# Master's Program Subject and Completion Requirements 2025

**Department of Multimedia Engineering**

| Code | Classification | A completion requirements item name and subject name | Instructor | Unit | School hour a week | | | | Unit multiplication method | Necessary lower limit units | Upper limit units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1st.Grade | | 2nd.Grade | | | | |
| | | | | | Spring and Summer Terms | Fall and Winter Terms | Spring and Summer Terms | Fall and Winter Terms | | | |
| | | Total | | | | | | | 1+2 | 30 | |
| | | 1.Advanced Liberal Arts Educational subjects (select from the attached list "「高度教養教育科目リスト(マルチメディア工学専攻)」) | | | | | | | | 2 | |
| | | 2.Major Subjects･Advanced Global Literacy Educational subjects | | | | | | | (1)+(2) | 28 | |
| | | (1)Core Subjects | | | | | | | (1,1)+(1,2)+(1,3) | 22 | |
| | | (1,1)Core Subjects(Required) | | | | | | | Σ | 4 | 4 |
| 331625 | M | Research on Multimedia Engineering Ia | All Staff | 2 | 6 | | | | | | |
| 331626 | M | Research on Multimedia Engineering Ib | All Staff | 2 | | 6 | | | | | |
| | | (1,2)Core Subjects(Required Elective) | | | | | | | (1,2,1)or(1,2,2)or(1,2,3) | 4 | 4 |
| | | (1,2,1)Required Elective Subjects 1 | | | | | | | Σ | 0 | |
| 331613 | M | Exercises on Multimedia Engineering I | All Staff | 2 | 4 | | | | | | |
| 331614 | M | Exercises on Multimedia Engineering II | All Staff | 2 | | 4 | | | | | |
| | | (1,2,2)Required Elective Subjects 2 | | | | | | | Σ | 0 | |
| 331527 | M | Exercises on Information Security I | Hirozumi Yamaguchi<br>Akira Uchiyama<br>(Shingo Okamura) | 2 | 2 | 2 | | | | | |
| 331528 | M | Exercises on Information Security II | Hirozumi Yamaguchi<br>Akira Uchiyama<br>(Shingo Okamura) | 2 | 2 | 2 | | | | | |
| | | (1,2,3)Required Elective Subjects 3 | | | | | | | Σ | 0 | |
| 331426 | M | Introduction to Exercises on Information Engineering for Interactive Creation A | Taro Maeda<br>Susumu Date<br>Yuki Uranishi<br>Masahiro Furukawa | 4 | 4 | 4 | | | | | |
| | | (1,3)Core Subjects(Elective) | | | | | | | (1,3,1)+(1,3,2) | 14 | |
| | | (1,3,1)Subjects held at the university | | | | | | | Σ | 0 | |
| 331601 | M | Architecture for Multimedia Systems | Susumu Date<br>Kazuhide Kojima<br>Yoshiyuki Kido | 2 | 2 | | | | | | |
| 331635 | M | Big Data Engineering | Makoto Onizuka<br>Chuan Xiao | 2 | 2 | | | | | | |
| 331636 | M | Big Data Analytics | | 2 | | | | | | | |
| 331640 | M | Cybernetic Avatar | Norihiro Hagita<br>Takahiro Miyashita<br>Satoshi Satake | 2 | | 2 | | | | | |
| 331611 | M | Seminar on Multimedia Engineering I | All Staff | 2 | 2 | | | | | | |
| 331612 | G・M | Seminar on Multimedia Engineering II | All Staff | 2 | | 2 | | | | | |
| 331619 | M | Multimedia Data Engineering | | 2 | | | | | | | |
| 331620 | M | Database Systems | Takahiro Hara<br>Takuya Maekawa<br>Tadashi Nakano<br>Renee Patrizia Shultz<br>Yasue Kishino<br>Amagata Daichi<br>Zhang Yihong | 2 | 2 | | | | | | |
| 331621 | M | Information Security | Takanori Isobe<br>Kyosuke Yamashita | 2 | 2 | | | | | | |
| 331622 | M | Content Security | | 2 | | | | | | | |
| 331637 | M | Robot Vision | | 2 | | | | | | | |
| 331638 | M | Machine Vision | Fumio Okura | 2 | | 2 | | | | | |
| 331627 | M | Research on Multimedia Engineering IIa | All Staff | 2 | | | 6 | | | | |
| 331628 | M | Research on Multimedia Engineering IIb | All Staff | 2 | | | | 6 | | | |
