

# 本科教育課程

Regular Course Curriculum

## 一般科目

Liberal Studies

[2025 年度以降入学者に係る教育課程]

| 区 分<br>Classification                                             | 授 業 科 目<br>Subjects                            | 単位数<br>Credits | 学年別配当<br>Credits by Grade |           |           |            |            | 備 考<br>Notes     |
|-------------------------------------------------------------------|------------------------------------------------|----------------|---------------------------|-----------|-----------|------------|------------|------------------|
|                                                                   |                                                |                | 1年<br>1st                 | 2年<br>2nd | 3年<br>3rd | 4年<br>4th  | 5年<br>5th  |                  |
| 必<br>修<br>科<br>目<br><br>Required<br>Subjects                      | 国 語 I Japanese I                               | 3              | 3                         |           |           |            |            |                  |
|                                                                   | 国 語 II Japanese II                             | 3              |                           | 3         |           |            |            |                  |
|                                                                   | 国 語 III Japanese III                           | 2              |                           |           | 2         |            |            |                  |
|                                                                   | 国 語 表 現 法 Japanese Language and Communication  | 2              |                           |           |           | 2          |            |                  |
|                                                                   | 地 理 Geography                                  | 2              | 2                         |           |           |            |            |                  |
|                                                                   | 歴 史 History                                    | 2              |                           | 2         |           |            |            |                  |
|                                                                   | 公 共 Citizenship                                | 2              |                           |           | 2         |            |            |                  |
|                                                                   | 政 治・経 済 Politics and Economics                 | 2              |                           |           | 2         |            |            |                  |
|                                                                   | 現代社会と法 Modern Society and Law                  | 2              |                           |           |           |            | 2          |                  |
|                                                                   | 基礎数学 $\alpha$ Fundamental Mathematics $\alpha$ | 4              | 4                         |           |           |            |            |                  |
|                                                                   | 基礎数学 $\beta$ Fundamental Mathematics $\beta$   | 2              | 2                         |           |           |            |            |                  |
|                                                                   | 微 分 積 分 I Differential and Integral I          | 4              |                           | 4         |           |            |            |                  |
|                                                                   | 微 分 積 分 II Differential and Integral II        | 2              |                           |           | 2         |            |            |                  |
|                                                                   | 線 形 代 数 Linear Algebra                         | 2              |                           | 2         |           |            |            |                  |
|                                                                   | 数学特論 $\alpha$ Advanced Mathematics $\alpha$    | 2              |                           |           | 2         |            |            |                  |
|                                                                   | 数学特論 $\beta$ Advanced Mathematics $\beta$      | 1              |                           |           | 1         |            |            |                  |
|                                                                   | 地球惑星物理 Geophysics                              | 1              | 1                         |           |           |            |            |                  |
|                                                                   | 物 理 I Physics I                                | 1              | 1                         |           |           |            |            |                  |
|                                                                   | 物 理 II Physics II                              | 3              |                           | 3         |           |            |            |                  |
|                                                                   | 生 物 Biology                                    | 1              | 1                         |           |           |            |            |                  |
|                                                                   | 化 学 I Chemistry I                              | 2              | 2                         |           |           |            |            | ※ 1              |
|                                                                   | 化 学 II Chemistry II                            | 2              |                           | 2         |           |            |            |                  |
|                                                                   | 化 学 Chemistry                                  | 4              | 4                         |           |           |            |            | ※ 2              |
|                                                                   | 保健・体育 I Health and Physical Education I        | 2              | 2                         |           |           |            |            |                  |
|                                                                   | 保健・体育 II Health and Physical Education II      | 2              |                           | 2         |           |            |            |                  |
|                                                                   | 体育理論 I Physical Education Theory I             | 2              |                           |           | 2         |            |            |                  |
|                                                                   | 体育理論 II Physical Education Theory II           | 2              |                           |           |           | 2          |            |                  |
|                                                                   | 体育実技 Physical Education                        | 1              |                           |           |           |            | 1          |                  |
|                                                                   | 英 語 I English I                                | 3              | 3                         |           |           |            |            |                  |
