

## Department of Mathematics and Physical Sciences

### Common Subjects

|         |                                               |                  |
|---------|-----------------------------------------------|------------------|
| 4101000 | Preliminary Guide for Mathematics and Physics | Department Staff |
| 4101100 | Advanced Guide for Mathematics and Physics    | Department Staff |

### Mathematics Course

|         |                                                     |                      |
|---------|-----------------------------------------------------|----------------------|
| 4201000 | Introduction to Differential and Integral Calculus  | Hideo YOSHIOKA       |
| 4201110 | Differential and Integral Calculus I                | Shinya MORITOH       |
| 4201120 | Differential and Integral Calculus I                | Masahiko TANIGUCHI   |
| 4201210 | Exercises in Differential and Integral Calculus I   | Taku YANAGISAWA      |
| 4201220 | Exercises in Differential and Integral Calculus I   | Kenkichi MIYABAYASHI |
| 4201310 | Linear Algebra I                                    | Jun-ichi MATSUZAWA   |
| 4201320 | Linear Algebra I                                    | Taku YANAGISAWA      |
| 4201400 | Exercises in Linear Algebra I                       | Ryoichi KASE         |
| 4201510 | Introduction to Classical Physics                   | Yumiko UMEGAKI       |
| 4201520 | Introduction to Classical Physics                   | Minyo KATAGIRI       |
| 4201610 | Introduction to Modern Physics                      | Yumiko UMEGAKI       |
| 4201620 | Introduction to Modern Physics                      | Satoru HIRENZAKI     |
| 4201710 | Linear Algebra II                                   | Takeo OKAZAKI        |
| 4201720 | Linear Algebra II                                   | Masato SHINODA       |
| 4201800 | Exercises in Linear Algebra II                      | Tomoko TAKEMURA      |
| 4201900 | Statistical Method in Data Analysis                 | Kenkichi MIYABAYASHI |
| 4202000 | Differential and Integral Calculus III              | Jun-ichi MATSUZAWA   |
| 4202100 | Exercises in Differential and Integral Calculus III | Masato SHINODA       |
| 4202200 | Set and Topology                                    | Minyo KATAGIRI       |
| 4202300 | Exercises in Set and Topology                       | Yeonhee JANG         |
| 4202400 | Vector Analysis                                     | Tatsuya UEZU         |
| 4202500 | Exercises in Vector Analysis                        | Shuji KIYOKAWA       |
| 4202600 | Applied Complex Analysis                            | Haruhiko TERAOKA     |
| 4202700 | Exercises in Applied Complex Analysis               | Hideko NAGAHIRO      |
| 4202800 | Real Analysis                                       | Shinya MORITOH       |
| 4202900 | Exercises in Real Analysis                          | Shinya MORITOH       |
| 4203000 | Nonlinear Analysis                                  | Taku YANAGISAWA      |
| 4203100 | Exercises in Nonlinear Analysis                     | Taku YANAGISAWA      |
| 4203200 | Complex Analysis                                    | Masahiko TANIGUCHI   |
| 4203300 | Exercises in Complex Analysis                       | Masahiko TANIGUCHI   |
| 4203600 | Introduction to Algebra                             | Takeo OKAZAKI        |
| 4203700 | Exercises in introduction to Algebra                | Takeo OKAZAKI        |
| 4203800 | 3-dimensional Manifolds                             | Yeonhee JANG         |
| 4203900 | Exercises in 3-dimensional manifolds                | Yeonhee JANG         |

### Physics Course

|         |                                   |                                    |
|---------|-----------------------------------|------------------------------------|
| 4301000 | Introduction to Classical Physics | Kazuki YAMAMOTO                    |
| 4301100 | Introduction to Modern Physics    | Shigeo YAMAUCHI                    |
| 4301200 | Classical Mechanics 1             | Hidemi OGAWA                       |
| 4301300 | Physics Laboratory 1              | Kazuki YAMAMOTO<br>Naomi OTA       |
| 4301400 | Classical Mechanics 2             | So KITSUNEZAKI                     |
| 4301500 | Exercises in Classical Mechanics  | Hideko NAGAHIRO                    |
| 4301600 | Electromagnetism 1                | Shuji KIYOKAWA                     |
| 4301700 | Exercises in Electromagnetism 1   | Shuji KIYOKAWA                     |
| 4301800 | Physics Laboratory 2              | Hisaki HAYASHII<br>Shigeo YAMAUCHI |
| 4301900 | Thermodynamics                    | So KITSUNEZAKI                     |
| 4302000 | Electromagnetism 2                | Mikito TODA                        |
| 4302100 | Exercises in Electromagnetism 2   | Mikito TODA                        |
| 4302200 | Quantum Mechanics 1               | Tomohiko TAKAHASHI                 |
| 4302300 | Exercises in Quantum Mechanics 1  | Tomohiko TAKAHASHI                 |
| 4311000 | General Earth Science 2           | Shigeo YAMAUCHI<br>Akihiko TOMITA  |
| 4312000 | Environmental Science on Earth 1  | Sachiko HAYASHIDA                  |

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|---------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------|
| 4314000                               | Introductory Chemistry Laboratory 1          | Kaoru IWAI<br>Takashi KAJIWARA<br>Takae TAKEUCHI<br>Yumiko KATAOKA<br>Bunsho KURE |
| 4316000                               | Experiments on Earth Sciences 1              | Tatsumasa KITAHARA<br>Masayoshi NOBUKAWA<br>Yoshiya WATANABE                      |
| <b>Physics and Mathematics Course</b> |                                              |                                                                                   |
| 4401000                               | Programming                                  | Fujio KAKO<br>Yasushi YAMASHITA                                                   |
| 4401100                               | Programming Practice                         | Fujio KAKO<br>Yasushi YAMASHITA                                                   |
| 4401200                               | Geometry of Vector and Space                 | Tsuyoshi KOBAYASHI                                                                |
| 4401300                               | Exercises for Geometry of Vector and Space   | Yeonhee JANG                                                                      |
| 4401400                               | Graph Theory                                 | Yasushi YAMASHITA                                                                 |
| 4401500                               | Group Theory in Science                      | Jun-ichi MATSUZAWA                                                                |
| 4401600                               | Exercise for Group Theory in Science         | Jun-ichi MATSUZAWA                                                                |
| 4401700                               | Hyperbolic Geometry                          | Yasushi YAMASHITA                                                                 |
| 4401800                               | Exercise for Hyperbolic Geometry             | Yasushi YAMASHITA                                                                 |
| 4402300                               | Mathematical analysis of shape               | Tsuyoshi KOBAYASHI                                                                |
| 4402400                               | Exercises for Mathematical analysis of shape | Tsuyoshi KOBAYASHI                                                                |