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 fulfill 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](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](https://preengineering.richmond.edu/dual-degree/index.html)

Public Policy
Suggested coursework for Mathematical Economics majors focusing in an Economics Graduate School path:
- **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 (khole@richmond.edu) or Saif Mehkari (smehkari@richmond.edu). For questions about the possibility of taking Business School courses email Saif Mehkari (smehkari@richmond.edu)