|                                                                   | 英 語 II English II                              | 3              |                           | 3         |           |            |            |                  |
|                                                                   | 英 語 III English III                            | 2              |                           |           | 2         |            |            |                  |
|                                                                   | 英 語 IV English IV                              | 4              |                           |           |           | 4          |            |                  |
|                                                                   | 英 語 V English V                                | 2              |                           |           |           |            | 2          |                  |
|                                                                   | 英 文 法 I English Grammar I                      | 2              | 2                         |           |           |            |            |                  |
|                                                                   | 英 文 法 II English Grammar II                    | 2              |                           | 2         |           |            |            |                  |
|                                                                   | 英 文 法 III English Grammar III                  | 1              |                           |           | 1         |            |            |                  |
| 選 択 必 修 科 目<br>Required<br>Elective<br>Subjects                   | 美 術 Fine Arts                                  | 2              | ※ 2                       |           |           |            |            | ※ の内いずれか 1 科目を選択 |
|                                                                   | 音 楽 Music                                      | 2              | ※ 2                       |           |           |            |            |                  |
|                                                                   | 人 間 環 境 学 Human Environmental Studies          | 2              |                           |           |           |            | △ 2        |                  |
|                                                                   | 地 域 学 Regional Studies                         | 2              |                           |           |           |            | △ 2        |                  |
| 必 修 科 目 (留 学 生)<br>Required<br>Subjects<br>(Overseas<br>Students) | 日 本 文 化 学 Japanese Culture                     | 2              |                           |           |           |            | △ 2        |                  |
|                                                                   | 留学生の日本語 I Japanese for Foreign Students I      | 2              |                           |           | 2         |            |            |                  |
|                                                                   | 留学生の日本語 II Japanese for Foreign Students II    | 2              |                           |           | 2         |            |            |                  |
|                                                                   | 留学生の日本語 III Japanese for Foreign Students III  | 2              |                           |           |           | 2          |            |                  |
| 選 択 科 目<br>Elective<br>Subjects                                   | 留学生の日本語 IV Japanese for Foreign Students IV    | 2              |                           |           |           | 2          |            |                  |
|                                                                   | 異文化コミュニケーション Cross-cultural Communication      | 2              |                           |           |           | 2          |            |                  |
|                                                                   | 日 本 事 情 Japanese Affairs                       | 2              |                           |           |           |            | 2          |                  |
|                                                                   | 実 用 英 語 I Practical English I                  | 1              |                           |           | 1         | (1)        | (1)        | ※ 3              |
|                                                                   | 実 用 英 語 II Practical English II                | 1              |                           |           |           | 1          | (1)        |                  |
|                                                                   | 実 用 英 語 III Practical English III              | 1              |                           |           |           |            | 1          |                  |
|                                                                   | 異文化交流 I Cross-Cultural Exchange I              | 1              | 1                         |           |           |            |            |                  |
|                                                                   | 異文化交流 II Cross-Cultural Exchange II            | 1              |                           | 1         |           |            |            |                  |
|                                                                   | 異文化交流 III Cross-Cultural Exchange III          | 1              |                           |           | 1         |            |            |                  |
|                                                                   | 異文化交流 IV Cross-Cultural Exchange IV            | 1              |                           |           |           | 1          |            |                  |
|                                                                   | 異文化交流 V Cross-Cultural Exchange V              | 1              |                           |           |           |            | 1          |                  |
|                                                                   | 海外協働研修 I Overseas Training I                   | 1              | 1                         |           |           |            |            |                  |
|                                                                   | 海外協働研修 II Overseas Training II                 | 1              |                           | 1         |           |            |            |                  |
|                                                                   | 海外協働研修 III Overseas Training III               | 1              |                           |           | 1         |            |            |                  |
|                                                                   | 海外協働研修 IV Overseas Training IV                 | 1              |                           |           |           | 1          |            |                  |
|                                                                   | 海外協働研修 V Overseas Training V                   | 1              |                           |           |           |            | 1          |                  |
| 開 設 単 位 計 Total Offered Credits                                   |                                                | 100[100]       | 29[31]                    | 25[23]    | 21[21]    | 11[11][12] | 14[14][16] |                  |
| 修 得 単 位 計 Total Required Credits                                  |                                                | 79[79]         | 25[27]                    | 23[21]    | 16[16]    | 8[8]       | 7[7]       |                  |

