

# BS in Mathematics

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The BS in Mathematics successfully prepares student for graduate studies, teaching and industry positions, and provides a solid foundation for many other careers. It offers five concentrations in 7-12 Math, 7-12 Math/Physics, Actuarial Science, Applied Mathematics, and Statistics.

## Marketable Skills

Students will develop the following skills:

- Critical thinking: Analyze and evaluate issues in order to solve problems and develop informed opinions.
- Problem-solving: Find solutions to difficult or complex issues.
- Analytical thinking.
- Quantitative reasoning.
- Ability to manipulate precise and intricate ideas.
- Time management: Prioritize goals and organize time to be more productive and efficient.

## Fast Track

The Fast-Track Program (<http://catalog.utep.edu/admissions/undergraduate/fast-track/#text>) enables outstanding undergraduate UTEP students to receive both undergraduate and graduate credit for up to 15 hours of UTEP course work as determined by participating Master's and Doctoral programs.

Not all undergraduate programs have elected to participate in the Fast Track option, so students should see their departmental graduate advisor for information about requirements and guidelines. A list of courses that have been approved for possible use at the graduate level is found here (<http://catalog.utep.edu/admissions/undergraduate/fast-track/#fasttrackcoursestext>).

M.S. in Mathematical Sciences (<http://catalog.utep.edu/grad/college-of-science/mathematical-sciences/mathematical-sciences-ms/>) / **B.S. in Mathematical Sciences**

Code	Title	Hours
MATH 5310		
MATH 5311	Topics in Applied Mathematics	3
MATH 5314		
MATH 5315		
MATH 5321	Principles of Analysis	3
MATH 5325	Principles of Algebra	3
MATH 5329	Numerical Analysis	3
MATH 5330	Comp Methods of Linear Algebra	3
MATH 5331	Real Variables	3
MATH 5335	Techniques in Optimization	3
MATH 5341	General Topology	3
MATH 5343	Numer Solution Part Diff Equat	3
MATH 5345	Numerical Optimization	3
MATH 5346		
MATH 5351	Complex Variables	3
MATH 5370	Special Topics	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / **B.S. in Mathematical Sciences (Actuarial Concentration)**

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / **B.S. in Mathematical Sciences (Applied Concentration)**

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / **B.S. in Mathematical Sciences (Statistics Concentration)**

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.S. in Statistics (<http://catalog.utep.edu/grad/college-of-science/mathematical-sciences/statistics-ms/>) / **B.S. in Mathematical Sciences**

Code	Title	Hours
MATH 5321	Principles of Analysis	3
STAT 5329	Statistical Programming	3
STAT 5428	Intro to Statistical Analysis	4

M.S. in Bioinformatics (<http://catalog.utep.edu/grad/college-of-science/college-science-deans-office/bioinformatics-ms/>) / **B.S. in Mathematics**

Code	Title	Hours
BINF/STAT 5354	Post-Genomic Analysis	3
MATH 5330	Comp Methods of Linear Algebra	3
MATH 5335	Techniques in Optimization	3
STAT 5329	Statistical Programming	3
STAT 5428	Intro to Statistical Analysis	4

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / **B.S. in Mathematical Sciences**

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

## Degree Plan

The requirement to obtain the BS in Mathematics consists of the general College of Science requirements plus the following specific requirements:

Required Credits: 120

Code	Title	Hours
<b>Designated Core</b>		
Required Courses: <sup>1</sup>		
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
<b>University Core Curriculum</b>		
Complete the University Core Curriculum requirements. (p. 10)		42
Required Courses:		
MATH 1312	Calculus II	3
MATH 1411	Calculus I	4
MATH 2313	Calculus III	3
MATH 2300 or MATH 2325	Discrete Mathematics Intro. to Higher Mathematics	3
MATH 2326	Differential Equations	3
MATH 3325	Principles of Mathematics	3
MATH 3341	Introduction to Analysis	3
MATH 4325	Modern Algebra	3
MATH 4326	Linear Algebra	3
MATH 4341	Real Analysis	3
STAT 3330	Probability	3
Select at least six semester hours of the following: <sup>2</sup>		6
MATH 3300	History of Mathematics	
MATH 3319	Elementary Number Theory	
MATH 3320	Actuarial Mathematics	
MATH 3323	Matrix Algebra	
MATH 3329	Geometry	
MATH 3335	Applied Analysis I	
MATH 4329	Numerical Analysis	
MATH 4336	Applied Analysis II	
STAT 4380 or STAT 4385	Statistics Inference Applied Regression Analysis	
MATH 4370	Topics Seminar (with permission of Chair)	
MATH 4199	Individ Studies in Mathematic (with permission of Chair)	
MATH 4399	Indiv Studies in Mathematics (with permission of Chair)	
<b>Additional Science Requirements</b>		
Choose one sequence from the following:		8
BIOL 1305 & BIOL 1107	General Biology and Topics in Study of Life I	4
BIOL 1306 & BIOL 1108	Organismal Biology and Organismal Biology Laboratory	4
OR		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
OR		
GEOL 1313 & GEOL 1103	Intro to Physical Geology and Lab for GEOL 1313	4
GEOL 1314 & GEOL 1104	Intro to Historical Geol and Lab for GEOL 1314	4