| 331629 | M | Special Lectures on Multimedia Engineering | (Osamu Shirakawa)<br>(Tsukasa Okada)<br>(Takashi Taketomi )<br>(Masaki Samejima)<br>(Toshimori Honjo)<br>(Taro Saitou)<br>(Yoshinori Takesako)<br>(Yasuhiro Fujiwara)<br>(Yukiko Kawai) | 2 | | 2 | | | | | |
| 331639 | G・M | Studies on International Integrated Sciences | Leibnitz Kenji<br>Ferdinand Peper | 2 | 2 | | | | | | |
| | | (1,3,2)Subjects held outside the university | | | | | | | MAX{(1,3,2,1),(1,3,2,2)} | 0 | |
| | | (1,3,2,1) | | | | | | | | 0 | |
| 331630 | M | Internship on Multimedia Engineering | All Staff(Except Collaborative Division) | 2 | 3 | 3 | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1st.Grade | | 2nd.Grade | | | | |
| | | | | | Spring and Summer Terms | Fall and Winter Terms | Spring and Summer Terms | Fall and Winter Terms | | | |
| | | (1,3,2,2) | | | | | | | | 0 | |
| 331633 | M | Collaborative Research in Multimedia Engineering | All Staff（Except Collaborative Division） | 4 | 6 | 6 | | | | | |
| | | (2)Elective subject | | | | | | | (2,1)+(2,2)+(2,3) | | |
| | | (2,1)Inter-disciplinary Subjects | | | | | | | Σ | 0 | |
| 331005 | M | Informartion Technology and Ethics | Staffs of dept. of Information Systems Engineering<br>Staffs of dept. of Multimedia Engineering<br>(Michio Nakanishi) | 2 | 2 | | | | | | |
| 331006 | G・M | English Presentation Skills | Bettina Wutzl | 2 | *2 | *2 | | | | | |
| 331014 | M | The Foundation of Intellectual Property (Focusing on Computer Science) | (Shuichi Mukai)<br>(Tsuyoshi Masuda)<br>&Other | 2 | | 2 | | | | | |
| 331030 | M | Innovation Management | Minoru Eto<br>Yuko Sasahara<br>Takaaki Kitajima | 2 | 2 | | | | | | |
| 331135 | M | Topics in Frontiers of Mathematics | Makoto Nakamura | 2 | | 2 | | | | | |
| 331203 | M | Computational Informatics | (Undecided) | 2 | | | | | | | |
| 331204 | M | Mathematical Programming | Yutaro Yamaguchi | 2 | 2 | | | | | | |
| 331208 | M | Advanced Statistical analysis | Hiroshi Morita | 2 | | 2 | | | | | |
| 331222 | M | Advanced Introduction to Information Physical Science | All Staff | 2 | 2 | | | | | | |
| 331224 | M | Knowledge Informatics | TBD | 2 | | | | | | | |
| 331307 | M | Algorithm Design | | 2 | | | | | | | |
| 331308 | M | Theory of Distributed System Software | Taisuke Izumi | 2 | | 2 | | | | | |
| 331319 | M | Theory of Software Design | Shinji Kusumoto<br>Shinsuke Matsumoto | 2 | 2 | | | | | | |
| 331337 | M | Image Recognition | | 2 | | | | | | | |
| 331338 | M | Computational Phogography | Hajime Nagahara<br>Tomoya Nakamura | 2 | | 2 | | | | | |
| 331404 | M | Computer-Aided System-on-a-Chip Design | | 2 | | | | | | | |
| 331408 | M | Concurrent Systems | | 2 | | | | | | | |
| 331409 | M | System Interface Design | Yuki Uranishi | 2 | 2 | | | | | | |
| 331419 | M | Integrated System Architecture and Synthesis | Takao Onoye<br>Ittetsu Taniguchi<br>Norio Ito<br>Kimihiko Imamura<br>Shohei Yamada | 2 | 2 | | | | | | |
| 331420 | M | Dependable Systems | Tatsuhiro Tsuchiya | 2 | 2 | | | | | | |
| 331431 | M | Machine Learning Systems Theory | | 2 | | | | | | | |
| 331432 | M | Machine Learning for Dynamical Systems | Yoshinobu Kawahara<br>Masahiro Ikeda<br>Takuya Konishi<br>Masahiro Fujisawa | 2 | 2 | | | | | | |
| 331501 | M | Information Network Design | Hideyuki Shimonishi<br>Shin-ichi Arakawa | 2 | 2 | | | | | | |
