

| 理工学部生命科学専攻 生命地球科学研究科 博士前期課程                                                                              |                          |                                                                                       |                                                             |                                      |                |                |                        |                         |                             | 汎用コンピテンシ<br>Generic Competences                           |                                                      |                                            |                                                 |                                     | 専門コンピテンシ<br>Specific Competences           |                                                              |                                                  |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------|----------------|----------------|------------------------|-------------------------|-----------------------------|-----------------------------------------------------------|------------------------------------------------------|--------------------------------------------|-------------------------------------------------|-------------------------------------|--------------------------------------------|--------------------------------------------------------------|--------------------------------------------------|--------------------------------------------|--------------------------------------------------------------|--------------------------------------------------|--------------------------------|--|--|--|--|--|--|
| Master Programs in Life and Earth Sciences, Graduate School of Science and Technology (Master's Program) |                          |                                                                                       |                                                             |                                      |                |                |                        |                         |                             | 1<br>知の<br>活用能力<br>Knowledge<br>application<br>competence |                                                      |                                            |                                                 |                                     | 2<br>マネージメント能力<br>Management<br>competence | 3<br>コミュニケーション能力<br>Communication<br>competence              | 4<br>チームワーク力<br>Teamwork competence              | 5<br>国際性<br>Internationality<br>competence | 1<br>理解力・解析力<br>Comprehensive<br>ability/analysis<br>ability | 2<br>課題対応力<br>Ability to<br>correspond to issues | 3<br>提言力<br>Ability to suggest |  |  |  |  |  |  |
| 科目<br>区分<br>Course<br>Category                                                                           | 科目番号<br>Course<br>Number | 授業科目の名称<br>Course Name                                                                | 標準<br>単位<br>Standard<br>Credits                             | 修得<br>年次<br>Acquisi-<br>tion<br>year | 学修後<br>Credits |                |                        | 授業形態<br>Course Schedule |                             |                                                           | 知の<br>活用能力<br>Knowledge<br>application<br>competence | 2<br>マネージメント能力<br>Management<br>competence | 3<br>コミュニケーション能力<br>Communication<br>competence | 4<br>チームワーク力<br>Teamwork competence | 5<br>国際性<br>Internationality<br>competence | 1<br>理解力・解析力<br>Comprehensive<br>ability/analysis<br>ability | 2<br>課題対応力<br>Ability to<br>correspond to issues | 3<br>提言力<br>Ability to suggest             |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          |                          |                                                                                       |                                                             |                                      | 必修<br>Required | 選択<br>Elective | 自由<br>Free<br>elective | 講義<br>Lecture           | 実習<br>Practical<br>training | 演習<br>Exercise                                            |                                                      |                                            |                                                 |                                     |                                            |                                                              |                                                  |                                            | 研究<br>Research                                               |                                                  |                                |  |  |  |  |  |  |
| 環境科学専攻プログラム (M) Master's Program in Environmental Sciences                                               |                          |                                                                                       |                                                             |                                      |                |                |                        |                         |                             |                                                           |                                                      |                                            |                                                 |                                     |                                            |                                                              |                                                  |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
| 専門基礎科目<br>Foundation<br>Subjects<br>for Major                                                            | ENV0016                  | Introduction to Environmental Science                                                 |                                                             | 1                                    | 2              |                |                        | ○                       |                             |                                                           |                                                      | ○                                          |                                                 |                                     |                                            | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0001                  | Basics in Environmental Science                                                       |                                                             | 1                                    | 1              |                |                        |                         | ○                           |                                                           |                                                      | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0001                  | Lab Seminar in Environmental Science 01                                               |                                                             | 1                                    | 2              |                |                        | ○                       |                             | ○                                                         |                                                      | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0002                  | Lab Seminar in Environmental Science 02                                               |                                                             | 1                                    | 2              |                |                        | ○                       |                             | ○                                                         |                                                      | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0003                  | Lab Seminar in Environmental Science 03                                               |                                                             | 2                                    | 2              |                |                        |                         |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0004                  | Lab Seminar in Environmental Science 04                                               |                                                             | 2                                    | 2              |                |                        |                         |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0011                  | Basic Seminar in Environmental Science 01                                             |                                                             | 1                                    | 2              |                |                        | ○                       |                             | ○                                                         |                                                      | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0012                  | Basic Seminar in Environmental Science 02                                             |                                                             | 1                                    | 2              |                |                        | ○                       |                             | ○                                                         |                                                      | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0013                  | Basic Seminar in Environmental Science 03                                             |                                                             | 2                                    | 2              |                |                        | ○                       |                             | ○                                                         |                                                      | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0014                  | Basic Seminar in Environmental Science 04                                             |                                                             | 2                                    | 2              |                |                        | ○                       |                             | ○                                                         |                                                      | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0021                  | 環境科学実践実習I                                                                             | Environmental Science Practicum I                           | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0022                  | Environmental Science Practicum I                                                     |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0023                  | 環境科学実践実習II                                                                            | Environmental Science Practicum II                          | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0024                  | Environmental