



Secondary Education Mathematics

The content and education courses to be taken at the community college for Mathematics Secondary Education majors are listed below. These courses are offered at Towson University and are identified by their TU course numbers. To determine course equivalencies and ensure transferability of courses taken at a Maryland community college visit www.artsys.usmd.edu.

| | |
|----------|---|
| SEMS 230 | Knowing & Learning (3 units) [waived if Educational Psychology is taken elsewhere] |
| MATH 265 | Elementary Linear Algebra (4 units) |
| MATH 273 | Calculus I (4 units) |
| MATH 274 | Calculus II (4 units) [satisfies core curriculum 3] |
| MATH 275 | Calculus III (4 units) |
| MATH 374 | Differential Equations (3 units) |
| PHYS 241 | General Physics I (4 units) [satisfies core curriculum 7] |
| PHYS 242 | General Physics II (4 units) [satisfies core curriculum 8] |

See the next page for a complete four-year sequence (2 years at a community college and two years at TU).

Math Secondary Ed – Community College Pathway Four-Year Sequence (two years CC plus two years TU)

| 1 st year at Community College* | | | |
|--|-----------|--|-----------|
| Fall Term | | Spring Term | |
| Course | Units | Course | Units |
| MATH 273 Calculus I | 4 | MATH 274 Calculus II (Core Category 3) | 4 |
| ENGL 102 (Core Category 2) | 3 | MATH 265 Elementary Linear Algebra | 4 |
| PSYCH 101 (Core Category 6) [typically a prereq for Ed Psychology] | 3 | General Education Elective to satisfy TU Core Curriculum Categories 4,10,11,12,13,14 | 3 |
| General Education Elective to satisfy TU Core Curriculum Categories 4,10,11,12,13,14 | 3 | General Education Elective to satisfy TU Core Curriculum Categories 4,10,11,12,13,14 | 3 |
| elective | 3 | | |
| Total | 16 | Total | 14 |

| 2 nd year at Community College* | | | |
|--|-----------|--|-----------|
| Fall Term | | Spring Term | |
| Course | Units | Course | Units |
| Education Psychology [SEMS 230 Knowing and Learning] | 3 | Content Elective – Math (MATH 374 – Differential Eqs) | 3 |
| MATH 275 Calculus III | 4 | Content Elective PHYS 242 (Core Category 8) | 4 |
| PHYS 241 General Physics I (Core Category 7) | 4 | General Education Elective to satisfy TU Core Curriculum Categories 4,10,11,12,13,14 | 3 |
| General Education Elective to satisfy TU Core Curriculum Categories 4,10,11,12,13,14 | 3 | General Education Elective to satisfy TU Core Curriculum Categories 4,10,11,12,13,14 | 3 |
| | | elective | 3 |
| Total | 14 | Total | 16 |

60 credits at the CC level, including 2 electives (6 cr); 63 credits at TU

*Course codes are those of the equivalent TU courses.

| 1 st year at Towson University | | | |
|--|-----------|---|-----------|
| Fall Term | | Spring Term | |
| Course | Units | Course | Units |
| SEMS130 Introduction to STEM Teaching I&II Combined (field placement) | 2 | SEMS 240 Classroom Interactions (field placement) | 3 |
| SEMS 250 Perspectives on Science and Math (Core Category 5) | 3 | SCED 460 Using Reading & Writing in the Secondary Schools | 4 |
| MATH 267 Introduction to Abstract Mathematics | 4 | MATH 330 Introduction to Statistical Methods | 4 |
| MATH 353 Euclidean and Non-Euclidean Geometries fall-only | 3 | MATH 369 Intro to Abstract Algebra | 4 |
| MATH 310 Functions and Modeling fall-only | 3 | MATH 420 Applications of Technology for Secondary School Teachers / Teaching AP Calculus spring-only | 3 |
| Total | 15 | Total | 18 |

| 2 nd year at Towson University | | | |
|---|-----------|---|-----------|
| Fall Term (SEMS 498 scheduled one day/wk; other courses on remaining four days) | | Spring Term | |
| Course | Units | Course | Units |
| SEMS 370 Project-Based Instruction (field placement) | 3 | MATH 426 Internship in Secondary Education – Mathematics (field placement) | 12 |
| SEMS 360 Research Methods (Core Category 9) | 3 | | |
| SCED 461 Teaching Reading in the Secondary Content Areas | 3 | | |
| MATH 423 Teaching Mathematics in the Secondary Schools fall-only | 3 | MATH 430 Seminar in Internship – Mathematics | 1 |
| MATH 428 Senior Seminar in Math Ed fall-only | 2 | | |
| SEMS 498 Internship in Mathematics and Science Secondary Education (field placement) | 3 | | |
| Total | 17 | Total | 13 |