Careers with a Mathematical Economics Major

http://math.richmond.edu/major-minor/mathecon.html

Graduates with strong analytical skills are highly valued in today's increasingly data-driven and interconnected business world. The Mathematical Economics major provides a course of study that allows students to not only acquire some of these highly valued analytical skills, but also integrates that knowledge with a deeper understanding of the business world and the social sciences. This combination of mathematics, statistics/data, and economics knowledge makes Mathematical Economics majors highly competitive in the job market and excellent candidates for graduate school.

The Mathematical Economics major provides students with a structured study towards several post-graduate paths. These focal areas includes Actuarial Sciences, Data Science, Economic Consulting, Economics Graduate School, Engineering, Finance, and Statistics Graduate School. Students interested in other post-graduate paths such as medical school, entrepreneurship, etc. should discuss these plans with their academic advisor and/or the program coordinators towards choosing electives and non-major courses that complement their plans.

Provided below is a list of suggested coursework for each of the focal paths (advisors are happy to help chart alternative paths too):

Actuarial Sciences

Suggested coursework for Mathematical Economics majors focusing in Actuarial Sciences:

- Elective Courses: ECON 370, MATH 309, DSST 329, DSST 330
- Non-Major Courses/Exams: ACCT 201, FIN 360, FIN 361/366, ECON 370, ECON 373, P Actuarial Exam, FM Actuarial Exam
- Other considerations: Take DSST 329 early. Talk to a Math-Econ coordinator about fulfilling the VEE requirements.

Note: Students considering an actuarial career should visit http://www.beanactuary.org/ to get more information about the process towards becoming an actuary, including information about the P & FM exams and how to fulfil VEE requirements.

Consulting

Suggested coursework for Mathematical Economics majors focusing in Consulting:

- Elective Courses: ECON 242, ECON 300, ECON 370, ECON 373, DSST 389
- Non-Major Courses: CMSC 221, DSST 289
- Other considerations: Consider ECON 249 workshops. Talk to a Math-Econ coordinator about the possibility of attempting the consulting-sequence in the Business School.

Data Science/Analytics

Suggested coursework for Mathematical Economics majors focusing in Data Science:

- Elective Courses: ECON 242, ECON 370, ECON 373, DSST 329, DSST 330, DSST 389
- Non-Major Courses: DSST 289, CMSC 221, ECON 249 Workshops
- Other considerations: Take CMSC 150/ECON 242 & ECON 270 early and look out for special topics offerings in data-related topics. Consider taking the Data Science & Statistics Minor. Also consider further learning opportunities to improve your skills in languages such as R, Python, and SQL (e.g. ECON 249 workshops). Finally, students considering a data science career will benefit from adding more computer science courses such as CMSC 315, CMSC 325, CMSC 326, CMSC 327, and CMSC 328 to their academic plans.

Economics Graduate School

Suggested coursework for Mathematical Economics majors focusing in an Economics Graduate School path:

- Elective Courses: ECON 300, ECON 370, DSST 329, MATH 300, MATH 312, MATH 320
- Non-Major Courses/Tracks/Exams: Departmental Honors Track, GRE
- Other considerations: Take ECON 270 early. Discuss graduate school application plans with a Math-Econ coordinator. Do note that Real Analysis (MATH 320) is very important for a Ph.D. program in Economics

Finance

Suggested coursework for Mathematical Economics majors focusing in Finance:

- Elective Courses: ECON 200, ECON 370, ECON 373, MATH 309, MATH 312
- Non-Major Courses/Exams: ACCT 201, ACCT 301, FIN 360, 3-5 300/400-level Finance Courses (For tracks offered by the Finance department visit https://robins.richmond.edu/undergraduate/departments/finance/concentration.html)
- Other considerations: Consider applying for the Student Managed ETF Fund.

Pre-Engineering (3-2 Program)

Suggested coursework for Mathematical Economics majors focusing in the 3-2 program:

- Elective Courses: Varies based on engineering major choice (see link below).
- Non-Major Courses/Exams: PHYS 131, PHYS 132, CHEM 141, FYS + 6/7 non-technical courses
- Other considerations: For information about major specific course requirements see https://preengineering.richmond.edu/dual-degree/index.html

Public Policy

Suggested coursework for Mathematical Economics majors focusing in Public Policy:

- Elective Courses: Any ECON 200/300-Level policy related electives, DSST 329, MATH 300, MATH 304, MATH 312, DSST 389, DSST 395 (policy related topic).
- Non-Major Courses/Tracks/Exams: DSST 289, and PPEL, PLSC, and LDST courses.
- Other considerations: Consider combining the Math-Econ major with PPEL, PLSC, or LDST minor/major.

Statistics Graduate School

Suggested coursework for Mathematical Economics majors focusing in a Statistics Graduate School path:

- Elective Courses: ECON 370, ECON 373, MATH 300, MATH 312, DSST 329, MATH 330/DSST 330, DSST 389
- Non-Major Courses/Tracks/Exams: CMSC 221, Departmental Honors Track, GRE
- Other considerations: Take DSST 329 early. Discuss graduate school application plans with a Math-Econ coordinator.

For general questions feel free to contact the Mathematical Economics Program Coordinators, Kathy Hoke (khoke@richmond.edu) or Saif Mehkari (smehkari@richmond.edu). For questions about the possibility of taking Business School courses email Saif Mehkari (smehkari@richmond.edu)

Revised March 30th, 2024