(注) [ ]内は物質化学工学科 (Notes) [ ]: Credits offered / required to Chemical Engineering Course only.

※ 1 物質化学工学科以外 These two subjects for the students of other departments except Department of Chemical Engineering.

※ 2 物質化学工学科のみ This subject only for the students in Department of Chemical Engineering.

※ 3 ( )は未修得者 The credits in the parenthesis are for students who have not taken the course before.

機械工学科

[2024 年度以降入学者に係る教育課程]

Mechanical Engineering

| 区 分<br>Classification                       | 授 業 科 目<br>Subjects                                                  | 単位数<br>Credits | 学年別配当<br>Credits by Grade |           |           |           |           | 備 考<br>Notes |
|---------------------------------------------|----------------------------------------------------------------------|----------------|---------------------------|-----------|-----------|-----------|-----------|--------------|
|                                             |                                                                      |                | 1年<br>1st                 | 2年<br>2nd | 3年<br>3rd | 4年<br>4th | 5年<br>5th |              |
| 必修科目<br>Required Subjects                   | 情報リテラシー Information Literacy                                         | 2              | 2                         |           |           |           |           |              |
|                                             | 応用数学 $\alpha$ Applied Mathematics $\alpha$                           | 2              |                           |           |           | 2         |           |              |
|                                             | 応用数学 $\beta$ Applied Mathematics $\beta$                             | 2              |                           |           |           | 2         |           |              |
|                                             | 応用物理 I Advanced Physics I                                            | 2              |                           |           | 2         |           |           |              |
|                                             | 応用物理 II Advanced Physics II                                          | 2              |                           |           |           | 2         |           |              |
|                                             | 機械工学基礎 Introduction to Mechanical Engineering                        | 2              | 2                         |           |           |           |           |              |
|                                             | 機械工学ゼミナール Mechanical Engineering Seminar                             | 1              |                           |           |           | 1         |           |              |
|                                             | 技術英語 English for Engineering                                         | 2              |                           |           |           |           | 2         |              |
|                                             | 材料学 I Engineering Materials I                                        | 1              |                           | 1         |           |           |           |              |
|                                             | 材料学 II Engineering Materials II                                      | 2              |                           |           | 2         |           |           |              |
|                                             | 機械工作法 I Mechanical Technology I                                      | 2              |                           | 2         |           |           |           |              |
|                                             | 機械工作法 II Mechanical Technology II                                    | 2              |                           |           | 2         |           |           |              |
|                                             | 材料力学 I Mechanics of Materials I                                      | 2              |                           |           | 2         |           |           |              |
|                                             | 材料力学 II Mechanics of Materials II                                    | 2              |                           |           |           | 2         |           |              |
|                                             | 材料力学演習 Exercises in Mechanics of Materials                           | 1              |                           |           |           | 1         |           |              |
|                                             | 流体力学 I Fluid Mechanics I                                             | 2              |                           |           |           | 2         |           |              |
|                                             | 流体力学 II Fluid Mechanics II                                           | 2              |                           |           |           | 2         |           |              |
|                                             | 流体力学演習 Exercises in Fluid Dynamics                                   | 1              |                           |           |           |           | 1         |              |
|                                             | 熱工学 I Thermodynamics I                                               | 2              |                           |           |           | 2         |           |              |
|                                             | 熱工学 II Thermodynamics II                                             | 2              |                           |           |           | 2         |           |              |
|                                             | 熱工学演習 Exercises in Thermodynamics                                    | 1              |                           |           |           |           | 1         |              |
|                                             | 機械力学 I Dynamics of Machinery I                                       | 2              |                           |           | 2         |           |           |              |
|                                             | 機械力学 II Dynamics of Machinery II                                     | 2              |                           |           |           | 2         |           |              |
|                                             | 機械力学演習 Exercises in Dynamics of Machinery                            | 1              |                           |           |           | 1         |           |              |
|                                             | 電気電子工学 Electrical and Electronic Engineering                         | 2              |                           |           | 2         |           |           |              |
|                                             | 計測工学 Instrumentation Engineering                                     | 2              |                           |           |           |           | 2         |              |
|                                             | 制御工学 I Control Engineering I                                         | 2              |                           |           |           | 2         |           |              |
|                                             | 制御工学 II Control Engineering II                                       | 2              |                           |           |           |           | 2         |              |
|                                             | 応用制御工学 Advanced Control Engineering                                  | 2              |                           |           |           |           | 2         |              |
|                                             | 情報処理 Information Processing                                          | 2              |                           |           | 2         |           |           |              |
|                                             | 数値計算法 Numerical Calculation Methods                                  | 1              |                           |           |           | 1         |           |              |
|                                             | 機械設計製図 I Machine Design and Drawing I                                | 2              | 2                         |           |           |           |           |              |
|                                             | 機械設計製図 II Machine Design and Drawing II                              | 2              |                           | 2         |           |           |           |              |
|                                             | 創造設計 Creative Design and Drawing                                     | 1              |                           |           | 1         |           |           |              |
|                                             | 機構学 Machine Mechanism                                                | 2              |                           | 2         |           |           |           |              |
|                                             | 機械設計工学 Mechanical Design Engineering                                 | 2              |                           |           |           |           | 2         |              |
|                                             | 機械設計工学演習 Exercises in Mechanical Design Engineering                  | 2              |                           |           |           |           | 2         |              |
|                                             | 生産システム工学 Manufacturing Systems Engineering                           | 2              |                           |           |           |           | 2         |              |
|                                             | 機械工作実習 I Workshop Practice I                                         | 3              | 3                         |           |           |           |           |              |
|                                             | 機械工作実習 II Workshop Practice II                                       | 3              |                           | 3         |           |           |           |              |
|                                             | 創造設計製作 Creative Design and Production                                | 3              |                           |           | 3         |           |           |              |
|                                             | 機械工学実験 I Experiments in Mechanical Engineering I                     | 3              |                           |           |           | 3         |           |              |
|                                             | 機械工学実験 II Experiments in Mechanical Engineering II                   | 2              |                           |           |           |           | 2         |              |
|                                             | 卒業研究 Research for Graduation Thesis                                  | 6              |                           |           |           |           | 6         |              |
| 選択科目<br>Elective Subjects                   | 学外実習 Internship                                                      | 1              |                           |           |           | 1         |           |              |
|                                             | 数理データサイエンスA基礎Ⅰ Fundamentals of Mathematics, Data Science, and AI I   | 1              |                           | 1         |           |           |           |              |
|                                             | 数理データサイエンスA基礎Ⅱ Fundamentals of Mathematics, Data Science, and AI II  | 1              |                           |           | 1         |           |           |              |
|                                             | 数理データサイエンスA基礎Ⅲ Fundamentals of Mathematics, Data Science, and AI III | 1              |                           |           |           | 1         |           |              |
|                                             | 数理データサイエンスA基礎Ⅳ Fundamentals of Mathematics, Data Science, and AI IV  | 1              |                           |           |           |           | 1         |              |
|                                             | 数理データサイエンスA応用Ⅰ Applied Mathematics, Data Science, and AI I           | 1              |                           |           | 1         |           |           |              |
|                                             | 数理データサイエンスA応用Ⅱ Applied Mathematics, Data Science, and AI II          | 1              |                           |           |           | 1         |           |              |
|                                             | 数理データサイエンスA応用Ⅲ Applied Mathematics, Data Science, and AI III         | 1              |                           |           |           |           | 1         |              |
| 専門科目開設単位計 Total Offered Credits             |                                                                      | 96             | 9                         | 11        | 20        | 30        | 26        |              |
| 専門科目修得単位計 Total Required Credits            |                                                                      | 88             | 9                         | 10        | 18        | 27        | 24        |              |
| 修得単位計 Total Credits Required for Graduation |                                                                      | 167            | 34                        | 33        | 34        | 35        | 31        |              |

# 電気工学科

[2024 年度以降入学者に係る教育課程]