| 331502 | M | Multimedia Network | | 2 | | | | | | | |
| 331507 | M | Mobile Computing | | 2 | | | | | | | |
| 331508 | M | Mobile Communication Protocols | Hirozumi Yamaguchi<br>Akira Uchiyama<br>Viktor Erdelyi | 2 | | 2 | | | | | |
| 331509 | M | Gigabit Network | | 2 | | | | | | | |
| 331510 | M | High-Speed Network Architecture | Yuichi Ohshita | 2 | 2 | | | | | | |
| 331511 | M | Economics of Information Network | Hirozumi Yamaguchi<br>Akira Uchiyama<br>(Keita Arai) | 2 | 2 | | | | | | |
| 331525 | M | Advanced Introduction to Information Networking | All staff of dept. of Information Networking | 2 | | 2 | | | | | |
| 331709 | M | Human Information Processing | | 2 | | | | | | | |
| 331720 | M | Bio-network Engineering | | 2 | | | | | | | |
| 331721 | M | Basic Theory of Bio-networks | Naoki Wakamiya<br>Shun Kurokawa | 2 | 2 | | | | | | |
| 331723 | M | Human Information Engineering | Taro Maeda<br>Masahiro Furukawa | 2 | | 2 | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1st.Grade | | 2nd.Grade | | | | |
| | | | | | Spring and Summer Terms | Fall and Winter Terms | Spring and Summer Terms | Fall and Winter Terms | | | |
| 331724 | M | Introduction to Bioinformatic Engineering | All staff of dept. of Bioinformatic Engineering | 2 | 2 | | | | | | |
| 331732 | M | Introduction to Integrated Biological and Information Engineering | Hiroshi Shimizu<br>Fumio Matsuda<br>Yoshihiro Toya<br>Nobuyuki Okahashi<br>Teppei Niide | 2 | 2 | | | | | | |
| | | (2,2)Others | | | | | | | | | |
| | | (2,3)Academic Internship Abroad | | | | | | | MAX{(2,3,1),(2,3,2)} | 0 | |
| | | (2,3,1) | | | | | | | | 0 | |
| 331025 | G・M | Academic Internship Abroad M(S) | All Staff | 4 | 6 | 6 | (6) | | | | |
| | | (2,3,2) | | | | | | | | 0 | |
| 331027 | G・M | 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. In the 30 credits, students must include 22 credits of Major subjects, 1 credit of Advanced Global Literacy Educational subjects, and 2 credits of Advanced Liberal Arts Educational subjects.
6. M1 students can register Academic Internship AbroadM(S),M(L) from "fall and winter terms" through "spring and summer terms".
7. "M" in the classification column represents Major subjects, "G" represents Advanced Global Literacy Educational subjects, and "G･M" represents subjects with both Advanced Global Literacy Educational and Major subjects' characteristics.
8. If you have acquired subjects with both Advanced Global Literacy Educational and Major subjects' characteristics, the credits will be included preferentially for Advanced Global Literacy Educational subjects. If 1 credit of Advanced Global Literacy Educational subjects is already fulfilled, the credits will be included for Major subjects
9. With regard to Advanced Liberal Arts Educational subjects and Advanced Global Literacy Educational subjects offered by other graduates schools (or other institutions) in Osaka university, the subjects approved by Department of Multimedia Engineering can be included for Requirements for Completion up to 2 credits for Advanced Liberal Arts Educational subjects and 1 credit for Advanced Global Literacy Educational subjects.
   For details, please refer the attached "「高度教養教育科目リスト(マルチメディア工学専攻)」「高度国際性涵養教育科目リスト(マルチメディア工学専攻)」.

Note2)

The requirements to complete "SecCap" course shall be prescribed separately.