### BS – Applied Math (SC-BS/APMA)

#### Core and Minor Requirements

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Fall semester</td>
<td>MATH 2358 (F,S,Su) Discrete Math I TCCNS: MATH 2305</td>
</tr>
<tr>
<td>Freshman Spring semester</td>
<td>MATH 2393 (F,S,Su) Calculus III (replaced MATH 3373) TCCNS: MATH 2415</td>
</tr>
<tr>
<td>Sophomore Fall semester</td>
<td>MATH 2471 (F,S,Su) Calculus I TCCNS: MATH 2413</td>
</tr>
<tr>
<td>Sophomore Spring semester</td>
<td>MATH 2472 (F,S,Su) Calculus II TCCNS: MATH 2414</td>
</tr>
<tr>
<td>Junior Fall semester</td>
<td>MATH 3305 (F,S,Su) Intro to Probability &amp; Statistics</td>
</tr>
<tr>
<td>Junior Spring semester</td>
<td>MATH 3330 (F,S,Su) Intro to Advanced Math</td>
</tr>
<tr>
<td>Senior Fall semester</td>
<td>MATH 3308 (F,S,Su) Foundations of Computer Science II TCCNS: COSC 2436/2310</td>
</tr>
<tr>
<td>Senior Spring semester</td>
<td>MATH 3323 (F,S,Su) Differential Equations</td>
</tr>
</tbody>
</table>

#### Minor and/or Elective Courses (as needed, see advisor)

- **6 hours MATH advanced electives:**
  - ENGR 2301 – Engineering Mechanics (replaced ENGR 3375)
  - MATH 3348 (F) – Deterministic Operations Research
  - MATH 3398 (F,S,Su) – Discrete Math II
  - MATH 4305 (S) – Probability & Statistics
  - MATH 4306 (S) – Fourier Series
  - MATH 4307 (F,S) – Modern Algebra
  - MATH 4315 (F,S) – Analysis II
  - MATH 4327 – Introduction to Complex Analysis & App
  - MATH 4336 (see dept) – Studies in Applied Math
  - MATH 4337A – Topological Data Analysis
  - MATH 4337B – Research in Discrete Mathematics
  - MATH 4337C – Numerical Methods for Ordinary Diff Equ
  - MATH 4350 (S) – Combinatorics
  - MATH 4383 – Numerical Analysis II
  - MATH 4393 – Intro to Finite Element Methods

#### Additional Information

- **Core courses must be completed:**
  - 6 credits Core 010
  - 6 credits Core 020
  - 6 credits Core 030
  - 6 credits Core 040
  - 6 credits Core 050
  - 6 credits Core 060
  - 6 credits Core 070
  - 3 credits Core 080
  - 6 credits Core 090, 091, 093, and 094

- **APMA required course:** MATH 2471

- **Technical Writing:**
  - MATH 3303

- **Numerical Analysis I:**
  - MATH 3380 (F,S,Su) Numerical Analysis I

- **Linear Algebra:**
  - MATH 3383 (F,S,Su) Linear Algebra (student may not receive credit for both)

### Key

- Arrows indicate prerequisites.
- Arrows with dotted lines indicate co-requisites.
- Arrows with dash lines are recommended prerequisites.
- Courses taught in specific semesters are indicated with the following codes:
  - F-S: Fall - Spring
  - Su: Summer Session I or II

### Core courses

- **Additional WI courses:** MATH 4337A, 4337B, 4337C

---

**This is not an official degree audit and it is subject to change.** This chart is intended to be used by students who start out at Texas State. Please contact the College of Science and Engineering Undergraduate Advising Center for advising.

**Note:** In addition to major courses, students must also complete all core and minor requirements (if applicable) and any other requirements for graduation.

See catalog for options: [http://mycatalog.txstate.edu/undergraduate/general-education-core-curriculum](http://mycatalog.txstate.edu/undergraduate/general-education-core-curriculum)