## Electrical Engineering

| 区 分<br>Classification                           | 授 業 科 目<br>Subjects                                                         | 単位数<br>Credits | 学年別配当<br>Credits by Grade |           |           |           |           | 備 考<br>Notes |
|-------------------------------------------------|-----------------------------------------------------------------------------|----------------|---------------------------|-----------|-----------|-----------|-----------|--------------|
|                                                 |                                                                             |                | 1年<br>1st                 | 2年<br>2nd | 3年<br>3rd | 4年<br>4th | 5年<br>5th |              |
| 必<br>修<br>科<br>目<br><br>Required<br>Subjects    | 情報リテラシー Information Literacy                                                | 2              | 2                         |           |           |           |           |              |
|                                                 | 応 用 数 学 $\alpha$ Applied Mathematics $\alpha$                               | 2              |                           |           |           | 2         |           |              |
|                                                 | 応 用 数 学 $\beta$ Applied Mathematics $\beta$                                 | 2              |                           |           |           | 2         |           |              |
|                                                 | 応 用 物 理 I Advanced Physics I                                                | 2              |                           |           | 2         |           |           |              |
|                                                 | 応 用 物 理 II Advanced Physics II                                              | 2              |                           |           |           | 2         |           |              |
|                                                 | 基礎電気回路 Foundations of Electrical Circuits                                   | 2              | 2                         |           |           |           |           |              |
|                                                 | 電気・電子工学入門 Introduction to Electrical Engineering and Electronics            | 1              | 1                         |           |           |           |           |              |
|                                                 | 環境リテラシー Environmental Literacy                                              | 1              | 1                         |           |           |           |           |              |
|                                                 | 電 気 回 路 I Electrical Circuits I                                             | 2              |                           | 2         |           |           |           |              |
|                                                 | デジタル回路 I Digital Circuits I                                                 | 1              |                           | 1         |           |           |           |              |
|                                                 | プログラミング Computer Programming                                                | 2              |                           | 2         |           |           |           |              |
|                                                 | 電気回路演習 Exercises on Circuits and Circuit Analysis                           | 1              |                           | 1         |           |           |           |              |
|                                                 | 電 磁 気 学 I Electromagnetics I                                                | 1              |                           | 1         |           |           |           |              |
|                                                 | 電 磁 気 学 II Electromagnetics II                                              | 2              |                           |           | 2         |           |           |              |
|                                                 | 電 気 回 路 II Electrical Circuits II                                           | 2              |                           |           | 2         |           |           |              |
|                                                 | 電 子 工 学 Electronic Engineering                                              | 2              |                           |           | 2         |           |           |              |
|                                                 | 計 測 工 学 Instrumentation Engineering                                         | 2              |                           |           | 2         |           |           |              |
|                                                 | 電気工学演習 I Exercises in Electrical Engineering I                              | 2              |                           |           | 2         |           |           |              |
|                                                 | デジタル回路 II Digital Circuits II                                               | 1              |                           |           | 1         |           |           |              |
|                                                 | 環境エレクトロニクス Environmental Engineering for Electrical Engineer                | 1              |                           |           | 1         |           |           |              |
|                                                 | アナログ回路 Analog Circuits                                                      | 2              |                           |           |           | 2         |           |              |
|                                                 | デジタルシステム Digital Systems                                                    | 1              |                           |           |           | 1         |           |              |
|                                                 | 電 磁 気 学 III Electromagnetics III                                            | 2              |                           |           |           | 2         |           |              |
|                                                 | 電 気 回 路 III Electrical Circuits III                                         | 2              |                           |           |           | 2         |           |              |
|                                                 | 電力変換回路 Power Electronics                                                    | 2              |                           |           |           | 2         |           |              |
|                                                 | 電気電子材料 Electrical and Electronic Materials                                  | 2              |                           |           |           | 2         |           |              |
|                                                 | 通 信 工 学 Telecommunication Engineering                                       | 2              |                           |           |           | 2         |           |              |
|                                                 | 電気機器工学 Electrical Machinery and Apparatus Engineering                       | 2              |                           |           |           | 2         |           |              |
