

# MAJOR IN ECONOMICS - MATHEMATICAL ECONOMICS TRACK

## Requirements

The major in Economics requires 37 units, and the Mathematical Economics track requires an additional 23 units, for a total of 60 units. All Economics majors must complete a minimum of 15 units in economics at Towson University.

| Code                                                                     | Title                                                       | Units     |
|--------------------------------------------------------------------------|-------------------------------------------------------------|-----------|
| <b>Required Courses</b>                                                  |                                                             |           |
| ECON 201<br>or ECON 203                                                  | MICROECONOMIC PRINCIPLES<br>HONORS MICROECONOMIC PRINCIPLES | 3         |
| ECON 202<br>or ECON 204                                                  | MACROECONOMIC PRINCIPLES<br>HONORS MACROECONOMIC PRINCIPLES | 3         |
| ECON 205                                                                 | STATISTICS FOR BUSINESS AND ECONOMICS I                     | 3         |
| ECON 306                                                                 | STATISTICS FOR BUSINESS AND ECONOMICS II                    | 3         |
| ECON 309                                                                 | INTERMEDIATE PRICE THEORY                                   | 3         |
| ECON 310                                                                 | MACROECONOMIC THEORY                                        | 3         |
| MATH 273                                                                 | CALCULUS I                                                  | 4         |
| <b>Electives</b>                                                         |                                                             |           |
| Three upper (300-400) level Economics (ECON) courses <sup>1,2</sup>      |                                                             | 9         |
| Two 400-level (Economics) ECON courses (excluding ECON 495 and ECON 497) |                                                             | 6         |
| <b>Mathematical Economics Track Requirements</b>                         |                                                             |           |
| MATH 265                                                                 | ELEMENTARY LINEAR ALGEBRA                                   | 4         |
| MATH 267                                                                 | INTRODUCTION TO ABSTRACT MATHEMATICS                        | 4         |
| MATH 274                                                                 | CALCULUS II                                                 | 4         |
| MATH 275                                                                 | CALCULUS III                                                | 4         |
| MATH 331<br>or MATH 372                                                  | PROBABILITY<br>REAL ANALYSIS I                              | 4         |
| MATH 374<br>or MATH 332                                                  | DIFFERENTIAL EQUATIONS<br>MATHEMATICAL STATISTICS           | 3         |
| <b>Total Units</b>                                                       |                                                             | <b>60</b> |

<sup>1</sup> Only one instance of ECON 497 will count toward electives.

<sup>2</sup> The department will allow MATH 377 to satisfy electives.

## Four-Year Plan of Study

### Sample Four-Year Plan

The selected course sequence below is an example of the simplest path to degree completion. Based on course schedules, student needs, and student choice, individual plans may vary. Students should consult with their adviser to make the most appropriate elective choices and to ensure that they have completed the required number of units (120) to graduate.

| <b>Freshman</b>                    |                      |           |
|------------------------------------|----------------------|-----------|
| Term 1                             | Units Term 2         | Units     |
| ECON 201 or 203 (Core 6)           | 3 ECON 202 or 204    | 3         |
| Prerequisite for MATH 273 (Core 3) | 3 MATH 273           | 4         |
| Core 1 (or Core 2)                 | 3 Core 2 (or Core 1) | 3         |
| Core 5                             | 3 Core 4             | 3         |
| Core 10                            | 3 Core 12            | 3         |
| <b>15</b>                          |                      | <b>16</b> |

| <b>Sophomore</b> |              |           |
|------------------|--------------|-----------|
| Term 1           | Units Term 2 | Units     |
| ECON 205         | 3 ECON 306   | 3         |
| MATH 274         | 4 MATH 275   | 4         |
| Core 8           | 4 Core 9     | 3         |
| Core 11          | 3 Core 7     | 4         |
| Core 13          | 3 Core 14    | 3         |
| <b>17</b>        |              | <b>17</b> |

| <b>Junior</b> |                             |           |
|---------------|-----------------------------|-----------|
| Term 1        | Units Term 2                | Units     |
| ECON 309      | 3 ECON 310                  | 3         |
| MATH 265      | 4 ECON Upper-Level Elective | 3         |
| Elective      | 3 ECON Upper-Level Elective | 3         |
| Elective      | 3 MATH 267                  | 4         |
| Elective      | 3                           |           |
| <b>16</b>     |                             | <b>13</b> |

| <b>Senior</b>                  |                                  |           |
|--------------------------------|----------------------------------|-----------|
| Term 1                         | Units Term 2                     | Units     |
| ECON 4xx Elective <sup>1</sup> | 3 ECON 4xx Elective <sup>1</sup> | 3         |
| ECON Upper-Level Elective      | 3 MATH 331 or 372                | 4         |
| MATH 374 or 332                | 3 Elective                       | 3         |
| Elective                       | 3 Elective                       | 3         |
| Elective                       | 1                                |           |
| <b>13</b>                      |                                  | <b>13</b> |

**Total Units 120**

<sup>1</sup> Excluding ECON 495 and ECON 497.

## Learning Outcomes

1. Knowledge of economic theories and concepts.
2. Knowledge of real world economic institutions and actors.
3. Skill in framing questions and gathering appropriate resources.
4. Skill in problem solving and analysis.
5. Skill in communication.