**Additional Required Courses**

Required:

RWS 3359	Technical Writing	3
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Select one of the following:

CS 1101 & CS 1301	Intro to Computer Science Lab and Intro to Computer Science	4
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CS 1320	Computer Programming Sci/Engr	3
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CS 1401	Intro to Computer Science	4
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**Minor (Optional)**

Complete an 18-hour minor or 18 hours of electives, at least 10 must be upper-division

**Electives**

Select 7 additional semester hours with advisor approval

**Upper Division Requirement**

Select a total of 37 hours of upper division course work <sup>3</sup>	37
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<b>Total Hours</b>	<b>120</b>
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1

Although the UTEP core choice is larger, students are encouraged to choose the core courses that also satisfies the major.

2

MATH 4370 Topics Seminar, MATH 4199 Individ Studies in Mathematic, or MATH 4399 Indiv Studies in Mathematics may be substituted

3

A total of thirty-seven hours of upper division coursework is required for all Bachelor of Science degrees.

**Concentrations****7-12 Math**

Students may not apply to the Educator Preparation Program until they meet the following requirements:

1. Have a UTEP overall GPA of at least 2.75
2. Have a UTEP majors GPA of at least 2.75
3. Pass the UTEP math content qualifying exam with a score of at least 80%

Required Credits: 120

Code	Title	Hours
Select one of the following sequences:		
Sequence 1:		
ASTR 1307	Elem Astronomy-Solar System	
ASTR 1107	Astronomy Lab I	
ASTR 1308	Elem Astr Stars & Galaxies	
Sequence 2:		
BIOL 1305	General Biology	
BIOL 1107	Topics in Study of Life I	
BIOL 1306	Organismal Biology	
BIOL 1108	Organismal Biology Laboratory	
Sequence 3:		
CHEM 1305	General Chemistry	
CHEM 1105	Laboratory for CHEM 1305	
CHEM 1306	General Chemistry	
CHEM 1106	Laboratory for CHEM 1306	
Sequence 4:		
GEOL 1313	Intro to Physical Geology	
GEOL 1103	Lab for GEOL 1313	
GEOL 1314	Intro to Historical Geol	
GEOL 1104	Lab for GEOL 1314	

Sequence 5:		
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	
<b>University Core Curriculum</b>		
Complete the University Core Curriculum requirements. (p. 10)		42
<b>Math Major</b>		
Required Courses:		
MATH 1312	Calculus II	3
MATH 1411	Calculus I	4
MATH 2300 or MATH 2325	Discrete Mathematics Intro. to Higher Mathematics	3
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
MATH 3300	History of Mathematics	3
MATH 3323 or MATH 4326	Matrix Algebra Linear Algebra	3
MATH 3325	Principles of Mathematics	3
MATH 3329	Geometry	3
MATH 3341	Introduction to Analysis	3
MATH 4303	Fundamental Math/Adv. Standpt	3
Choose one of the two sequences:		6
STAT 3325 & STAT 4385	Prob & Applied Statistics and Applied Regression Analysis	
STAT 3330 & STAT 4380	Probability and Statistics Inference	
Choose six semester hours from the following math electives:		6
MATH 3319	Elementary Number Theory	
MATH 4325	Modern Algebra	
MATH 4329	Numerical Analysis	
MATH 4341	Real Analysis	
<b>Required Secondary Education Minor Courses:</b>		
BED 4317	Tch & Empwr ELLs in Sec Schls	3
EDPC 3300	Intro to Youth Dev & Spec Ed	3
RED 3342	Content Area Literacy	3
SCED 3311	Curriculum Plan-Secondary Schl	3
SCED 4367	Teaching Math in Sec School	3
SCED 4691	Student Teaching in Sec School	6
<b>Other Requirements</b>		
<b>Required Courses:</b>		
CS 1401 or CS 1320	Intro to Computer Science Computer Programming Sci/Engr	4
RWS 3359	Technical Writing	3
<b>Elective:</b>		
Select five additional hours at any level		5
<b>Total Hours</b>		<b>120</b>

1

Although the UTEP core choice is larger, students are encouraged to choose the core courses that also satisfies the major.