Science Practicum II                                                    |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0025                  | 環境科学実践実習III                                                                           | Environmental Science Practicum III                         | 1-2                                  | 4              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0026                  | Environmental Science Practicum III                                                   |                                                             | 1-2                                  | 4              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0031                  | 環境科学特講I                                                                               | Environmental Science Special Lecture I                     | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0032                  | 環境科学特講II                                                                              | Environmental Science Special Lecture II                    | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0041                  | International Field Appraisal I                                                       |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0042                  | International Field Appraisal II                                                      |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0043                  | Environmental Field Practice                                                          |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0051                  | 大気汚染学                                                                                 | Air Pollution                                               | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0052                  | 環境物質輸送学                                                                               | Transport Processes in the Terrestrial Environments         | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0053                  | 地球環境統計学                                                                               | Lecture on Statistical Analysis in Geoenvironmental Science | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0054                  | Soil and Water Environmental Global Science                                           |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0055                  | 植物環境生理学                                                                               | Plant Environmental Physiology                              | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0057                  | 環境生物化学                                                                                | Ecological Biochemistry                                     | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0058                  | 環境化学物質リスク論                                                                            | Risk Assessment and Management of Chemicals in Environment  | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0059                  | 食料環境健康科学特論                                                                            | Environmental Sciences for Food and Medicinal Resources     | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0061                  | 水環境学                                                                                  | Environmental Hydrology                                     | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0061                  | Introduction to Water Environment                                                     |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0062                  | Environmental Soil Science                                                            |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0063                  | Environmental Analytical Chemistry                                                    |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0064                  | Environmental Microbiology                                                            |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0065                  | Remote Sensing                                                                        |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0065                  | Urbanization and Recycling of Bio-Resources                                           |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0066                  | Introduction to Water Resource (Solid Waste Management System General)                |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0067                  | Solid Waste Management Systems Planning                                               |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0068                  | Climate System Study I                                                                |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0069                  | Environmental Psychology                                                              |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                | ○                                          |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0070                  | Vegetation Science                                                                    |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0071                  | Environmental Field Appraisal                                                         |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0072                  | 陸域生態学                                                                                 | Terrestrial Ecology                                         | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0073                  | Introduction to Ecology                                                               |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0074                  | 水圏生態学                                                                                 | Aquatic Ecology                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0075                  | 地域環境健康学                                                                               | Regional Environmental Health Sciences                      | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0076                  | Environmental Law                                                                     |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0077                  | 植物学                                                                                   | Vegetation Science                                          | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0077                  | Environmental Analysis and Planning                                                   |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0078                  | Applied Environmental Ethics (Introduction to English Translation and Interpretation) |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0079                  | Environmental Health Perspectives                                                     |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0080                  | Simulation of Environmental Policy                                                    |                                                             | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0081                  | 環境防災計画論                                                                               | Environmental Disaster Prevention Policy                    | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0082                  | 環境防災政策論                                                                               | Environmental Disaster Prevention Planning                  | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0083                  | Climate System Study I                                                                |                                                             | 1-2                                  | 1              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
|                                                                                                          | ENV0084                  | 環境化学物質リスク評価・管理論                                                                       | Chemical Risk Assessment and Management in Environment      | 1-2                                  | 2              |                |                        | ○                       |                             | ○                                                         | ○                                                    |                                            | ○                                               | ○                                   | ○                                          | ○                                                            | ○                                                |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
| ENV0085                                                                                                  | 保全生態学                    | Conservation Ecology                                                                  | 1-2                                                         | 1                                    |                |                | ○                      |                         | ○                           | ○                                                         |                                                      | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            |                                                  |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |
| ENV0086                                                                                                  | Conservation Ecology     |                                                                                       | 1-2                                                         | 1                                    |                |                | ○                      |                         | ○                           | ○                                                         |                                                      | ○                                          | ○                                               | ○                                   | ○                                          | ○                                                            |                                                  |                                            |                                                              |                                                  |                                |  |  |  |  |  |  |

※ 「必修」は学位プログラムとしての必修を要す。 "Required" indicates required for each degree program.