

MMSS Blue Sheet
DEGREE REQUIREMENTS FOR MMSS STUDENTS
Academic Year 2011-12

1. General

In order to graduate with a joint major in MMSS and another field, students must:

- (i) meet the requirements for the MMSS major;
- (ii) meet the requirements of another approved major; and
- (iii) meet all general requirements of the Weinberg College of Arts and Sciences.

This document describes the requirements for the MMSS major and also describes the extent to which courses required for the MMSS major can be used to meet general degree requirements and requirements for the other major. It also describes special provisions for MMSS students that allow them to obtain a minor or major in mathematics in addition to the joint major in MMSS and a social science.

2. Requirements for the MMSS major

MATH 285-1	MATH 385-0	MMSS 211-1	MMSS 311-1	Either
MATH 285-2	MATH 386-1	MMSS 211-2	MMSS 311-2	MMSS 398-2 or
MATH 285-3	MATH 386-2	MMSS 211-3	MMSS 398-1	MMSS 398-3
	MATH 300-0			

NOTES:

- Students in their senior year must write an acceptable senior thesis. Students must register for MMSS 398-1 in the fall, and they must register for one additional quarter of MMSS 398. (MMSS 398-1, MMSS 398-2 and MMSS 398-3 are offered, respectively, in fall, winter and spring). Students may register for all three quarters if they wish. Regardless of which quarters they register for, students writing their theses must attend all meetings of the thesis seminar held throughout the entire year. The seminar typically meets a number of times in the fall quarter when students begin writing their theses, less frequently in the winter quarter, and then a number of times in the spring quarter for students to present their thesis research to one another.
- This note applies to students that take Math 291-1,2,3 in their freshman year and enter the MMSS program as sophomores. The Math Department allows students that perform well in Math 291-1,2,3 to directly enter the real analysis sequence, Math 320-1,2,3 or Math 321-1,2,3, without taking Math 300. MMSS students in this position who do not wish to obtain a minor or major in mathematics may substitute the first quarter of real analysis (Math 320-1 or Math 321-1) for Math 300. As detailed further below, students who wish to obtain either a minor or major in mathematics must take the entire real analysis sequence and are required to choose an additional 300 level math course to substitute for Math 300.

3. General distribution requirements fulfilled by MMSS courses

MMSS 211-1 fulfills ONE of the two required freshman seminars.

MMSS 211-2 and MMSS 211-3 fulfill BOTH Area III social science distribution requirements.

Any two of the following three courses fulfill BOTH Area II formal studies distribution requirements: MATH 285-1; MATH 285-2; or MATH 285-3.

Required MMSS courses do not fulfill any other general distribution requirements.

4. **Joint major requirements**

This section provides a list of pre-approved joint majors that MMSS students may choose from. Choice of a joint major not on this list must be approved by the director of MMSS. For each joint major, the extent to which required courses in the MMSS program can be used to meet the requirements of the joint major is described.

For students' convenience, a summary of the main requirements for each joint major is also provided. However, all of the detailed requirements for each joint major are not necessarily described in full. Students should consult documents issued by the relevant department for detailed descriptions of the complete requirements for any major.

Three general college-wide rules that apply for meeting requirements of joint majors are:

- (i) the same course may not be applied to the major requirements of two departments, but that
- (ii) a course used as a major course in one department may also fulfill a related course requirement for another major program, and
- (iii) a single thesis cannot be used to satisfy the requirements of two different majors.

In some cases, MMSS students are granted exceptions to rule (i) above (i.e., in some cases MMSS students are allowed to count a required MMSS course as a course satisfying a requirement for both the MMSS major and the other major). These cases are described in this section.

The extent to which required MMSS courses can be used to fulfill related course requirements under rule (ii) is also explained.

Finally, in some cases MMSS students are also granted an exception to rule (iii). Namely in some cases MMSS students are allowed to use a single thesis to meet the thesis requirement of MMSS and their additional major, so long as the thesis is only used to apply for honors in one of the two majors. (Students that wish to apply for honors in both MMSS and their additional major must write two separate theses.) These cases are also described in this section.

a) Anthropology

Summary of requirements for the major

ANTHRO 211	ANTHRO 215
ANTHRO 213	ANTHRO 370
ANTHRO 214	

Five additional 300-level anthropology courses subject to restrictions listed in the catalog.