|                                                 | 制 御 工 学 I Control Engineering I                                             | 2              |                           |           |           | 2         |           |              |
|                                                 | 環境エネルギー工学 Energy Conversion                                                 | 2              |                           |           |           |           | 2         |              |
|                                                 | 制 御 工 学 II Control Engineering II                                           | 2              |                           |           |           |           | 2         |              |
|                                                 | 工 業 外 国 語 Technical English                                                 | 1              |                           |           |           |           | 1         |              |
|                                                 | 電気・電子工学実験 I Experiments on Electrical and Electronic Engineering I          | 2              |                           | 2         |           |           |           |              |
|                                                 | ものづくり基礎実習 Fundamental Practices for Electrical and Electronic Manufacturing | 2              |                           | 2         |           |           |           |              |
|                                                 | 電気・電子工学実験 II Experiments on Electrical and Electronic Engineering II        | 2              |                           |           | 2         |           |           |              |
|                                                 | ものづくり応用実習 Applied Practices for Electrical and Electronic Manufacturing     | 2              |                           |           | 2         |           |           |              |
|                                                 | 電気・電子工学実験 III Experiments on Electrical and Electronic Engineering III      | 2              |                           |           |           | 2         |           |              |
|                                                 | 電気・電子工学創造実験 Experimental Projects on Electrical and Electronic Engineering  | 2              |                           |           |           | 2         |           |              |
|                                                 | 電気・電子工学実験 IV Experiments on Electrical and Electronic Engineering IV        | 4              |                           |           |           |           | 4         |              |
|                                                 | 卒 業 研 究 Research for Graduation Thesis                                      | 6              |                           |           |           |           | 6         |              |
| 選択必修科目<br>Required Elective Subject             | 電気工学演習 II Exercises in Electrical Engineering II                            | 1              |                           |           |           | 1         |           | いずれか1単位を選択   |
|                                                 | 電 気 機 器 設 計 Electric and Electronics Equipment Design Engineering           | 1              |                           |           |           | 1         |           |              |
| 選択科目<br>Elective<br>Subjects                    | 学 外 実 習 Internship                                                          | 1              |                           |           |           | 1         |           | 10単位以上を選択    |
|                                                 | 数理データサイエンスA基礎 I Fundamentals of Mathematics, Data Science, and AI I         | 1              |                           | 1         |           |           |           |              |
|                                                 | 数理データサイエンスA基礎 II Fundamentals of Mathematics, Data Science, and AI II       | 1              |                           |           | 1         |           |           |              |
|                                                 | 数理データサイエンスA基礎 III Fundamentals of Mathematics, Data Science, and AI III     | 1              |                           |           |           | 1         |           |              |
|                                                 | 数理データサイエンスA基礎 IV Fundamentals of Mathematics, Data Science, and AI IV       | 1              |                           |           |           |           | 1         |              |
|                                                 | 数理データサイエンスA応用 I Applied Mathematics, Data Science, and AI I                 | 1              |                           |           | 1         |           |           |              |
|                                                 | 数理データサイエンスA応用 II Applied Mathematics, Data Science, and AI II               | 1              |                           |           |           | 1         |           |              |
|                                                 | 数理データサイエンスA応用 III Applied Mathematics, Data Science, and AI III             | 1              |                           |           |           |           | 1         |              |
|                                                 | 電力系統工学 Electric Power Systems Engineering                                   | 2              |                           |           |           |           | 2         |              |
|                                                 | 電 気 製 図 Drafting for Electric and Electronic Systems                        | 2              |                           |           |           |           | 2         |              |
|                                                 | 高 電 圧 工 学 High-Voltage Engineering                                          | 2              |                           |           |           |           | 2         |              |
|                                                 | 伝 送 工 学 Transmission Engineering                                            | 2              |                           |           |           |           | 2         |              |
|                                                 | 組み込みシステム Embedded System Design                                             | 2              |                           |           |           |           | 2         |              |
|                                                 | 電気法規・設備工学 Electrical Regulations and Engineering of Electrical Installation | 2              |                           |           |           |           | 2         |              |
|                                                 | 半 導 体 工 学 Semiconductor Electronics                                         | 2              |                           |           |           |           | 2         |              |
| 専門科目開設単位計 Total Offered Credits                 |                                                                             | 101            | 6                         | 12        | 20        | 32        | 31        |              |
| 専門科目修得単位計 Total Required Credits                |                                                                             | 88             | 6                         | 11        | 18        | 28        | 25        |              |
| 修 得 単 位 計 Total Credits Required for Graduation |                                                                             | 167            | 31                        | 34        | 34        | 36        | 32        |              |

