# Master's Program Subject and Completion Requirements 2017

**Department of Computer Science**

| Code | A completion requirements item name and subject name | Instructor | Unit | 1st.Grade Spring and Summer Terms | 1st.Grade Fall and Winter Terms | 2nd.Grade Spring and Summer Terms | 2nd.Grade Fall and Winter Terms | Unit multiplication method | Necessary lower limit units | Necessary lower limit units |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | | | | | | (1)+(2) | 30 | |
| | (1)Core Subjects | | | | | | | (1,1)+(1,2)+(1,3) | 22 | |
| | (1,1)Core Subjects(Required) | | | | | | | Σ | 4 | |
| 331321 | Research on Computer Science Ia | All Staff | 2 | 6 | | | | | | |
| 331322 | Research on Computer Science Ib | All Staff | 2 | | 6 | | | | | |
| | (1,2)Core Subjects(Required Elective) | | | | | | | (1,2,1)or(1,2,2)or(1,2,3) | 4 | |
| | (1,2,1)Required Elective Subjects 1 | | | | | | | Σ | 0 | |
| 331312 | Exercises on Computer science I | All Staff | 2 | 4 | | | | | | |
| 331313 | Exercises on Computer science II | All Staff | 2 | | 4 | | | | | |
| | (1,2,2)Required Elective Subjects 2 | | | | | | | Σ | 0 | |
| 331332 | Fundamentals of Software Development on Cloud Environment | Katsuro Inoue Shinji Kusumoto Shusuke Haruna & Other | 2 | 2 | | | | | | |
| 331333 | Exercise for Software Development on Cloud Environment | Katsuro Inoue Shinji Kusumoto Shusuke Haruna & Other | 2 | 2 | | 2 | | | | |
| | (1,2,3)Required Elective Subjects 3 | | | | | | | Σ | 0 | |
| 331426 | Introduction to Exercises on Information Engineering for Interactive Creation A | Taro Maeda Haruo Takemura Toru Fujiwara Hideyuki Ando Susumu Date Yuichi Ito | 4 | 4 | | 4 | | | | |
| | (1,3)Core Subjects(Elective) | | | | | | | Σ | 0 | |
| 331003 | Special Lectures on Information Science & Technology I | (Nobuyuki Shibano) (Masaaki Nishino) (Tomoharu Iwata) (Yasue Kishino) (Akinori Fujino) (Takaaki Tanaka) (Masaya Hirashima) (Hiroshi Ban) (Yasushi Naruse) | 2 | 2 | | | | | | |
| 331004 | Special Lectures on Information Science & Technology II | (Toshiyuki Kano) (Norihiko Tava) | 2 | | | 2 | | | | |
| 331302 | Theory of Programming Languages | | 2 | | | | | | | |
| 331303 | Parallel Programming | Fumihiko Ino | 2 | 2 | | | | | | |
| 331304 | Theory of Parallel Algorithms | | 2 | | | | | | | |
| 331305 | Theory of Software Development | Katsuro Inoue Makoto Matsushita (Katsuhiko Yuura) | 2 | | | 2 | | | | |
| 331306 | Software Maintenance Engineering | | 2 | | | | | | | |
| 331307 | Algorithm Design | | 2 | | | | | | | |
| 331308 | Theory of Distributed System Software | Toshimitsu Masuzawa Hirotsugu Kakugawa | 2 | | | 2 | | | | |
| 331310 | Seminar on Computer Science I | All Staff | 2 | 2 | | | | | | |
| 331311 | Seminar on Computer Science II | All Staff | 2 | | | 2 | | | | |
| 331318 | Introduction to Intelligent System | Yasushi Makihara Daigo Muramatsu | 2 | | | 2 | | | | |
| 331319 | Theory of Software Design | Shinji Kusumoto Yoshiki Higo | 2 | 2 | | | | | | |
| 331337 | Image Recognition | | 2 | | | | | | | |
| 331323 | Research on Computer Science IIa | All Staff | 2 | | | 6 | | | | |
| 331324 | Research on Computer Science IIb | All Staff | 2 | | | | 6 | | | |
| 331325 | Fundamentals of Computer Science | All Staff | 2 | 2 | | | | | | |
| 331326 | Internship on Computer Science | All Staff (Except Collaborative Division) | 2 | 3 | | 3 | | | | |
| 331336 | Advanced PBL for Software Development on Cloud Environment | Katsuro Inoue Shinji Kusumoto & Other | 2 | | | 2 | | | | |
| | (2)Elective subject | | | | | | | (2,1)+(2,2)+(2,3) | 0 | |
| | (2,1)Inter-disciplinary Subjects | | | | | | | Σ | 0 | |
| 331005 | Informartion Technology and Ethics | Staffs of dept. of Information Systems Engineering Staffs of dept. of Multimedia Engineering (Michio Nakanish) | 2 | 2 | | | | | | |
| 331006 | English Presentation Skills | Eum Suyong | 2 | *2 | | *2 | | | | |
| 331014 | The Foundation of Intellectual Property (Focusing on Computer Science) | Hidefumi Aoe & Other | 2 | | | 2 | | | | |
| 331135 | Topics in Frontiers of Mathematics | Satoshi Murai | 2 | | | 2 | | | | |
| 331222 | Advenced Introduction to Information Pysicscal Science | All staff of dept. of Information and Physical Sciences | 2 | 2 | | | | | | |
| 331401 | System Level Design Methodology | | 2 | | | | | | | |
| 331408 | Concurrent Systems | Tatsuhiro Tsuchiya Hiroyuki Nakagawa | 2 | 2 | | | | | | |

