

**Course Requirements and Registration Priorities  
School of Sciences and Humanities (Master), Spring 2021**

| #                         | Abbr     | Title                                 | Cr(US) | Cr(ECTS) | PreRequisite  | CoRequisite | AntiRequisite | 1st priority registration                          | 2nd priority registration      | 3rd priority registration      | 4th priority registration |
|---------------------------|----------|---------------------------------------|--------|----------|---|-------------|---------------|--|--------------------------------|--------------------------------|---------------------------|
| <b>SSH</b>                |          |                                       |        |          |   |             |               |  |                                |                                |                           |
| <b>Area Studies</b>       |          |                                       |        |          |   |             |               |  |                                |                                |                           |
| 1                         | EAS 502  | Disciplinary Methodology              | 4      | 8        |   |             |               | SSH  | GSB, GSE, GSPP, SEDS, SMG, SoM |                                |                           |
| 2                         | EAS 503  | Thesis I                              | 7.5    | 15       | EAS 500 Introduction to Eurasia (1632) (C- and above) AND EAS 501 General Methodology (1633) (C- and above) AND EAS 502 Disciplinary Methodology (1379) (C- and above)  |             |               |  |                                |                                |                           |
| 3                         | EAS 504  | Thesis II                             | 12.5   | 25       | EAS 500 Introduction to Eurasia (1632) (C- and above) AND EAS 501 General Methodology (1633) (C- and above) AND EAS 502 Disciplinary Methodology (1379) (C- and above) AND EAS 503 Thesis I (2141) (C- and above) |             |               | SSH  |                                |                                |                           |
| 4                         | EAS 511  | Independent Study in Eurasian Studies | 4      | 8        |   |             |               |  |                                |                                |                           |
| <b>Biological Science</b> |          |                                       |        |          |   |             |               |  |                                |                                |                           |
| 5                         | BIOL 502 | Research Methods and Bioethics        | 3      | 6        |   |             |               | Biological Sciences                                | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |                           |
| 6                         | BIOL 570 | Advanced Biotechnology                | 3      | 6        |   |             |               | Biological Sciences                                | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |                           |
| 7                         | BIOL 580 | Applied Bioinformatics                | 3      | 6        | BIOL 520 Statistical Methods in Life Sciences (1203) (C and above)  |             |               | Biological Sciences                                | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |                           |
| 8                         | BIOL 590 | Research Design and Project Planning  | 3      | 6        |   |             |               | 1 year Gr SSH Biological Sciences and Technologies |                                |                                |                           |
| 9                         | BIOL 591 | Cellular Biophysics                   | 3      | 6        |   |             |               | Biological Sciences                                | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |                           |
| 10                        | BIOL 599 | Master's Thesis Research              | 0      | 0        |   |             |               | Biological Sciences                                |                                |                                |                           |
| 11                        | BIOL 630 | Advanced Neuroscience                 | 3      | 6        |   |             |               | Biological Sciences                                | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |                           |
| 12                        | BIOL 637 | Fundamentals of Advanced Microscopy   | 3      | 6        |   |             |               | Biological Sciences                                | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |                           |