2

A total of thirty-seven hours of upper division coursework is required for all Bachelor of Science degrees.

## 7-12 Math/Physics

Students may not apply to the Educator Preparation Program until they meet the following requirements:

1. Have a UTEP overall GPA of at least 2.75
2. Have a UTEP majors GPA of at least 2.75
3. Pass the UTEP math content qualifying exam with a score of at least 80%

Required Credits: 120

Code	Title	Hours
<b>University Core Curriculum</b>		
Complete the University Core Curriculum requirements. (p. 10)		42
<b>Math Major</b>		
Required Courses:		
MATH 1312	Calculus II	3
MATH 1411	Calculus I	4
MATH 2300	Discrete Mathematics	3
or MATH 2325	Intro. to Higher Mathematics	
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
MATH 3300	History of Mathematics	3
MATH 3323	Matrix Algebra	3
or MATH 4326	Linear Algebra	
MATH 3325	Principles of Mathematics	3
MATH 3329	Geometry	3
MATH 3341	Introduction to Analysis	3
MATH 4303	Fundamental Math/Adv. Standpt	3
Choose one of the two sequences:		6
STAT 3330 & STAT 4380	Probability and Statistics Inference	
STAT 3325 & STAT 4385	Prob & Applied Statistics and Applied Regression Analysis	
Choose three semester hours from the following math electives:		3
MATH 3319	Elementary Number Theory	
MATH 4325	Modern Algebra	
MATH 4329	Numerical Analysis	
MATH 4341	Real Analysis	
<b>Required Secondary Education Minor Courses:</b>		
BED 4317	Tch & Empwr ELLs in Sec Schls	3
EDPC 3300	Intro to Youth Dev & Spec Ed	3
RED 3342	Content Area Literacy	3
SCED 3311	Curriculum Plan-Secondary Schl	3
SCED 4367	Teaching Math in Sec School	3
SCED 4691	Student Teaching in Sec School	6
<b>Physics Requirement</b>		
PHYS 2325	Survey of Modern Physics	3
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PHYS 3323	Physical Optics	3
Additional Required Courses: <sup>2</sup>		37
CS 1401 or CS 1320	Intro to Computer Science Computer Programming Sci/Engr	4

RWS 3359	Technical Writing	3
Electives		
Take additional semester hours with advisor approval		
<b>Total Hours</b>		<b>120</b>

1

Although the UTEP core choice is larger, students are encouraged to choose the core courses that also satisfies the major.

2

A total of thirty-seven hours of upper division coursework is required for all Bachelor of Science degrees.

## Actuarial Science

Code	Title	Hours
<b>Designated Core</b>		
Required Courses: <sup>1</sup>		
COMM 1302	Business/Profession Comm	3
CS 1320	Computer Programming Sci/Engr	3
ECON 2304	Principles of Microeconomics	3
<b>University Core Curriculum</b>		
Complete the University Core Curriculum requirements. (p. 10)		42
<b>Minor in Finance Required Courses:</b>		
ACCT 2301	Principles of Accounting I	3
FIN 3310	Business Finance	3
FIN 3315	Investments	3
FIN 3325	Money & Capital Markets	3
FIN 4310	Managerial Finance	3
FIN 4315	Portfolio Analysis	3
FIN 4316	Analysis of Derivatives	3
QMB 3350	Business Analytics	3
<b>Physics Sequence:</b>		
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
<b>Actuarial Sciences Concentration</b>		
Required Courses:		
CIS 3301	Intro to Data Process & Prog	3
RWS 3359	Technical Writing	3
MATH 1312	Calculus II	3
MATH 1411	Calculus I	4
MATH 2300 or MATH 2325	Discrete Mathematics Intro. to Higher Mathematics	3
MATH 2313	Calculus III	3
MATH 2320	Mathematics of Interest	3
MATH 2326	Differential Equations	3
MATH 3320	Actuarial Mathematics	3
MATH 3323 or MATH 4326	Matrix Algebra Linear Algebra	3
MATH 3325	Principles of Mathematics	3
MATH 3341	Introduction to Analysis	3
MATH 4329	Numerical Analysis	3
STAT 3320	Probability and Statistics	3
STAT 3330	Probability	3
STAT 4380	Statistics Inference	3

or STAT 4385 Applied Regression Analysis

### Electives

Take additional semester hours with advisor approval

**Total Hours** **120**

1

Although the UTEP core choice is larger, students are encouraged to choose the core courses that also satisfies the major.

