

## 履修方法・修了要件

## 理工情報生命学院 国際連携持続環境科学専攻 博士前期課程

※1 筑波大学を主大学とする学生 ※2 マレーシア日本国際工科院を主大学とする学生

| 科目区分   | 科目群等   | 条件又は科目名等                  | 修得単位数 |   |      |
|--------|--------|---------------------------|-------|---|------|
| 専門科目   | 必修科目   | 環境科学概論                    | 1.0   | } |      |
|        |        | 環境科学演習                    | 1.0   |   |      |
|        |        | 環境科学実習                    | 1.0   |   |      |
|        |        | 合同セミナー                    | 1.0   |   |      |
|        |        | 持続性マネジメント政策               | 3.0   |   |      |
| 修論研究科目 | 選択必修科目 | 環境科学セミナー 1                | 2.0   |   | }    |
|        |        | 環境科学セミナー 2                | 2.0   |   |      |
|        |        | Master Project 1          | 6.0   |   |      |
|        |        | 環境科学特別研究 2S               | 3.0   |   |      |
|        |        | 環境科学特別研究 2F               | 3.0   |   |      |
|        |        | Master Project 2          | 6.0   |   |      |
|        |        |                           |       |   |      |
| 教養科目   | 選択必修科目 | 研究マネージメント技術               | 1.0   |   | }    |
|        |        | 科学英語執筆                    | 1.0   |   |      |
|        |        | 生命科学工学討論                  | 2.0   |   |      |
|        |        | 応用環境倫理学                   | 2.0   |   |      |
|        |        | 研究方法論                     | 3.0   |   |      |
|        |        | 大学院共通科目                   | 3.0   |   |      |
|        |        |                           |       |   |      |
| 専門選択科目 | 選択科目   | 《筑波大学開講科目》環境政策シミュレーション    | 2.0   | } |      |
|        |        | 水環境論                      | 2.0   |   |      |
|        |        | 廃棄物管理序論                   | 2.0   |   |      |
|        |        | 固体廃棄物管理システム設計論            | 2.0   |   |      |
|        |        | 生物資源再利用循環論                | 2.0   |   |      |
|        |        | 熱帯気候・地球規模モンスーン論           | 1.0   |   |      |
|        |        | 陸域生態論                     | 1.0   |   |      |
|        |        | 環境政策概論                    | 1.0   |   |      |
|        |        | 《マレーシア日本国際工科院開講科目》環境影響評価論 | 3.0   |   |      |
|        |        | ライフサイクルアセスメント             | 3.0   |   |      |
|        |        | 再生可能エネルギー論                | 3.0   |   |      |
|        |        | 持続的食料システム論                | 3.0   |   |      |
|        |        | グリーンエコノミー論                | 3.0   |   |      |
|        |        | 低炭素都市論                    | 3.0   |   |      |
|        |        | スマートコミュニティ論               | 3.0   |   |      |
|        |        | 応用持続可能システム論               | 3.0   |   |      |
|        |        | 修了単位数                     |       |   | 46.0 |

必修科目及び選択必修科目(専門・修論研究・教養)を29単位、専門選択科目を17単位以上、合計46単位以上修得し、修士論文審査に合格すること。

なお、専門選択科目は、筑波大学開講科目から8単位以上、マレーシア日本国際工科院開講科目から9単位以上を修得しなければならない。

## Guidelines and Requirements

Joint Master's Degree Program in Sustainability and Environmental Sciences

Graduate School of Science and Technology

※1 Students registered at UT as Home Institution

※2 Students registered at MJIIT as Home Institution

| Course Designation                    | Course Group                                           | Course Name                                                                   | Required Credits |   |   |
|---------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------|------------------|---|---|
| Core                                  | Compulsory                                             | Introduction to Environmental Sciences                                        | 1.0              | } |   |
|                                       |                                                        | Exercises in Environmental Sciences                                           | 1.0              |   |   |
|                                       |                                                        | Field and Laboratory Practices in Environmental Sciences                      | 1.0              |   |   |
|                                       |                                                        | Tsukuba-MJIIT Joint Seminar                                                   | 1.0              |   |   |
|                                       |                                                        | Sustainability Management and Policy                                          | 3.0              |   |   |
| Research                              | Compulsory Elective                                    | UT and MJIIT Compulsory ※1                                                    | 2.0              | } |   |
|                                       |                                                        | ※2                                                                            | 2.0              |   |   |
|                                       |                                                        | Master Project 1                                                              | 6.0              |   |   |
|                                       |                                                        | UT Compulsory ※1                                                              | 3.0              |   |   |
|                                       |                                                        | Thesis Seminar in Environmental Sciences 2F                                   | 3.0              |   |   |
| General                               | Compulsory Elective                                    | MJIIT Compulsory ※2                                                           | 6.0              | } |   |
|                                       |                                                        | Master Project 2                                                              | 6.0              |   |   |
|                                       |                                                        | Research Management Skills                                                    | 1.0              |   |   |
|                                       |                                                        | Scientific Writing in English-Practice                                        | 1.0              |   |   |
|                                       |                                                        | Debating Current Topics in Life Science and Engineerng                        | 2.0              |   |   |
| Elective                              | Elective                                               | Applied Environmental Ethics(Introduction to English Presentation and Debate) | 2.0              | } |   |
|                                       |                                                        | MJIIT Compulsory ※2                                                           | 3.0              |   |   |
|                                       |                                                        | University Course                                                             | 3.0              |   |   |
|                                       |                                                        | Simulation of Environmental Policy                                            | 2.0              |   |   |
|                                       |                                                        | Introduction to Water Environment                                             | 2.0              |   |   |
|                                       |                                                        | Introduction to Waste Management                                              | 2.0              |   |   |
|                                       |                                                        | Solid Waste Management Systems Planning                                       | 2.0              |   |   |
|                                       |                                                        | Utilization and Recycling of Bioresources                                     | 2.0              |   |   |
|                                       | 《Malaysia-Japan International Institute of Technology》 | Tropical Climate and Global Monsoon                                           | 1.0              |   | } |
|                                       |                                                        | Terrestrial Ecology                                                           | 1.0              |   |   |
|                                       |                                                        | Introduction to Environmental Policy                                          | 1.0              |   |   |
|                                       |                                                        | Environmental Impact Assessment                                               | 3.0              |   |   |
|                                       |                                                        | Life Cycle Assessment                                                         | 3.0              |   |   |
|                                       |                                                        | Renewable Energy                                                              | 3.0              |   |   |
|                                       |                                                        | Sustainable Food Systems                                                      | 3.0              |   |   |
| Green Economy                         | 3.0                                                    | }                                                                             |                  |   |   |
|                                       | Low Carbon Cities                                      |                                                                               | 3.0              |   |   |
|                                       | Smart Communities                                      |                                                                               | 3.0              |   |   |
| Applied Sustainable Systems           |                                                        |                                                                               | 3.0              |   |   |
| Total credits required for completion |                                                        |                                                                               | 46.0             |   |   |

Students are required to earn more than 46 credits in total, 29 credits from Compulsory courses and Compulsory Elective courses and 17 or more credits from Elective courses, consisted of 8 or more credits from UT courses and 9 or more credits from MJIIT courses.

Students are required to pass the defense of Master's Thesis and final examinations.