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|--------------------------------------|----------|--|----|----|---|--|--|---------------------|--------------------------------|--------------------------------|--|
| 13                                   | BIOL 692 | Master's Thesis                        | 15 | 30 | BIOL 691 Master's Thesis Research Proposal (5676) (B- and above)  |  |  | Biological Sciences |                                |                                |  |
| <b>Chemistry</b>                     |          |  |    |    |   |  |  |                     |                                |                                |  |
| 14                                   | CHEM 511 | Theoretical Chemistry                  | 3  | 6  | CHEM 510 Principles of Physical Chemistry (5266) (C and above)  |  |  | Chemistry           | Biological Sciences            | SEDS, SMG, SSH, SoM            |  |
| 15                                   | CHEM 515 | Applied Colloid and Surfactant Science | 3  | 6  |   |  |  | Chemistry           | Biological Sciences            | SEDS, SMG, SSH, SoM            |  |
| 16                                   | CHEM 540 | Organic Reactions and Mechanisms       | 3  | 6  |   |  |  | Chemistry           | Biological Sciences            | SEDS, SMG, SSH, SoM            |  |
| 17                                   | CHEM 550 | Selected Topics in Chemistry           | 3  | 6  |   |  |  | Chemistry           | Biological Sciences            | SEDS, SMG, SSH, SoM            |  |
| 18                                   | CHEM 560 | Directed research in chemistry         | 0  | 0  |   |  |  | Chemistry           | Biological Sciences            | SEDS, SMG, SSH, SoM            |  |
| 19                                   | CHEM 592 | Chemistry Seminar                      | 3  | 6  |   |  |  | Chemistry           | Biological Sciences            | SEDS, SMG, SSH, SoM            |  |
| 20                                   | CHEM 692 | MSc Thesis in Chemistry                | 18 | 36 | CHEM 691 Thesis Proposal (5858) (C- and above)  |  |  | Chemistry           |                                |                                |  |
| <b>Communication and Composition</b> |          |  |    |    |   |  |  |                     |                                |                                |  |
| 21                                   | WCS 501  | Science Communication                  | 3  | 6  |   |  |  | SSH                 | GSB, GSE, GSPP, SEDS, SMG, SoM |                                |  |
| <b>Economics</b>                     |          |  |    |    |   |  |  |                     |                                |                                |  |
| 22                                   | ECON 516 | Empirical Industrial Organization      | 4  | 8  | ECON 501 Microeconomics I (2187) (C- and above) AND ECON 531 Econometrics (2505) (C- and above)   |  |  | Economics           | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |  |
| 23                                   | ECON 521 | Microeconomic Theory II                | 4  | 8  | ECON 501 Microeconomics I (2187) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)   |  |  | Economics           | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |  |
| 24                                   | ECON 522 | Macroeconomics II                      | 4  | 8  | ECON 502 Macroeconomics I (2186) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)   |  |  | Economics           | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |  |
| 25                                   | ECON 524 | Research Methodology                   | 4  | 8  | ECON 501 Microeconomics I (2187) (C- and above) AND ECON 502 Macroeconomics I (2186) (C- and above) AND ECON 511 Statistics (2188) (C- and above) | ECON 531 Econometrics (2505) (D and above) |  | Economics           | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |  |
| 26                                   | ECON 531 | Econometrics                           | 4  | 8  | ECON 511 Statistics (2188) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)   |  |  | Economics           | SSH                            | GSB, GSE, GSPP, SEDS, SMG, SoM |  |

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|---|-----------------|---|----|----|---|--|--|---------------------|-----|-------------------------------------|--------------------------|
| 27  | ECON 543        | Topics in Macroeconomic Theory                            | 4  | 8  | ECON 502 Macroeconomics I (2186) (C- and above)     |  |  | Economics           | SSH | GSB, GSE, GSPP, SEDS, SMG, SoM      |                          |
| 28  | ECON 590        | Thesis II   | 8  | 16 | ECON 589 Thesis I (3714) (P)                        |  |  |                     |     |                                     |                          |
| <b>History, Philosophy and Religious Studies</b>  |                 |   |    |    |   |  |  |                     |     |                                     |                          |
| 29  | HST 533         | Empire, Nation and Identity in Nineteenth-Century Eurasia | 4  | 8  |   |  |  | SSH                 |     | GSB, GSE, GSPP, SEDS, SMG, SoM      |                          |
| 30  | HST 590         | History of Sexuality                                      | 4  | 8  |   |  |  | SSH                 |     | GSB, GSE, GSPP, SEDS, SMG, SoM      |                          |
| <b>History, Philosophy and Religious Studies, History, Philosophy and Religious Studies</b> |                 |   |    |    |   |  |  |                     |     |                                     |                          |
| 31  | HST 562/REL 562 | History of Islam under Russian Rule                       | 4  | 8  |   |  |  | SSH                 |     | GSB, GSE, GSPP, SEDS, SMG, SoM      |                          |
| 32  | REL 572/HST 572 | History of Sufism in the Middle East and Central Asia     | 4  | 8  |   |  |  | SSH                 |     | GSB, GSE, GSPP, SEDS, SMG, SoM      |                          |
| <b>Kazakh Language and Turkic Studies</b>   |                 |   |    |    |   |  |  |                     |     |                                     |                          |
| 33  | TUR 555         | Eurasian Environments                                     | 4  | 8  |   |  |  |                     |     | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |                          |
| <b>Languages, Literature and Linguistics</b>  |                 |   |    |    |   |  |  |                     |     |                                     |                          |
| 34  | LING 572        | Language Ideologies                                       | 4  | 8  |   |  |  | SSH                 |     | GSB, GSE, GSPP, SEDS, SMG, SoM      |                          |
| <b>Mathematics</b>  |                 |   |    |    |   |  |  |                     |     |                                     |                          |
| 35  | MATH 512        | Optimization Methods and Techniques                       | 3  | 6  |   |  |  | Applied Mathematics |     | SEDS, SSH                           | GSB, GSE, GSPP, SMG, SoM |
| 36  | MATH 541        | Data Analysis and Statistical Learning                    | 3  | 6  | MATH 540 Statistical Learning (2340) (B- and above) |  |  | Applied Mathematics |     | SEDS, SSH                           | GSB, GSE, GSPP, SMG, SoM |
| 37  | MATH 582        | Mathematical Biology                                      | 3  | 6  |   |  |  | Applied Mathematics |     | SEDS, SSH                           | GSB, GSE, GSPP, SMG, SoM |
| 38  | MATH 601        | Analytic Number Theory                                    | 3  | 6  |   |  |  | Applied Mathematics |     | SEDS, SSH                           | GSB, GSE, GSPP, SMG, SoM |
| 39  | MATH 691        | Thesis Proposal   | 3  | 6  | MATH 592 Research Seminar (5760) (C- and above)     |  |  | Applied Mathematics |     | SEDS, SSH                           | GSB, GSE, GSPP, SMG, SoM |
| 40  | MATH 692        | Thesis  | 15 | 30 | MATH 691 Thesis Proposal (5769) (P)                 |  |  |                     |     |                                     |                          |
| <b>Physics</b>  |                 |   |    |    |   |  |  |                     |     |                                     |                          |
| 41  | PHYS 510        | Quantum Mechanics   | 3  | 6  |   |  |  | Physics             |     | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |                          |
| 42  | PHYS 520        | Statistical Physics                                       | 3  | 6  |   |  |  | Physics             |     | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |                          |