電子制御工学科

[2024 年度以降入学者に係る教育課程]

Control Engineering

| 区 分<br>Classification                           | 授 業 科 目<br>Subjects                                                     | 単位数<br>Credits | 学年別配当<br>Credits by Grade |           |           |           |           | 備 考<br>Notes |
|-------------------------------------------------|-------------------------------------------------------------------------|----------------|---------------------------|-----------|-----------|-----------|-----------|--------------|
|                                                 |                                                                         |                | 1年<br>1st                 | 2年<br>2nd | 3年<br>3rd | 4年<br>4th | 5年<br>5th |              |
| 必<br>修<br>科<br>目<br><br>Required<br>Subjects    | 情報リテラシー Information Literacy                                            | 2              | 2                         |           |           |           |           |              |
|                                                 | 応 用 数 学 $\alpha$ Applied Mathematics $\alpha$                           | 2              |                           |           |           | 2         |           |              |
|                                                 | 応 用 数 学 $\beta$ Applied Mathematics $\beta$                             | 2              |                           |           |           | 2         |           |              |
|                                                 | 応 用 物 理 I Advanced Physics I                                            | 2              |                           |           | 2         |           |           |              |
|                                                 | 応 用 物 理 II Advanced Physics II                                          | 2              |                           |           |           | 2         |           |              |
|                                                 | 基 礎 製 図 法 Fundamentals of Drawing                                       | 3              | 3                         |           |           |           |           |              |
|                                                 | プログラミング Computer Programming                                            | 2              |                           | 2         |           |           |           |              |
|                                                 | 電 気 回 路 I Electric Circuit I                                            | 2              |                           | 2         |           |           |           |              |
|                                                 | 材 料 ・ 加 工 学 Materials and Materials Processing                          | 1              |                           | 1         |           |           |           |              |
|                                                 | アルゴリズムとデータ構造 Algorithms and Data Structure                              | 1              |                           |           | 1         |           |           |              |
|                                                 | 計算機アーキテクチャ Computer Architecture                                        | 1              |                           |           | 1         |           |           |              |
|                                                 | 電 気 回 路 II Electric Circuit II                                          | 2              |                           |           | 2         |           |           |              |
|                                                 | 電 磁 気 学 Electromagnetics                                                | 2              |                           |           | 2         |           |           |              |
|                                                 | 電 子 工 学 Electronics                                                     | 2              |                           |           | 2         |           |           |              |
|                                                 | 熱 力 学 Thermodynamics                                                    | 2              |                           |           | 2         |           |           |              |
|                                                 | 計 測 工 学 I Engineering of Instrumentation I                              | 2              |                           |           | 2         |           |           |              |
|                                                 | システム要素設計 Fundamental System Design                                      | 2              |                           |           | 2         |           |           |              |
|                                                 | 電 子 回 路 Electronic Circuits                                             | 2              |                           |           |           | 2         |           |              |
|                                                 | 材 料 力 学 Strength of Materials                                           | 2              |                           |           |           | 2         |           |              |
|                                                 | 流 体 力 学 Fluid Mechanics                                                 | 2              |                           |           |           | 2         |           |              |
|                                                 | 制 御 工 学 I Control Engineering I                                         | 2              |                           |           |           | 2         |           |              |
|                                                 | 制 御 工 学 II Control Engineering II                                       | 2              |                           |           |           | 2         |           |              |
|                                                 | 計 測 工 学 II Engineering of Instrumentation II                            | 2              |                           |           |           | 2         |           |              |
|                                                 | 電磁気学演習 Exercises in Electromagnetics                                    | 2              |                           |           |           | 2         |           |              |
|                                                 | 材料力学演習 Exercises in Strength of Materials                               | 1              |                           |           |           | 1         |           |              |
|                                                 | 流体力学演習 Exercises in Fluid Mechanics                                     | 1              |                           |           |           | 1         |           |              |
|                                                 | 計測工学演習 Exercises in Engineering of Instrumentation                      | 1              |                           |           |           | 1         |           |              |
|                                                 | 数 値 解 析 Numerical Analysis                                              | 2              |                           |           |           |           | 2         |              |
|                                                 | 機 械 力 学 Dynamics of Mechanical Systems                                  | 2              |                           |           |           |           | 2         |              |
|                                                 | 機 能 性 材 料 Functional Materials                                          | 2              |                           |           |           |           | 2         |              |
|                                                 | 制 御 工 学 III Control Engineering III                                     | 2              |                           |           |           |           | 2         |              |
|                                                 | ロボティクス I Robotics I                                                     | 2              |                           |           |           |           | 2         |              |
|                                                 | ロボティクス II Robotics II                                                   | 2              |                           |           |           |           | 2         |              |
|                                                 | シ ス テ ム 工 学 Systems Engineering                                         | 2              |                           |           |           |           | 2         |              |
|                                                 | 応用システム設計 Applied System Design                                          | 2              |                           |           |           |           | 2         |              |
|                                                 | システム設計製作 System Design and Development                                  | 2              |                           |           |           | 2         |           |              |
|                                                 | 機 械 工 学 実 習 Workshop Practice in Mechanical Engineering                 | 2              |                           | 2         |           |           |           |              |
|                                                 | 電子制御工学実験 I Experiments in Control Engineering I                         | 3              | 3                         |           |           |           |           |              |
|                                                 | 電子制御工学実験 II Experiments in Control Engineering II                       | 3              |                           | 3         |           |           |           |              |
|                                                 | 電子制御工学実験 III Experiments in Control Engineering III                     | 3              |                           |           | 3         |           |           |              |
|                                                 | 電子制御工学実験 IV Experiments in Control Engineering IV                       | 2              |                           |           |           | 2         |           |              |
|                                                 | 卒 業 研 究 Research for Graduation Thesis                                  | 7              |                           |           |           |           | 7         |              |
| 選 択 科 目<br>Elective<br>Subjects                 | 学 外 実 習 Internship                                                      | 1              |                           |           |           | 1         |           |              |
|                                                 | 数理データサイエンスA基礎 I Fundamentals of Mathematics, Data Science, and AI I     | 1              |                           | 1         |           |           |           |              |
|                                                 | 数理データサイエンスA基礎 II Fundamentals of Mathematics, Data Science, and AI II   | 1              |                           |           | 1         |           |           |              |
|                                                 | 数理データサイエンスA基礎 III Fundamentals of Mathematics, Data Science, and AI III | 1              |                           |           |           | 1         |           |              |
|                                                 | 数理データサイエンスA基礎 IV Fundamentals of Mathematics, Data Science, and AI IV   | 1              |                           |           |           |           | 1         |              |
|                                                 | 数理データサイエンスA応用 I Applied Mathematics, Data Science, and AI I             | 1              |                           |           | 1         |           |           |              |
|                                                 | 数理データサイエンスA応用 II Applied Mathematics, Data Science, and AI II           | 1              |                           |           |           | 1         |           |              |
|                                                 | 数理データサイエンスA応用 III Applied Mathematics, Data Science, and AI III         | 1              |                           |           |           |           | 1         |              |
|                                                 | 電子制御工学総合演習 I General Exercises I                                        | 1              |                           |           |           |           | 1         |              |
|                                                 | 電子制御工学総合演習 II General Exercises II                                      | 1              |                           |           |           |           | 1         |              |
| 専 門 科 目 開 設 単 位 計 Total Offered Credits         |                                                                         | 97             | 8                         | 11        | 21        | 30        | 27        | 1 単位以上選択     |
| 専 門 科 目 修 得 単 位 計 Total Required Credits        |                                                                         | 88             | 8                         | 10        | 19        | 27        | 24        |              |
| 修 得 単 位 計 Total Credits Required for Graduation |                                                                         | 167            | 33                        | 33        | 35        | 35        | 31        |              |