Four related courses.

ANTHRO 398 (senior year)

Requirements fulfilled by MMSS courses

MATH 385-0 counts as a 300-level anthropology course.

MMSS 211-1, MMSS 211-2, MMSS 211-3, MMSS 311-1 and MMSS 311-2 count as related courses.

NOTES:

- Anthropology requires all majors to write a thesis. MMSS/anthropology students

need only complete one thesis to fulfill the thesis requirement for both majors. However, students who elect to write a single thesis to satisfy both requirements can obtain honors in only one of the two majors. In this case, students should register for and attend the anthropology senior thesis seminar according to the normal requirements of the anthropology department. Students should also fully participate in and attend all meetings of the MMSS thesis seminar over all three quarters of their senior year, but should ONLY register for MMSS398-1 in the fall. (i.e., they should not formally register for MMSS 398-2 or MMSS398-3). Students must inform the instructors of both thesis seminars that they intend to submit a single thesis to fulfill both requirements and the thesis topic and final paper must be approved by both instructors. To obtain honors in both majors, students must complete two different honors theses, one for each major. In this case, students should formally register for both thesis seminars according to the normal requirements for each department.

b) Economics

Summary of requirements for the major

ECON 201	ECON 310-1	MATH 220-0
ECON 202	ECON 310-2	STAT 210
ECON 281	ECON 311	

Five additional 300-level economics courses.

Three related courses

Requirements for MMSS students to obtain a joint major in economics

In addition to taking all of the required MMSS courses, students must take ECON 201, ECON 311 and five additional 300-level economics courses in order to obtain a joint major in economics.

NOTES:

- MMSS students should not register for ECON 202 or ECON 310-1 because the material in these courses is covered in MMSS 211-1.
- MMSS students with a strong high school background in macroeconomics should consult with the director of undergraduate studies in economics regarding whether they should take ECON 201, Introduction to Macroeconomics, or could instead directly enter into Economics 311, Intermediate Macroeconomics, after completing MMSS 211-1.
- In cases where students enter the program as sophomores, it is possible that they may have taken ECON 310-1 as freshmen prior to joining the program. In these cases, students are excused from taking MMSS 211-1. (Entering sophomores who have taken ECON 202 but not ECON 310-1 should register for MMSS 211-1.)
- MMSS students may take ECON 310-2 and have it count as one their six additional 300-level courses. However, they are not required to take ECON 310-2.
- MMSS students should not register for ECON 380-1 or ECON 380-2 because the material in these courses is covered in the MMSS game theory courses, MMSS211-2 and MMSS 311-1.
- MMSS students should not register for ECON 381-1 or ECON 381-2 because the material in these courses is covered in MATH 386-1 and MATH 386-2.
- To obtain honors in economics, students are required to participate in the economics department senior thesis seminar and submit a satisfactory thesis. To obtain honors

in both economics and MMSS, a joint MMSS/economics major must submit two separate theses and participate in both thesis seminars according to the normal requirements established by each department. However, MMSS students who wish to apply for honors in economics but not MMSS may submit a single thesis to fulfill both the MMSS major requirement and the economics honors requirement. Students intending to submit a single thesis to fill both requirements must inform the instructors of both thesis seminars of their intention, and the topic of the thesis and final paper must be approved by both instructors. In this case students should register for and attend the economics senior thesis seminar according to the normal requirements of the economics department. Students should also fully participate in and attend all meetings of the MMSS thesis seminar over all three quarters of their senior year, but should ONLY register for MMSS398-1 in the fall. (i.e., they should not formally register for MMSS 398-2 or MMSS398-3).

c) History

Summary of requirements for the major

Two undergraduate seminars, one being a 395 research seminar.

Nine 200- or 300-level history courses, including five in an area of concentration.

Two of the nine courses above must deal with non-western history or the history of Europe before 1800.