2

With department approval, other courses in the College of Science may be substituted for the PHYS 2420 Introductory Mechanics/PHYS 2421 Introductory Electromagnetism requirement.

3

A total of thirty-seven hours of upper division coursework is required for all Bachelor of Science degrees.

### C

Course requires a grade of C or better.

## Applied Mathematics

Code	Title	Hours
<b>Designated Core</b>		
Required Courses: <sup>1</sup>		
CS 1401 or CS 1320	Intro to Computer Science Computer Programming Sci/Engr	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
<b>University Core Curriculum</b>		
Complete the University Core Curriculum requirements. (p. 10)		42
<b>Applied Mathematics</b>		
Required Courses:		
MATH 1312	Calculus II	3
MATH 1411	Calculus I	4
MATH 2300	Discrete Mathematics	3
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
MATH 3323	Matrix Algebra	3
MATH 3325	Principles of Mathematics	3
MATH 3335	Applied Analysis I	3
MATH 4329	Numerical Analysis	3
MATH 4336	Applied Analysis II	3
RWS 3359	Technical Writing	3
STAT 3330	Probability	3
STAT 4380 or STAT 4385	Statistics Inference Applied Regression Analysis	3
Select three hours of the following:		3
MATH 3300	History of Mathematics	
MATH 3303	Fundmtl Numb Thry Adv Stndpt	
MATH 3304	Fundamentals/Geometry Standpt	
MATH 3305	Proportion and Algebra	
MATH 3308	Proportn & Algebrc Reasong I	
MATH 3309	Proportn & Algebrc Reasong II	
MATH 3319	Elementary Number Theory	
MATH 3320	Actuarial Mathematics	
MATH 3329	Geometry	



MATH 3341	Introduction to Analysis
MATH 4199	Individ Studies in Mathematic
MATH 4302	Fund Math Concepts Grades 4-8
MATH 4303	Fundamental Math/Adv. Standpt
MATH 4325	Modern Algebra
MATH 4326	Linear Algebra
MATH 4341	Real Analysis
MATH 4370	Topics Seminar
MATH 4399	Indiv Studies in Mathematics
STAT 3320	Probability and Statistics
STAT 4385	Applied Regression Analysis

**Additional Hours**

Additional semester hours with advisor approval

**Other Science Requirements**

Please choose one sequence from the following:

8

BIOL 1305 & BIOL 1107	General Biology and Topics in Study of Life I
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And

BIOL 1306 & BIOL 1108	Organismal Biology and Organismal Biology Laboratory
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OR

CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305
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And

CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306
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OR

GEOL 1313 & GEOL 1103	Intro to Physical Geology and Lab for GEOL 1313
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And

GEOL 1314 & GEOL 1104	Intro to Historical Geol and Lab for GEOL 1314
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**Minor (Optional)**

Complete an 18-hour minor or 18 hours of electives, at least 10 must be upper-division 18

**Upper Division Requirement**Select a total of thirty-seven hours of upper division course work<sup>2</sup> 37**Total Hours** 120<sup>1</sup> Although the UTEP core choice is larger, students are encouraged to choose the core courses that also satisfies the major.<sup>2</sup> A total of thirty-seven hours of upper division coursework is required for all Bachelor of Science degrees.<sup>c</sup> Course requires a grade of C or better**Data Science**

Code	Title	Hours
<b>Designated Core</b>		
Required Courses: <sup>1</sup>		
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
<b>University Core Curriculum</b>		
Complete the University Core Curriculum requirements. (p. 10)		42
<b>Data Science Concentration</b>		

## Required Courses:

MATH 1312	Calculus II	3
MATH 1411	Calculus I	4
MATH 2313	Calculus III	3
MATH 3325	Principles of Mathematics	3
MATH 4329	Numerical Analysis	3
STAT 2480	Elementary Statistical Methods	4
STAT 3330	Probability	3
STAT 4380	Statistics Inference	3
STAT 4385	Applied Regression Analysis	3
MATH 2300	Discrete Mathematics	3
or MATH 2325	Intro. to Higher Mathematics	
MATH 3323	Matrix Algebra	3
or MATH 4326	Linear Algebra	
or STAT 4329	Statistical Programming	
or STAT 4474	Statistical Machine Learning	

