

# Mathematics, B.S. - Secondary Teacher Prep/Pure Mathematics Subplan/Option: 120 units

## Associate Degree Transfer, Mathematics, AS-T 2021-2022 Academic Year

*Students should adhere to this recommended plan to ensure completion of 60 additional units.*

| Year 1 | Fall                                                |                                                                                                                                                    | Units     | Spring                                                                                             |                                                                                                                                                           | Units     | Comments                                                                                                                                                                                                                                                                      |
|--------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | Courses                                             | Requirements/Comments                                                                                                                              |           | Courses                                                                                            | Requirements/Comments                                                                                                                                     |           |                                                                                                                                                                                                                                                                               |
|        | MAT 3100 Introduction to Mathematical Proof [FSpSu] | Prereq: MAT 116 or MAT 1150.                                                                                                                       | 4         | MAT 3140 Introduction to Real Analysis I [FSpSu]                                                   | Prereq: MAT 310 or MAT 3100; and MAT 215 or MAT 2140.                                                                                                     | 4         | <i>This roadmap applies only to students who took 3 units from Group A for the TMC.<br/>* If the student took Introduction to Linear Algebra from Category A, this course may be either MAT 2240 (3) or MAT 2250 (4). If the student took Ordinary Differential Equations</i> |
|        | STA 2100 Introduction to Statistics [FSpSu]         | Prereq: AP Calc AB, AP Calc B, MAT 114, MAT 1140, MAT 120, MAT 1200, MAT 130, MAT 1300, MAT 115, MAT 1150, MAT 116, MAT 214, MAT 2140, or MAT 215. | 4         | STA 2200 Introduction to Probability [FSpSu]                                                       | Prereq: STA 2100.                                                                                                                                         | 3         |                                                                                                                                                                                                                                                                               |
|        | GE Area B5: Science and Technology Synthesis [FSp]  |                                                                                                                                                    | 3         | MAT 2010 Introduction to Computational Methods in Mathematics [FSp]                                | Prereq: MAT 116 or MAT 1150.<br>Coreq: MAT 2010L.                                                                                                         | 2         |                                                                                                                                                                                                                                                                               |
|        | Major Required                                      | Prereq: *See Comment                                                                                                                               | 4         | MAT 2010L Introduction to Computational Methods in Mathematics Laboratory [FSp]                    |                                                                                                                                                           | 1         |                                                                                                                                                                                                                                                                               |
|        |                                                     |                                                                                                                                                    | 0         | HST 3340 History of American Institutions and Ideals, 1877-present (C3, Amer. Ideals Part A) [FSp] | If American Ideals requirement has been satisfied by lower division transferred courses, take any C3 Upper Division Arts and Humanities Synthesis course. | 3         |                                                                                                                                                                                                                                                                               |
|        |                                                     |                                                                                                                                                    | 0         | Option Required [FSp]                                                                              | Select from Curriculum Sheet                                                                                                                              | 3         |                                                                                                                                                                                                                                                                               |
|        | <b>Total Units</b>                                  |                                                                                                                                                    | <b>15</b> | <b>Total Units</b>                                                                                 |                                                                                                                                                           | <b>16</b> |                                                                                                                                                                                                                                                                               |

|                    | Fall                                                                                  |                                                                                                                                       | Units     | Spring                                 |                                                       | Units     | Comments                                                                                                                                                                                                                                                        |
|--------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------|-------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | Courses                                                                               | Requirements/Comments                                                                                                                 |           | Courses                                | Requirements/Comments                                 |           |                                                                                                                                                                                                                                                                 |
| Year 2             | MAT 4280 Functions of a Complex Variable [FSpSu]                                      | Prereq: MAT 3140 and MAT 2140; MAT 314 and MAT 2140; MAT 3140 and MAT 215; or MAT 314 and MAT 215.                                    | 4         | MAT 4190 Advanced Linear Algebra [FSp] | Prereq: MAT 208 or MAT 2250; and MAT 310 or MAT 3100. | 4         | ** If the student took Calculus-Based Physics or Programming or Introduction to Statistics from Category B, this course must be an Option Course (3). If the student took Discrete Math or Proof from Category B, this course must be PHY 1520/1520L or BIO 122 |
|                    | MAT 4170 Introduction to Abstract Algebra I [FSp]                                     | Prereq: MAT 310 or MAT 3100.                                                                                                          | 4         | Major Required                         | Prereq: **See Comment                                 | 4         |                                                                                                                                                                                                                                                                 |
|                    | PLS 4205 American Political Institutions and Behavior (D4, Amer. Ideals Part B) [FSp] | If American Ideals requirement has been satisfied by lower division transferred courses, take any D4 Social Science Synthesis course. | 3         | Option Required [FSp]                  | Select from Curriculum Sheet                          | 3         |                                                                                                                                                                                                                                                                 |
|                    | Option Required [FSp]                                                                 | Select from Curriculum Sheet                                                                                                          | 3         | Option Required [FSp]                  | Select from Curriculum Sheet                          | 3         |                                                                                                                                                                                                                                                                 |
|                    | Unrestricted Elective                                                                 |                                                                                                                                       | 1         |                                        |                                                       | 0         |                                                                                                                                                                                                                                                                 |
|                    | <i>File an application to graduate</i>                                                |                                                                                                                                       |           |                                        |                                                       |           |                                                                                                                                                                                                                                                                 |
|                    | <b>Semester Total Units</b>                                                           |                                                                                                                                       | <b>15</b> | <b>Semester Total Units</b>            |                                                       | <b>14</b> |                                                                                                                                                                                                                                                                 |
| <b>Total Units</b> |                                                                                       |                                                                                                                                       |           |                                        | <b>60</b>                                             |           |                                                                                                                                                                                                                                                                 |