Five related courses in at least two departments

Requirements fulfilled by MMSS courses

MMSS 211-1, MMSS 211-2, MMSS 211-3, MMSS 311-1 and MMSS 311-2 count as related courses.

d) Linguistics

Summary of requirements for the major

LING 250, LING 260, LING 270

Nine 300 level linguistics courses subject to restrictions listed in the catalog.

Four related courses

Requirements fulfilled by MMSS courses

MMSS 311-1 and MMSS 311-2 count as 300-level linguistics courses.

MMSS 211-1, MMSS 211-2 and MMSS 211-3 count as related courses.

e) Political Science

Summary of the requirements for the major

Three 200-level courses in political science.

Eight 300-level courses in political science. One of these must be POLI SCI 310, POLI SCI 311, or POLI SCI 312. Another one must be a POLI SCI 395.

Five related courses, of which at least three must be at the 300 level

Requirements fulfilled by MMSS courses

MATH 385-0 counts as POLI SCI 310.

MMSS 311-2 counts as a 300-level political science course.

MMSS 211-1, MMSS 211-2, MMSS 211-3, MMSS 311-1, MATH 386-1 and MATH 386-2 count as related courses.

NOTES:

- To obtain honors in political science, students are required to participate in the political science department senior thesis seminar and submit a satisfactory thesis. To obtain honors in both political science and MMSS, a joint MMSS/political science major must submit two separate theses and participate in both thesis seminars according to the normal requirements established by each department. However, MMSS students who wish to apply for honors in political science but not MMSS may submit a single thesis to fulfill both the MMSS major requirement and the political science honors requirement. Students intending to submit a single thesis to fill both requirements must inform the instructors of both thesis seminars of their intention, and the topic of the thesis and final paper must be approved by both instructors. In this case students should register for and attend the political science senior thesis seminar according to the normal requirements of the political science department. Students should also fully participate in and attend all meetings of the MMSS thesis seminar over all three quarters of their senior year, but should **ONLY** register for MMSS398-1 in the fall. (i.e., they should not formally register for MMSS 398-2 or MMSS398-3).

f) Psychology

Summary of the requirements for the major

PSYCH 110, PSYCH 201, PSYCH 205

Eight additional psychology courses subject to restrictions listed in the Undergraduate Catalog

Five courses from mathematics, computer science, statistics, or the natural sciences subject to restrictions listed in the Undergraduate Catalog

Requirements fulfilled by MMSS courses

MATH 385-0 counts as PSYCH 201.

MATH 285-1, MATH 285-2, MATH 285-3, MATH 386-1 and MATH 386-2 count as the five required courses in mathematics, computer science, statistics, or the natural sciences.

NOTES:

- MMSS students **ARE** required to take PSYCH 205. They should keep in mind that PSYCH 201 or an approved substitute (e.g., MATH 385-0) is a prerequisite for PSYCH 205.

- To obtain honors in psychology, students are required to participate in the psychology department senior thesis seminar and submit a satisfactory thesis. To obtain honors in both psychology and MMSS, a joint MMSS/psychology major must submit two separate theses and participate in both thesis seminars according to the normal requirements established by each department. However, MMSS students who wish to apply for honors in psychology but not MMSS may submit a single thesis to fulfill both the MMSS major requirement and the psychology honors requirement. Students intending to submit a single thesis to fill both requirements must inform the instructors of both thesis seminars of their intention, and the topic of the thesis and final paper must be approved by both instructors. In this case students should register for and attend the psychology senior thesis seminar according to the normal requirements of the psychology department. Students should also fully participate in and attend all meetings of the MMSS thesis seminar over all three quarters of their senior year, but should ONLY register for MMSS398-1 in the fall. (i.e., they should not formally register for MMSS 398-2 or MMSS398-3).

g) Sociology

Summary of requirements for the major

SOC 226, SOC 303, SOC 329, SOC 306

SOC 398-1 and SOC 398-2 (if writing a senior thesis) or two 300-level sociology courses (if not writing a thesis)

One additional sociology course at the 100 or 200 level

Four additional 300-level sociology courses subject to restrictions listed in the Undergraduate Catalog

Four related courses

Requirements fulfilled by MMSS courses

MATH 385-0 counts as SOC 226.