**Additional Required Courses** 10

CS 1301 & CS 1101	Intro to Computer Science and Intro to Computer Science Lab	
RWS 3359	Technical Writing	
SCI 1301	Inquiry in Math & Science	

**Minor (Optional)** 18

Complete an 18-hour minor or 18 hours of electives, at least 10 must be upper-division

**Electives** 9

Take an additional 9 hours of upper-division electives

**Upper Division Requirement** 37

Select a total of thirty-seven hours of upper division course work <sup>1</sup>

**Total Hours** 120

1

Although the UTEP core choice is larger, students are encouraged to choose the core courses that also satisfies the major.

2

MATH 4370 Topics Seminar, MATH 4199 Individ Studies in Mathematic, MATH 4399 Indiv Studies in Mathematics with approval.

3

A total of thirty-seven hours of upper division coursework is required for all Bachelor of Science degrees.

**C**

Course requires a grade of C or better

**University Core Curriculum**

The department may make specific suggestions for courses which are most applicable towards your major.

All courses require a C or better

**I. Communication (six hours)**

Code	Title	Hours
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The objective of the communication component is to enable the student to communicate effectively in clear and correct prose or orally in a style appropriate to the subject, occasion, and audience.

Select six hours of the following: 6

For students whose secondary education was in English:

COMM 1611	Written and Oral Communication	
ENGL 1313	Writing About Literature	
RWS 1301	Rhetoric & Composition I	
RWS 1302	Rhetoric & Composition 2	
RWS 1601	Rhetoric, Composition & Comm	

For students whose secondary education was not in English:

ESOL 1311	Expos Engl Compos-Spkr Esl	
ESOL 1312	Res & Crit Writng Spkr Esl	
<b>Total Hours</b>		<b>6</b>

## II. American History (six hours)

Code	Title	Hours
The objectives of the history component are to expand students' knowledge of the origin and history of the U.S., their comprehension of the past and current role of the U.S. in the world, and their ability to critically evaluate and analyze historical evidence. U.S. history courses (three hours must be Texas history) include:		
HIST 1301	History of U.S. to 1865	3
HIST 1302	History of U.S. Since 1865	3
<b>Total Hours</b>		<b>6</b>

## III. Language, Philosophy & Culture (three hours)

Code	Title	Hours
The objective of the humanities component is to expand students' knowledge of the human condition and human cultures, especially in relation to behaviors, ideas, and values expressed in works of human imagination and thought. Through study in disciplines such as literature and philosophy, students engage in critical analysis and develop an appreciation of the humanities as fundamental to the health and survival of any society.		
Select one of the following:		3
AFST 2300	Intro-African Amer Studies	
CHIC 2302	Latina/o Presence in the U.S.	
ENGL 2311	English Literature	
ENGL 2312	English Literature	
ENGL 2313	Intro to American Fiction	
ENGL 2314	Intro to American Drama	
ENGL 2318	Intro to American Poetry	
FREN 2322	Making of the "Other" Americas	
HIST 2301	World History to 1500	
HIST 2302	World History Since 1500	
PHIL 1301	Introduction to Philosophy	
PHIL 2306	Ethics	
RS 1301	Introduct to Religious Studies	
SPAN 2340	Seeing & Naming: Conversations	
WS 2300	Introduction to Womens Studies	
WS 2350	Global Feminisms	
<b>Total Hours</b>		<b>3</b>

## IV. Mathematics (three hours)

Code	Title	Hours
The objective of the mathematics component is to develop a quantitatively literate college graduate. Every college graduate should be able to apply basic mathematical tools in the solution of real-world problems.		
Select one of the following:		3
MATH 1309	College Algebra	
MATH 1310	Trigonometry and Conics	
MATH 1319	Math in the Modern World	
MATH 1320	Math for Social Sciences I	
MATH 1411	Calculus I	
MATH 1508	Precalculus <sup>1,2</sup>	
MATH 2301	Math for Social Sciences II	
STAT 1380	Statistical Literacy	
STAT 2480	Elementary Statistical Methods	

