## Class Subjects and Course Registration

| Segment                 |                | Class Subject                                                      | Credit | Grade  | Registration and Requirement                                                                                                                                                                                           |
|-------------------------|----------------|--------------------------------------------------------------------|--------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | Compulsory     | Research for Academic Degree Dissertation *                        | 8      | 1 • 2  | ORegistration                                                                                                                                                                                                          |
|                         | Comp           | Science Seminar (A) (Note <sup>1</sup> ) *                         | 2      | 1 • 2  |                                                                                                                                                                                                                        |
|                         | Bacic subjects | (1) Science and Engineering Ethics                                 | 1      | 1 or 2 | 1 Compulsory 10 Credits<br>* No need to register by the students.                                                                                                                                                      |
|                         |                | ② General Biosphere Science (1)                                    | 2      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | ③ General Biosphere Science (2)                                    | 2      | 1 or 2 | 2 Compulsory but optional 12 Credits<br>(Should be selected after discussion with the<br>Academic Supervisor)                                                                                                          |
|                         |                | ④ Graduate general education subjects (Basic) (Note <sup>2</sup> ) | 1 or 2 | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Select 1 subject from ①-④ above                                    |        |        |                                                                                                                                                                                                                        |
|                         | Core subjects  | Applied Immunology                                                 | 1      | 1 or 2 | <ul> <li>1 subject from the basic subjects         <ol> <li>or 2 credits</li> <li>Excess credits over 1 obtained from the basic subjects can be counted as those of the optinal subjects</li> </ol> </li> </ul>        |
|                         |                | Molecular Immmunology                                              | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Plant Molecular Bioscience                                         | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Structure and Function of Proteins-II                              | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Gene Regulation (Note <sup>3</sup> )                               | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Molecular Cell Science A                                           | 1      | 1 or 2 | <ul> <li>From the Core Subjects</li> <li>Exercise designated by the Academic Supervisor</li> <li>Practice designated by the Academic Supervisor (Experiment / Practice)</li> </ul>                                     |
|                         |                | Molecular Cell Science B                                           | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Ecological Chemistry                                               | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Bioactive Natural Products II                                      | 1      | 1 or 2 |                                                                                                                                                                                                                        |
| onal                    |                | Biomolecular Science A                                             | 1      | 1 or 2 | <ul> <li>1 Credit</li> <li>Other Core subjects than those above<br/>8 Credits</li> <li>* Excess credits over eight obtained from the<br/>core subjects can be counted as those of the<br/>optinal subjects.</li> </ul> |
| Compulsory but optional |                | Biomolecular Science B                                             | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Exercises in Molecular and Applied Biosciences (A)                 | 2      | 1 or 2 |                                                                                                                                                                                                                        |
| y b                     |                | Practice in Molecular and Applied Biosciences                      | 1      | 1 or 2 |                                                                                                                                                                                                                        |
| lsor                    |                | Glycobiology and Glycotechnology                                   | 1      | 1 or 2 |                                                                                                                                                                                                                        |
| ndu                     |                | Aquatic Toxicology                                                 | 1      | 1 or 2 | 3 Optional 8 Credits or more                                                                                                                                                                                           |
| Con                     |                | Function of Livestock Food Product                                 | 1      | 1 or 2 | Should be selected from list of class subjects<br>in this Graduate School.<br>In addition, up to five credits obtained from<br>class subjects provided by other graduate school<br>can be incorporated.                |
| Ŭ                       |                | Biochemistry of Animal Foods II                                    | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Food Biophysics I                                                  | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Food Physical Chemistry II                                         | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Food Engineering                                                   | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Food Process Engineering                                           | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Microbiology for Food Safety II                                    | 1      | 1 or 2 | ORequirement for completion                                                                                                                                                                                            |
|                         |                | Foodborne Pathogenic Genetics                                      | 1      | 1 or 2 | 1Specialized subjectsCompulsory10 CreditsCompulsory but optional12 CreditsOptional8 Credits or moreTotal30 Credits or more                                                                                             |
|                         |                | Health and Nutrition Science                                       | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Biochemical and Molecular Nutrition                                | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Environmental and Biomass Technology II                            | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Microbial Engineering on Brewing II                                | 1      | 1 or 2 |                                                                                                                                                                                                                        |
|                         |                | Practical Exercises in Application of Brewing Resources            | 1      | 1 or 2 | 2 Research Guidance                                                                                                                                                                                                    |
|                         |                | Exercises in Food Science and Biofunctions (A)                     | 2      | 1 or 2 | 3 Master's Thesis                                                                                                                                                                                                      |
|                         |                | Practice in Food Science and Biofunctions                          | 1      | 1 or 2 |                                                                                                                                                                                                                        |

## Department of Biofunctional Science and Technology (Master's Program)

| Segment  | Class Subject                                   | Credit |        | Registration and Requirement |
|----------|-------------------------------------------------|--------|--------|------------------------------|
|          | Exercises in Applied Immunology                 | 1      | 1 or 2 |                              |
|          | Immunobiology                                   | 1      | 1 or 2 |                              |
|          | Structure and Function of Proteins-I            | 1      | 1 or 2 |                              |
|          | Basic Molecular Biology (Note <sup>3</sup> )    | 1      | 1 or 2 |                              |
|          | Applied Microbiology                            | 1      | 1 or 2 |                              |
|          | Applied Microbiology Seminar                    | 1      | 1 or 2 |                              |
|          | Exercises in Ecological Chemistry               | 1      | 1 or 2 |                              |
|          | Bioactive Natural Products I                    | 1      | 1 or 2 |                              |
|          | General Molecular Genetics                      | 1      | 1 or 2 |                              |
|          | Practical Molecular Genetics                    | 1      | 1 or 2 |                              |
|          | Aquatic Bioresource Chemistry                   | 1      | 1 or 2 |                              |
| nal      | Hygienic Chemistry of Sea Food                  | 1      | 1 or 2 |                              |
| Optional | Exercises in Function of Livestock Food Product | 1      | 1 or 2 |                              |
| OF       | Biochemistry of Animal Foods I                  | 1      | 1 or 2 |                              |
|          | Food Biophysics II                              | 1      | 1 or 2 |                              |
|          | Food Physical Chemistry I                       | 1      | 1 or 2 |                              |
|          | Exercise in Food Process Engineering            | 1      | 1 or 2 |                              |
|          | Process Engineering                             | 1      | 1 or 2 |                              |
|          | Microbiology for Food Safety I                  | 1      | 1 or 2 |                              |
|          | Exercises in Foodborne Pathogenic Genetics      | 1      | 1 or 2 |                              |
|          | Nutritional Biochemistry                        | 1      | 1 or 2 |                              |
|          | Nutrigenomics                                   | 1      | 1 or 2 |                              |
|          | Microbial Engineering on Brewing I              | 1      | 1 or 2 |                              |
|          | Environmental and Biomass Technology I          | 1      | 1 or 2 |                              |
|          | Application of Brewing Resources                | 1      | 1 or 2 |                              |

Department of Biofunctional Science and Technology (Master's Program)

Note1See details in "Notes on Course Registration (1)".Note2Select 1 subject in the lists of the "Graduate general education subjects (Basic)".Note3These lectures will not be offered after 2015 academic year.