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|--|----------|---|----|----|--|--|--|---|-------------------------------------|--|--|
| 43   | PHYS 574 | Lasers and Photonics                              | 3  | 6  |  |  |  | Physics                                       | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |  |  |
| 44   | PHYS 692 | Thesis  | 21 | 42 |  |  |  |   |                                     |  |  |
| <b>Political Science and International Relations</b> |          |   |    |    |  |  |  |   |                                     |  |  |
| 45   | PLS 510  | Advanced Research I                               | 4  | 8  |  |  |  | Political Science and International Relations | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |  |  |
| 46   | PLS 516  | Experimental Political Science                    | 4  | 8  | PLS 511 Advanced Research I (1631) (C- and above)  |  |  | Political Science and International Relations | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |  |  |
| 47   | PLS 526  | Hannah Arendt on Power, Violence, and Revolution  | 4  | 8  |  |  | PLS 426 Hannah Arendt on Power, Violence, and Revolution (5398) (C- and above) | Political Science and International Relations | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |  |  |
| 48   | PLS 531  | Politics and Governance of the Russian Federation | 4  | 8  |  |  |  | Political Science and International Relations | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |  |  |
| 49   | PLS 557  | International Security and Conflict               | 4  | 8  |  |  |  | Political Science and International Relations | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |  |  |
| 50   | PLS 565  | Politics of International Finance                 | 4  | 8  |  |  |  | Political Science and International Relations | GSB, GSE, GSPP, SEDS, SMG, SSH, SoM |  |  |
| 51   | PLS 596  | Thesis Preparation                                | 2  | 4  | PLS 540 Core Seminar in Comparative Politics (1374) (C+ and above) OR PLS 550 Core Seminar in IR (1372) (C+ and above) AND PLS 511 Advanced Research I (1631) (C+ and above) |  |  | Political Science and International Relations |                                     |  |  |
| 52   | PLS 598  | MA Thesis I                                       | 6  | 12 |  |  |  |   |                                     |  |  |
| 53   | PLS 599  | MA Thesis II                                      | 10 | 20 |  |  |  |   |                                     |  |  |
| <b>Sociology and Anthropology</b>                    |          |   |    |    |  |  |  |   |                                     |  |  |
| 54   | SOC 525  | COVID-19: The sociocultural aspects of a pandemic | 4  | 8  |  |  |  | SSH   | GSB, GSE, GSPP, SEDS, SMG, SoM      |  |  |