1 A higher-level course in the calculus sequence can be substituted.

2 TCCN MATH 1314 will also satisfy this requirement.

**Total Hours****3****V. Life & Physical Sciences (six hours)**

<b>Code</b>	<b>Title</b>	<b>Hours</b>
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The objective of the study of the natural sciences is to enable the student to understand, construct, and evaluate relationships in the natural sciences, and to enable the student to understand the bases for building and testing theories. The courses listed are for non-majors; the major courses in the discipline can be substituted for the non-major sequence. A minimum of two semesters of lecture and one semester of laboratory associated with one of the courses, or two semesters of combined (3 credit) lecture-laboratory courses (Only six hours apply toward the required 42.):

Select one of the following:

1-4

ASTR 1107	Astronomy Lab I	
ASTR 1307	Elem Astronomy-Solar System	
ASTR 1308	Elem Astr Stars & Galaxies	
BIOL 1103	Introductory Biology Lab	
BIOL 1104	Human Biology Laboratory	
BIOL 1107	Topics in Study of Life I	
BIOL 1108	Organismal Biology Laboratory	
BIOL 1203	Introductory Biology	
BIOL 1304	Human Biology	
BIOL 1305	General Biology	
BIOL 1306	Organismal Biology	
BIOL 2111	Human Anat/Physio Lab I	
BIOL 2113	Human Anat/Physio Lab II	
BIOL 2311	Human Anat/Physiology I	
BIOL 2313	Human Anat/Physiology II	
CHEM 1105	Laboratory for CHEM 1305	
CHEM 1106	Laboratory for CHEM 1306	
CHEM 1107	Intro General Chemistry Lab	
CHEM 1108	Intro Organic & Biochem Lab	
CHEM 1305	General Chemistry	
CHEM 1306	General Chemistry	
CHEM 1307	Intro to General Chemistry	
CHEM 1308	Intro Organic & Biochemistry	
ESCI 1101	Environmental Sci. Lab	
ESCI 1102	Non-major Lab for ESCI 1301	
ESCI 1202	Intro to Environment Science 2	
ESCI 1301	Intro to Environmental Sci	
GEOG 1106	Laboratory for GEOG 1306	
GEOG 1306	Physical Geography	
GEOL 1103	Lab for GEOL 1313	
GEOL 1104	Lab for GEOL 1314	
GEOL 1111	Principles of Earth Sci - Lab	
GEOL 1112	Laboratory for Geology 1212	
GEOL 1211	Principles of Earth Sciences	
GEOL 1212	Principles of Earth Science	
GEOL 1230	The Blue Planet	
GEOL 1231	Natural Hazards	
GEOL 1313	Intro to Physical Geology	
GEOL 1314	Intro to Historical Geol	
HSCI 2302	Fundamentals of Nutrition	
HSCI 2303	Wellness Dynamics	

MICR 2330	Microorganisms and Disease	
PHYS 1403	General Physics I	
PHYS 1404	General Physics II	
PHYS 2120	Laboratory for PHYS 2320	
PHYS 2121	Laboratory for PHYS 2321	
PHYS 2320	Introductory Mechanics	
PHYS 2321	Introductory Electromagnetism	
<b>Total Hours</b>		<b>6</b>

## VI. Political Science (six hours)

Code	Title	Hours
The objectives of the political science component are to expand students' knowledge of the origin and evolution of the U.S. and Texas political systems, focusing on the growth of political institutions, and on the constitutions of Texas and the United States; and to enhance their understanding of federalism, states rights, and individual civil liberties, rights, and responsibilities.		
Required Courses:		
POLS 2310	Introduction to Politics	3
POLS 2311	American Govern & Politics	3
<b>Total Hours</b>		<b>6</b>

## VII. Social and Behavioral Sciences (three hours)

Code	Title	Hours
The objective of the social and behavioral science component is to increase students' knowledge of how social and behavioral scientists discover, describe, and explain the behaviors and interactions among individuals, groups, institutions, events, and ideas. Such knowledge will better equip students to understand themselves and the roles they play in addressing the issues facing humanity.		
Select one of the following:		
		3
ANTH 1301	Intro-Phys Anth/Archeolog	
ANTH 1302	Intro-Cultural Anthropology	
ANTH 1310	Cultural Geography	
ANTH 2320	Intro to Linguistics	
CE 2326	Econ for Engrs & Scientists	
ASIA 2300	Asian American Studies	
COMM 2350	Interpersonal Communication	
COMM 2372	Mass Media and Society	
ECON 2303	Principles of Macroeconomics	
ECON 2304	Principles of Microeconomics	
EDPC 1301	Introduction to Ed Psychology	
EDU 1342	Action Research in Classrooms	
ENGL 2320	Introduction to Linguistics	
GEOG 1310	Cultural Geography	
LEAD 2300	Community Service	
LING 2320	An Intro. to Linguistics	
LING 2340	Lang. Inside & Out: Sel Topics	
PSYC 1301	Introduction to Psychology	
SOCI 1301	Introduction to Sociology	
SOCI 1310	Cultural Geography	
<b>Total Hours</b>		<b>3</b>