**Department of Computer Science**

| Code | A completion requirements item name and subject name | Instructor | Unit | School hour a week | | | | Unit multiplication method | Necessary lower limit units | Necessary lower limit units |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1st.Grade | | 2nd.Grade | | | | |
| | | | | Spring and Summer Terms | Fall and Winter Terms | Spring and Summer Terms | Fall and Winter Terms | | | |
| 331501 | Information Network Design | Toru Hasegawa Ryutaro Kawamura Osamu Kamatani Takana Kaho | 2 | 2 | | | | | | |
| 331508 | Mobile Communication Protocols | Teruo Higashino Hirozumi Yamaguchi | 2 | | 2 | | | | | |
| 331511 | Economics of Information Network | Teruo Higashino Hirozumi Yamaguchi (Keita Arai) | 2 | 2 | | | | | | |
| 331525 | Advanced Introduction to Information Networking | All staff of dept. of Information Networking | 2 | | 2 | | | | | |
| 331635 | Big Data Engineering | Makoto Onizuka Yuki Arase Yuna Sasaki | 2 | 2 | | | | | | |
| 331636 | Big Data Analytics | | 2 | | | | | | | |
| 331621 | Information Security | Toru Fujiwara Yasunori Ishihara | 2 | 2 | | | | | | |
| 331622 | Content Security | | 2 | | | | | | | |
| 331639 | Studies on International Integrated Sciences | Leibnitz Kenji Ferdinand Peper Siriteanu Constantin | 2 | 2 | | | | | | |
| 331701 | Bio-database Engineering | Hideo Matsuda Yoichi Takenaka | 2 | 2 | | | | | | |
| 331702 | Molecular Bio-information Analysis | | 2 | | | | | | | |
| 331720 | Bio-network Engineering | | 2 | | | | | | | |
| 331721 | Basic Theory of Bio-networks | Naoki Wakamiya Jun-nosuke Teramae | 2 | 2 | | | | | | |
| 331724 | Introduction to Bioinformatic Engineering | All staff of dept. of Bioinformatic Engineering | 2 | 2 | | | | | | |
| 331732 | Introduction to Integrated Biological and Information Engineering | Hiroshi Shimizu Yoshihiro Toya | 2 | 2 | | | | | | |
| | (2,2)Others | | | | | | | | 0 | |
| | (2,3)Academic Internship Abroad | | | | | | | MAX{(2,3,1),(2,3,2)} | 0 | |
| | (2,3,1)S | | | | | | | | 0 | |
| 331025 | Academic Internship Abroad M(S) | All Staff | 4 | 6 | 6 | (※6) | | | | |
| | (2,3,2)L | | | | | | | | 0 | |
| 331027 | Academic Internship Abroad M(L) | All Staff | 8 | 12 | 12 | (※12) | | | | |

Note1) 1. Σ= Integrate the total number of credits for subjects with a slant line directly below.
   2. MAX= Integrate only one subject with the maximum number of credits.
   3. The class with * is held twice a year. However, registration is limited according to the department.
   4. The class is not offered this year when the instructor's name field is blank.
   5. Requirements for Completion; Students must receive 30 credits or more from this table, and pass a final evaluation of their master's thesis.
   6. M1 students can register Academic Internship AbroadM(S),M(L) from "fall and winter terms" through "spring and summer terms".

Note2) 1. The requirements to complete "Cloud Spiral" course shall be prescribed separately.
   2. 331332, 331333 and 331336 are offered only for "Cloud Spiral" course students. (held at Nakanoshima center)
   3. Students can not register for both 331312 and 331332 at the same time.
   4. Students can not register for both 331313 and 331333 at the same time.