア 病気（医師の診断書を添付）のとき

イ 事故・災害（証明書を添付）及びその他（理由書を添付）正当と認められるとき

② 「追試験受験許可願」は、定期試験最終日の翌日から数えて1週間以内に教務課へ提出しなければいけません。

③ 追試験を受験できなかった場合、再度の追試験は実施しません。

### (3) 単位の認定及び成績評価

授業科目の単位認定は、試験等により授業科目担当教員が行います。

① 成績の評価は次の基準によって行い、A、B及びCを合格、Dを不合格とし、C以上の評価を得た場合に単位を認定します。

A・・・80点以上

B・・・65点以上80点未満

C・・・55点以上65点未満

D・・・55点未満

② 単位認定された成績は、各自学生用WEB画面で確認ができます。

## 3. 在学年限

修士課程の学生は、4年（ツイニングコースは2年）を超えて在学することができない。

## 4. 休学

疾病その他特別の理由により、引き続き2か月以上修学することができない場合は、所定の「休学願」を指導教員及び所属系長を経由して、原則として休学をしようとする月の前々月の末までに教務課へ提出し、学長の許可を得て休学することができます（通算して2年以内）。

休学期間は、前記「(1) 在学年限」に算入しません。

なお、休学期間が満了となり、復学する場合は、必ず「復学届」を提出してください。

また、休学事由の消滅により、休学期間中に復学しようとする場合は、「復学願」を提出し、原則として復学をしようとする月の前々月の末日までに教務課へ提出し、学長の許可を受けなければいけません。

## 5. 退学

退学しようとする者は、所定の「退学願」を指導教員及び所属系長を経由して、退学をしようとする月の前月の末日までに教務課へ提出し、学長の許可を受けなければいけません。

## 6. 除籍

次の各号の一に該当する場合は、除籍となります。

- ① 前記「(1) 在学年限」に定める期間を超えた者
- ② 前記「(2) 休学」に定める期間を超えて、なお修学できない者
- ③ 死亡又は行方不明の者
- ④ 入学料の免除又は徴収猶予を申請した者のうち、免除若しくは徴収猶予が不許可になった者又は半額免除若しくは徴収猶予が許可になった者で、所定の期日までに入学料を納付しない者
- ⑤ 授業料の納付を怠り、督促してもなお納付しない者

## 7. 休講・補講情報

大学から学生に対する種々の連絡は、原則として講義棟 A 棟掲示板及び電子掲示板で周知しますので、留意して下さい。

| 掲示版の場所      |                                                                                                                                                                                        | 掲載情報         |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| A 棟 1 階 ホール | 中央掲示版 (パネル)                                                                                                                                                                            | 学期を通しての時間割変更 |
|             | 電光掲示版                                                                                                                                                                                  | 休講・補講・時間割変更等 |
|             | ガラス掲示版                                                                                                                                                                                 | その他          |
| 大学 HP       | <a href="http://annai00.gakumu.tut.ac.jp/adlight/adlightwww/conduct_list_a.asp">http://annai00.gakumu.tut.ac.jp/adlight/adlightwww/conduct_list_a.asp</a>                              | 休講・補講        |
|             | <a href="http://annai00.gakumu.tut.ac.jp/adlight/adlightweb/conduct_list_b.asp">http://annai00.gakumu.tut.ac.jp/adlight/adlightweb/conduct_list_b.asp</a>                              | 講義室変更        |
| 携帯情報        | <a href="http://osirabe.net/tut/">http://osirabe.net/tut/</a><br>*Mobile tagging by camera phones  | 休講・補講        |

## ❖ 台風来襲等に伴い暴風警報が発令されたときの授業及び定期試験の取扱

台風来襲等に伴い暴風警報が発令されたときは、授業及び定期試験の実施については、次のとおり取り扱いますので留意してください。

- ① 暴風による事故の発生を防止するため、暴風警報の発令中は授業を休講とし、定期試験は予備日に振り替えます。
- ② 愛知県東三河南部地方に発令された暴風警報が、午前7時までに解除された場合は、第1時限から通常どおり授業及び定期試験を行います。
- ③ 愛知県東三河南部地方に発令された暴風警報が、午前7時から午前11時までに解除された場合は、第3時限から通常どおり授業及び定期試験を行います。
- ④ 愛知県東三河南部地方に発令された暴風警報が、午前11時までに解除されなかった場合は、当日の授業は休講とし、定期試験は予備日に振り替えます。

✧授業予備日について

本学では毎学期、通常授業日終了後・定期試験期間前に、天災で授業ができなかった場合を予測し、授業予備日を設けています。授業予備日は、台風等天災が発生せず使用する必要がない場合、補講に利用されます。その場合の時間割は、予備日の1週間前から、A棟学生ホールの掲示板等に掲示します。

この時間割は、予備日までの間に台風等天災が発生せず、授業予備日を使用する必要がない場合に限りです。当日までに授業予備日を使用する必要が生じた場合は、この補講はすべて無効とし、授業振替日とします。

### III 履修方法等

#### 1 授業科目・単位等

##### (1) 授業科目

授業科目は、大きく共通科目と専攻科目に分かれ、それぞれの授業科目ごとに単位を定めています。

開講授業科目については、共通科目等及び専攻科目を参照してください。

なお、授業科目の内容については、本学ホームページの「授業紹介」を参照してください。

##### (2) 必修科目、選択必修科目及び選択科目

- ① 必修科目は、必ず履修して単位を修得しなければならない科目です。
- ② 選択必修科目は、指定された複数の科目群の中から選択して履修し、決められた科目数又は単位数以上を修得しなければならない科目です。
- ③ 選択科目は、開講されている科目の中から選択して履修し、単位を修得する科目です。

##### (3) 単位の計算方法

授業は、講義、演習、実験、実習及び実技のいずれか、又はこれらの併用により行われますが、1単位の履修時間は、45時間の学修を必要とする内容をもって構成することを標準とし、次の基準により計算します。

- ① 講義については、15時間の授業と30時間の予習・復習をもって1単位とします。
- ② 演習については、30時間の授業と15時間の予習・復習をもって1単位とします。
- ③ 実験、実習及び実技については、45時間の授業をもって1単位とします。

##### (4) 授業期間

授業期間は、学年暦によって定めており、前期及び後期の2学期から成っています。

〔学期の区分〕

前期：4月1日～ 9月30日、 後期：10月1日～3月31日