## VIII. Creative Arts (three hours)

Code	Title	Hours
The objective of the visual and performing arts component is to expand students' knowledge and appreciation of the human imagination as expressed through works of visual art, dance, music, theatre and film. Through study in these disciplines, students will form aesthetic judgments and develop an appreciation of the arts as fundamental to the health and survival of any society.		
Select one of the following:		
		3

ART 1300	Art Appreciation
ARTH 1305	History of Art I
ARTH 1306	History of Art II
CHIC 1311	Chicana/o Fine Arts Appreciat
DANC 1304	Dance Appreciation
FILM 1390	Intro-Art of Motion Pict.
MUSL 1324	Music Appreciation
MUSL 1327	Jazz to Rock
MUSL 2321	Music, Culture, and Society
THEA 1313	Introduction to Theatre

**Total Hours** **3**

### IX. Component Area Option (six hours)

Code	Title	Hours
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The objective of the institutionally designated option component is to develop the critical thinking skills and academic tools required to be an effective learner. Special emphasis is placed on the use of technology in problem-solving, communications, and knowledge acquisition.

Select two of the following: 6

BUSN 1301	Intro to Global Business
COMM 1301	Public Speaking
COMM 1302	Business/Profession Comm
CS 1310	Intro-Computational Thinking
CS 1320	Computer Programming Sci/Engr
EL 1301	Eng Innovation and Leadership
LEAD 1300	Introduction to Leadership
SCI 1301	Inquiry in Math & Science
UNIV 1301	Seminar/Critical Inquiry

**Total Hours** **6**

## 4-Year Sample Degree Plan

### BS in Mathematics (Starting with Calculus)

Code	Title	Hours
<b>BS IN MATHEMATICS</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
CS 1320	Computer Programming Sci/Engr	3
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
RWS 1301	Rhetoric & Composition I	3
<b>Spring</b>		
MATH 1312	Calculus II	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PSYC 1301	Introduction to Psychology	3
RWS 1302	Rhetoric & Composition 2	3
<b>SOPHOMORE</b>		
<b>Fall</b>		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
COMM 1301	Public Speaking	3
HIST 1301	History of U.S. to 1865	3
MATH 2313	Calculus III	3

PHIL 2306	Ethics	3
<b>Spring</b>		
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
HIST 1302	History of U.S. Since 1865	3
MATH 2326	Differential Equations	3
Elective		3
Minor		3
<b>JUNIOR</b>		
<b>Fall</b>		
ART 1300	Art Appreciation	3
MATH 3325	Principles of Mathematics	3
POLS 2310	Introduction to Politics	3
STAT 3330	Probability	3
Minor		3
<b>Spring</b>		
CS 1320	Computer Programming Sci/Engr	3
MATH 3341	Introduction to Analysis	3
POLS 2311	American Gover & Politics	3
Upper Division Math Course		3
Elective		4
<b>SENIOR</b>		
<b>Fall</b>		
MATH 4325	Modern Algebra	3
MATH 4341	Real Analysis	3
RWS 3359	Technical Writing	3
Minor		3
Minor		3
<b>Spring</b>		
MATH 4326	Linear Algebra	3
Upper Division Math Course		3
Minor		3
Minor		3
Elective		3
<b>Total Hours</b>		<b>120</b>

## BS in Mathematics (Starting with Pre-Calculus)

Code	Title	Hours
<b>BS IN MATHEMATICS</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
CS 1320	Computer Programming Sci/Engr	3
HIST 1301	History of U.S. to 1865	3
MATH 1508	Precalculus	5
RWS 1301	Rhetoric & Composition I	3
<b>Spring</b>		
HIST 1302	History of U.S. Since 1865	3
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	3
PSYC 1301	Introduction to Psychology	3