# 情報工学科

## Information Engineering

[2019年度以降入学者に係る教育課程]

| 区 分<br>Classification                           | 授 業 科 目<br>Subjects                                           | 単位数<br>Credits | 学年別配当<br>Credits by Grade |           |           |           |           | 備 考<br>Notes |
|-------------------------------------------------|---------------------------------------------------------------|----------------|---------------------------|-----------|-----------|-----------|-----------|--------------|
|                                                 |                                                               |                | 1年<br>1st                 | 2年<br>2nd | 3年<br>3rd | 4年<br>4th | 5年<br>5th |              |
| 必<br>修<br>科<br>目<br><br>Required<br>Subjects    | 情報リテラシー Information Literacy                                  | 2              | 2                         |           |           |           |           |              |
|                                                 | 応 用 数 学 $\alpha$ Applied Mathematics $\alpha$                 | 2              |                           |           |           | 2         |           |              |
|                                                 | 応 用 数 学 $\beta$ Applied Mathematics $\beta$                   | 2              |                           |           |           | 2         |           |              |
|                                                 | 応 用 物 理 I Advanced Physics I                                  | 2              |                           |           | 2         |           |           |              |
|                                                 | 応 用 物 理 II Advanced Physics II                                | 2              |                           |           |           | 2         |           |              |
|                                                 | ディジタル回路 Digital Circuits                                      | 2              | 2                         |           |           |           |           |              |
|                                                 | 情報工学概論 Introduction to Information Engineering                | 2              | 2                         |           |           |           |           |              |
|                                                 | 電気回路基礎 Fundamentals of Electric Circuits                      | 1              |                           | 1         |           |           |           |              |
|                                                 | プログラミング基礎 Introduction to Computer Programming                | 1              |                           | 1         |           |           |           |              |
|                                                 | プログラミングI Computer Programming I                               | 1              |                           | 1         |           |           |           |              |
|                                                 | コンピュータシステム概論 Introduction to Computer Systems                 | 1              |                           | 1         |           |           |           |              |
|                                                 | 論 理 回 路 I Logic Circuits I                                    | 1              |                           | 1         |           |           |           |              |
|                                                 | I T 活 用 Information Technology Applications                   | 2              |                           | 2         |           |           |           |              |
|                                                 | 情 報 数 学 Mathematics for Information                           | 2              |                           | 2         |           |           |           |              |
|                                                 | 論 理 回 路 II Logic Circuits II                                  | 2              |                           |           | 2         |           |           |              |
|                                                 | データベースとWebアプリケーション Database and Web Application               | 1              |                           |           | 1         |           |           |              |
|                                                 | 情報アクティブラーニングI Active learning for Information Engineering I   | 2              |                           |           | 2         |           |           |              |
|                                                 | プログラミングII Computer Programming II                             | 2              |                           |           | 2         |           |           |              |
|                                                 | コンピュータアーキテクチャ Computer Architecture                           | 2              |                           |           | 2         |           |           |              |
|                                                 | データ構造とアルゴリズム Data Structures and Algorithms                   | 2              |                           |           | 2         |           |           |              |
|                                                 | 計算機ネットワークI Computer Networks I                                | 2              |                           |           | 2         |           |           |              |
|                                                 | 数値計算・統計 Numerical Methods and Statistics                      | 2              |                           |           |           | 2         |           |              |
|                                                 | コンピュータ援用論理設計 Computer Aided Logic Design                      | 2              |                           |           |           | 2         |           |              |
|                                                 | オペレーティングシステム Operating Systems                                | 2              |                           |           |           | 2         |           |              |
|                                                 | 計算機言語処理 Programming Language Processing                       | 2              |                           |           |           | 2         |           |              |
|                                                 | 情 報 理 論 Information Theory                                    | 2              |                           |           |           | 2         |           |              |
|                                                 | 情報セキュリティ Information Security                                 | 2              |                           |           |           | 2         |           |              |
|                                                 | 計算機ネットワークII Computer Networks II                              | 2              |                           |           |           | 2         |           |              |
|                                                 | プログラミングIII Computer Programming III                           | 2              |                           |           |           | 2         |           |              |
|                                                 | 情報アクティブラーニングII Active learning for Information Engineering II | 2              |                           |           |           | 2         |           |              |
|                                                 | 集 積 回 路 Integrated Circuits                                   | 2              |                           |           |           |           | 2         |              |
|                                                 | 情報工学特論 Special Topics in Information Engineering              | 2              |                           |           |           |           | 2         |              |
|                                                 | マルチメディア情報処理 Multimedia Information Processing                 | 2              |                           |           |           |           | 2         |              |
|                                                 | 信 号 処 理 Signal Processing                                     | 2              |                           |           |           |           | 2         |              |
|                                                 | ソフトウェア工学 Software Engineering                                 | 2              |                           |           |           |           | 2         |              |
|                                                 | 情報戦略システム Strategic Information Systems                        | 2              |                           |           |           |           | 2         |              |
|                                                 | 人 工 知 能 Artificial Intelligence                               | 2              |                           |           |           |           | 2         |              |
|                                                 | ヒューマン・コンピュータインタラクション Human Computer Interaction               | 2              |                           |           |           |           | 2         |              |
|                                                 | 工 業 外 国 語 English for Information Engineering                 | 1              |                           |           |           |           | 1         |              |
|                                                 | 情報工学実験I Experiments in Information Engineering I              | 2              |                           | 2         |           |           |           |              |
|                                                 | 情報工学実験II Experiments in Information Engineering II            | 3              |                           |           | 3         |           |           |              |
|                                                 | 情報工学実験III Experiments in Information Engineering III          | 3              |                           |           |           | 3         |           |              |
|                                                 | 卒 業 研 究 I Research for Graduation Thesis I                    | 4              |                           |           |           |           | 4         |              |
|                                                 | 卒 業 研 究 II Research for Graduation Thesis II                  | 5              |                           |           |           |           | 5         |              |
| 選 択 科 目<br>Elective Subjects                    | 学 外 実 習 Internship                                            | 1              |                           |           |           | 1         |           |              |
| 専門科目開設単位計 Total Offered Credits                 |                                                               | 89             | 6                         | 11        | 18        | 28        | 26        |              |
| 専門科目修得単位計 Total Required Credits                |                                                               | 88             | 6                         | 11        | 18        | 27        | 26        |              |
| 修 得 単 位 計 Total Credits Required for Graduation |                                                               | 167            | 31                        | 34        | 34        | 35        | 33        |              |

物質化学工学科

[2024 年度以降入学者に係る教育課程]

