Check List for BA in Mathematics

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Term(s)</th>
<th>Notes</th>
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<tbody>
<tr>
<td>MATH 1431</td>
<td>Calculus I Fall, Spring, Sum</td>
<td></td>
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<tr>
<td>MATH 1432</td>
<td>Calculus II Fall, Spring, Sum</td>
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<td>MATH 2331</td>
<td>Linear Algebra Fall, Spring, Sum</td>
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<td>MATH 2433</td>
<td>Calculus III Fall, Spring, Sum</td>
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<tr>
<td>MATH 3300</td>
<td>Abstract Algebra Fall, Spring</td>
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<tr>
<td>MATH 3332</td>
<td>Intermediate Analysis Fall, Spring</td>
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<tr>
<td>MATH 3334</td>
<td>Advanced Multivariable Calculus Fall, Spring</td>
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<tr>
<td>MATH 4369</td>
<td>Survey of Undergraduate Mathematics Fall, Spring</td>
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<tr>
<td>MATH 4377</td>
<td>MATH Senior Sequence elective</td>
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<tr>
<td>MATH 4378</td>
<td>MATH Senior Sequence elective</td>
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<tr>
<td>MATH 4390</td>
<td>Senior Honors Thesis</td>
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<tr>
<td>MATH 4391</td>
<td>Senior Honors Thesis</td>
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**BEGINNING FALL 2013, MATH 3325 IS A REQUIRED PRE-REQUISITE FOR MATH 3330 AND MATH 3333.**

**EXAMPLES OF MATHEMATICS ELECTIVES**

*NEW* MATH 3325 Transition to Advanced Mathematics
F/S/MATH 3336 Discrete Mathematics
F/S/MATH 3338 Probability
F/S/MATH 3339 Statistics for the Sciences
F/S/MATH 3340 Introduction to Fixed Income Mathematics
F/S/MATH 3363 Introduction to Partial Differential Equations
S/MATH 3379 Introduction to Higher Geometry
S/MATH 4315 Graph Theory with Applications
S/MATH 4320 Introduction to Stochastic Processes
F/S/MATH 4331/4332 Introduction to Real Analysis
**MATH 3333 Advanced Abstract Algebra
F/S/MATH 4335/4336 Partial Differential Equations
F/S/MATH 4350/4351 Differential Geometry
S/MATH 4355 Mathematics of Signal Representation
**MATH 4360 Integral Equations
**MATH 4362 Theory of Ordinary Differential Equations
F/S/MATH 4364/4365 Numerical Analysis
F/S/MATH 4377 Advanced Linear Algebra I
S/S/MATH 4378 Advanced Linear Algebra II
S/MATH 4380 Mathematical Introduction to Options
F/MATH 4388 History of Mathematics

**Indicates the course is not offered at consistent intervals.**

**NSM Natural Sciences (7 Hours):**

- 1 hr Natural Sciences Lab*** Lab must be in the same discipline
- 3 hrs NSM Approved Natural Science***
- 3 hrs NSM Approved Natural Science***

***ALL must be in the same discipline, and approved for NSM majors

- 3 hrs 2000-level Foreign Language
- 3 hrs 2000-level Foreign Language

**CORE (Check UH Catalog or UH Core Website for Pre-Requisites):**

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<tbody>
<tr>
<td>ENGL 1303</td>
<td>First Year Writing I</td>
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<tr>
<td>ENGL 1304</td>
<td>First Year Writing II</td>
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**STATE REQUIREMENTS (12 Hours):**

- HIST 1376 or 1377 The United States to 1877
- HIST 1378 or 1379 The United States Since 1877
- POLS 1336 U.S. and Texas Constitutions and Politics
- POLS 1337 U.S. Government: Congress, President, and Court

**FROM APPROVED CORE LIST (12 Hours):** Choose from UH Core Website

- Language/Philosophy/Culture (3 Hours)
- Creative Arts (3 Hours)
- Social & Behavioral Science (3 Hours)
- Writing in the Disciplines (3 Hours)

**RULES YOU NEED TO KNOW:**

1. MINIMUM of a 2.00 GPA in cumulative, major, and minor GPA to graduate
2. C-RULE: MAXIMUM of 6 hours of grades below C- allowed in UH MATH courses
3. LAST 30 hours must be exclusively completed at UH
4. MAXIMUM of 6 Ws allowed during entire undergraduate career
5. MINIMUM of 36 advanced hours and 120 total hours to graduate
6. MAXIMUM of 66 lower level transfer hours may be applied towards UH degree
7. At 60 hours, must request a Major Degree Plan REQUIRED TO GRADUATE

Advisor: __________________________

**NOTE:** NSM CAPSTONE (Minimum 6 Advanced Hours):

- Minor
- Double Major
- Senior Research Project
- Double Degree
- Senior Honors Thesis
- teachHouston

FREE ELECTIVES

(Additional hours to complete a total of 120 hours, including at least 36 advanced hours)

*May require up to 26 hours of free electives, depending on NSM Capstone selected and if any Foreign Language pre-requisites are needed*