MATH 386-1 counts as SOC 303.

MATH 386-2, MMSS 211-1, MMSS 211-2, MMSS 211-3, MMSS 311-1 and MMSS 311-2 count as related courses.

NOTES:

- MMSS students ARE required to take SOC 329.
- One of the options available for meeting the requirements for a major in sociology is writing a senior thesis. MMSS/sociology students need only complete one thesis to fulfill the thesis requirement for both majors. However, students who elect to write a single thesis to satisfy both requirements can obtain honors in only one of the two majors. In this case, students should register for and attend the sociology senior thesis seminar according to the normal requirements of the sociology department. Students should also fully participate in and attend all meetings of the MMSS thesis seminar over all three quarters of their senior year, but should ONLY register for MMSS398-1 in the fall. (i.e., they should not formally register for MMSS 398-2 or MMSS398-3). Students must inform the instructors of both thesis seminars that they intend to submit a single thesis to fulfill both requirements and the thesis topic and final paper must be approved by both instructors. To obtain honors in both majors, students must complete two different honors theses, one for each major. In this case, students should formally register for both thesis seminars according to the normal requirements for each department.

5. Triple Majors

Students wishing to pursue two joint majors with MMSS (i.e., to pursue a triple major) are NOT allowed to double count MMSS courses towards both of their other majors, i.e., MMSS students may only apply the double counting rules stated above to ONE major. In special cases, permission may be given to count some MMSS courses as fulfilling the requirements of two other majors. However, explicit permission must be obtained from the Director of MMSS and from the Directors of Undergraduate Studies of BOTH of the other departments.

6. The math minor

MMSS students who fulfill all of the requirements for the joint major, including taking MATH 285-1, MATH 285-2, MATH 285-3, MATH 385-0, MATH 386-1, MATH 386-2, and MATH 300-0, are eligible to receive a minor in mathematics if they also take MATH 320-1,2,3 or MATH 321-1,2,3.

MMSS students who are permitted to take MATH 320-1, 2, 3 or 321-1,2,3 without taking MATH 300 must substitute any 300-level mathematics course for MATH 300-0 (i.e., it does not have to be chosen from the list of 300-level courses specified below that courses satisfying the major requirement must be chosen from).

7. The math major

MMSS students who fulfill all of the requirements for the joint major, including taking MATH 285-1, MATH 285-2, MATH 285-3, MATH 385-0, MATH 386-1, MATH 386-2, and MATH 300-0, are eligible to receive a major in mathematics in addition to their joint major in MMSS and a social science if they also take MATH 320-1,2,3 or MATH 321-1,2,3 and three additional one quarter courses chosen from the following list:

- 310-2,3 Probability and Stochastic Processes (even though MMSS students cannot receive credit for 310-1, those planning to take 310-2,3 would be well advised to sit in on 310-1)
- 330-1,2,3 Abstract Algebra or 331-1,2,3 MENU: Abstract Algebra
- 334-0 Linear Algebra: second course
- 344-1,2 Introduction to Topology
- 325-0 Complex Analysis
- 366-1 Mathematical Models in Finance
- 368-0 Introduction to Optimization

It is recommended that students planning on graduate work in mathematics take MATH 330 or MATH 331.

NOTE: To receive a major in math under the requirements listed in this section, the major in math must be IN ADDITION to the joint major in MMSS and a social science. That is, the major in math would be a THIRD major. Students wishing to receive a joint major ONLY in MMSS and math may be required to take additional math courses as required by the math department.

MMSS students who are permitted to take MATH 320-1, 2, 3 or 321-1,2,3 without taking MATH 300 must substitute another 300-level mathematics course for MATH 300-0. Students may choose any 300 level math course to meet this requirement (i.e., it does not have to be chosen from the above list.)

8. Other minors:

Except for the case of mathematics described above, MMSS students may not use any of their required MMSS courses to fulfill the requirements for a minor in some other field.