Chemical Engineering

| 区 分<br>Classification                           | 授 業 科 目<br>Subjects                                                      | 単位数<br>Credits | 学年別配当<br>Credits by Grade |           |           |           |           | 備 考<br>Notes |
|-------------------------------------------------|--------------------------------------------------------------------------|----------------|---------------------------|-----------|-----------|-----------|-----------|--------------|
|                                                 |                                                                          |                | 1年<br>1st                 | 2年<br>2nd | 3年<br>3rd | 4年<br>4th | 5年<br>5th |              |
| 必修科目<br>Required Subjects                       | 情報リテラシー Information Literacy                                             | 2              | 2                         |           |           |           |           |              |
|                                                 | 応用数学 $\alpha$ Applied Mathematics $\alpha$                               | 2              |                           |           |           | 2         |           |              |
|                                                 | 応用数学 $\beta$ Applied Mathematics $\beta$                                 | 2              |                           |           |           | 2         |           |              |
|                                                 | 応用物理 I Advanced Physics I                                                | 2              |                           |           | 2         |           |           |              |
|                                                 | 応用物理 II Advanced Physics II                                              | 2              |                           |           |           | 2         |           |              |
|                                                 | 一般化学演習 I Exercise of General Chemistry I                                 | 1              | 1                         |           |           |           |           |              |
|                                                 | 一般化学演習 II Exercise of General Chemistry II                               | 1              |                           | 1         |           |           |           |              |
|                                                 | 一般化学演習 III Exercise of General Chemistry III                             | 1              |                           | 1         |           |           |           |              |
|                                                 | 化学特論 I Advanced Chemistry I                                              | 1              | 1                         |           |           |           |           |              |
|                                                 | 化学特論 II Advanced Chemistry II                                            | 1              |                           | 1         |           |           |           |              |
|                                                 | 分析化学 Analytical Chemistry                                                | 2              |                           |           | 2         |           |           |              |
|                                                 | 機器分析 Instrumental Analysis                                               | 2              |                           |           |           |           | 2         |              |
|                                                 | 有機化学 I Organic Chemistry I                                               | 2              |                           | 2         |           |           |           |              |
|                                                 | 有機化学 II Organic Chemistry II                                             | 2              |                           |           | 2         |           |           |              |
|                                                 | 有機化学 III Organic Chemistry III                                           | 2              |                           |           |           | 2         |           |              |
|                                                 | 有機材料合成化学 Synthesis of Organic Materials                                  | 1              |                           |           |           |           | 1         |              |
|                                                 | 機能性高分子化学 Functional Polymer Chemistry                                    | 2              |                           |           |           |           | 2         |              |
|                                                 | 無機化学 I Inorganic Chemistry I                                             | 2              |                           | 2         |           |           |           |              |
|                                                 | 無機化学 II Inorganic Chemistry II                                           | 2              |                           |           | 2         |           |           |              |
|                                                 | 固体化学 Solid State Chemistry                                               | 2              |                           |           |           | 2         |           |              |
|                                                 | 基礎電気化学 Basic Electrochemistry                                            | 2              |                           |           |           |           | 2         |              |
|                                                 | 物理化学 I Physical Chemistry I                                              | 2              |                           |           | 2         |           |           |              |
|                                                 | 物理化学 II Physical Chemistry II                                            | 2              |                           |           |           | 2         |           |              |
|                                                 | 基礎量子化学 Basic Quantum Chemistry                                           | 2              |                           |           |           | 2         |           |              |
|                                                 | 生物化学 I Biochemistry I                                                    | 2              |                           | 2         |           |           |           |              |
|                                                 | 生物化学 II Biochemistry II                                                  | 2              |                           |           | 2         |           |           |              |
|                                                 | 生物化学 III Biochemistry III                                                | 2              |                           |           |           | 2         |           |              |
|                                                 | 応用微生物学 Applied Microbiology                                              | 1              |                           |           |           | 1         |           |              |
|                                                 | 分子生物学 Molecular Biology                                                  | 2              |                           |           |           |           | 2         |              |
|                                                 | 生物化学工学 Biochemical Engineering                                           | 1              |                           |           |           | 1         |           |              |
|                                                 | 化学工学 I Chemical Engineering I                                            | 2              |                           |           | 2         |           |           |              |
|                                                 | 化学工学 II Chemical Engineering II                                          | 2              |                           |           |           | 2         |           |              |
|                                                 | 微粒子工学 Particle Engineering                                               | 2              |                           |           |           | 2         |           |              |
|                                                 | 反応工学 Reaction Engineering                                                | 2              |                           |           |           |           | 2         |              |
|                                                 | 環境分離工学 Environmental Separation Engineering                              | 2              |                           |           |           |           | 2         |              |
|                                                 | プロセス制御 Process Control                                                   | 2              |                           |           |           |           | 2         |              |
|                                                 | 物質化学工学実験 I Chemical Engineering Laboratory I                             | 2              | 2                         |           |           |           |           |              |
|                                                 | 物質化学工学実験 II Chemical Engineering Laboratory II                           | 4              |                           | 4         |           |           |           |              |
|                                                 | 物質化学工学実験 III Chemical Engineering Laboratory III                         | 4              |                           |           | 4         |           |           |              |
|                                                 | 物質化学工学実験 IV Chemical Engineering Laboratory IV                           | 4              |                           |           |           | 4         |           |              |
|                                                 | 卒業研究 Graduation Research                                                 | 10             |                           |           |           |           | 10        |              |
| 選択科目<br>Elective Subjects                       | 学 外 実 習 Internship                                                       | 1              |                           |           |           | 1         |           |              |
|                                                 | 数理データサイエンスAI基礎 I Fundamentals of Mathematics, Data Science, and AI I     | 1              |                           | 1         |           |           |           |              |
|                                                 | 数理データサイエンスAI基礎 II Fundamentals of Mathematics, Data Science, and AI II   | 1              |                           |           | 1         |           |           |              |
|                                                 | 数理データサイエンスAI基礎 III Fundamentals of Mathematics, Data Science, and AI III | 1              |                           |           |           | 1         |           |              |
|                                                 | 数理データサイエンスAI基礎 IV Fundamentals of Mathematics, Data Science, and AI IV   | 1              |                           |           |           |           | 1         |              |
|                                                 | 数理データサイエンスAI応用 I Applied Mathematics, Data Science, and AI I             | 1              |                           |           | 1         |           |           |              |
|                                                 | 数理データサイエンスAI応用 II Applied Mathematics, Data Science, and AI II           | 1              |                           |           |           | 1         |           |              |
|                                                 | 数理データサイエンスAI応用 III Applied Mathematics, Data Science, and AI III         | 1              |                           |           |           |           | 1         |              |
| 専門科目開設単位数 Total Offered Credits                 |                                                                          | 96             | 6                         | 14        | 20        | 29        | 27        |              |
| 専門科目修得単位数 Total Required Credits                |                                                                          | 88             | 6                         | 13        | 18        | 26        | 25        |              |
| 修 得 単 位 計 Total Credits Required for Graduation |                                                                          | 167            | 33                        | 34        | 34        | 34        | 32        |              |