RWS 1302	Rhetoric & Composition 2	3
<b>SOPHOMORE</b>		
<b>Fall</b>		
COMM 1301	Public Speaking	3
MATH 1312	Calculus II	3
PHIL 2306	Ethics	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	3
POLS 2310	Introduction to Politics	3
<b>Spring</b>		
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
POLS 2311	American Gover & Politics	3
Elective		3
<b>JUNIOR</b>		
<b>Fall</b>		
ART 1300	Art Appreciation	3
MATH 2300	Discrete Mathematics	3
MATH 3325	Principles of Mathematics	3
STAT 3330	Probability	3
Minor		3
Upper Division Math Course		3
<b>Spring</b>		
CS 1320	Computer Programming Sci/Engr	3
MATH 3335	Applied Analysis I	3
MATH 3341	Introduction to Analysis	3
Minor		3
Upper-Division Math Elective		3
<b>SENIOR</b>		
<b>Fall</b>		
MATH 4325	Modern Algebra	3
MATH 4341	Real Analysis	3
RWS 3359	Technical Writing	3
Minor		3
Minor		3
<b>Spring</b>		
MATH 4326	Linear Algebra	3
Minor		3
Minor		3
Elective		3
<b>Total Hours</b>		<b>125</b>

### BS in Mathematics with a Concentration in Actuarial Science (Starting with Calculus)

Code	Title	Hours
<b>BS IN MATHEMATICS WITH A CONCENTRATION IN ACTUARIAL MATHEMATICS</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
COMM 1302	Business/Profession Comm	3
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4



RWS 1301	Rhetoric & Composition I	3
<b>Spring</b>		
MATH 1312	Calculus II	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
RWS 1302	Rhetoric & Composition 2	3
ECON 2304	Principles of Microeconomics	3
<b>SOPHOMORE</b>		
<b>Fall</b>		
ACCT 2301	Principles of Accounting I	3
CS 1320	Computer Programming Sci/Engr	3
HIST 1301	History of U.S. to 1865	3
MATH 2313	Calculus III	3
PHIL 2306	Ethics	3
Elective		3
<b>Spring</b>		
ART 1300	Art Appreciation	3
HIST 1302	History of U.S. Since 1865	3
MATH 2300 or MATH 2325	Discrete Mathematics Intro. to Higher Mathematics	3
MATH 2326	Differential Equations	3
FIN 3310	Business Finance	3
Elective		3
<b>JUNIOR</b>		
<b>Fall</b>		
MATH 3325	Principles of Mathematics	3
STAT 3330	Probability	3
QMB 3350	Business Analytics	3
Elective		3
<b>Spring</b>		
CIS 3301	Intro to Data Process & Prog	3
MATH 3320	Actuarial Mathematics	3
MATH 3323 or MATH 4326	Matrix Algebra Linear Algebra	3
MATH 3341	Introduction to Analysis	3
FIN 3315	Investments	3
<b>SENIOR</b>		
<b>Fall</b>		
FIN 4310 & FIN 4311A	Managerial Finance and Managerial Finance Laboratory	4.5
MATH 2320	Mathematics of Interest	3
POLS 2310	Introduction to Politics	3
RWS 3359	Technical Writing	3
STAT 4380 or STAT 4385	Statistics Inference Applied Regression Analysis	3
<b>Spring</b>		
FIN 4315 & 4315A	Portfolio Analysis and Portfolio Analysis Laboratory	4.5
FIN 4316	Analysis of Derivatives	3
MATH 4329	Numerical Analysis	3
POLS 2311	American Govern & Politics	3
<b>Total Hours</b>		<b>120</b>

**BS in Mathematics with a Concentration in Actuarial Science (Starting with Pre-Calculus)**

Code	Title	Hours
<b>BS IN MATHEMATICS WITH A CONCENTRATION IN ACTUARIAL MATHEMATICS</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
ACCT 2301	Principles of Accounting I	3
COMM 1302	Business/Profession Comm	3
MATH 1508	Precalculus	5
RWS 1301	Rhetoric & Composition I	3
<b>Spring</b>		
MATH 1411	Calculus I	4
ECON 2304	Principles of Microeconomics	3
RWS 1302	Rhetoric & Composition 2	3
Elective		3
<b>SOPHOMORE</b>		
<b>Fall</b>		
CS 1320	Computer Programming Sci/Engr	3
MATH 1312	Calculus II	3
HIST 1301	History of U.S. to 1865	3
PHIL 2306	Ethics	3
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
<b>Spring</b>		
HIST 1302	History of U.S. Since 1865	3
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
Elective		3
<b>JUNIOR</b>		
<b>Fall</b>		
ART 1300	Art Appreciation	3
FIN 3310	Business Finance	3
MATH 2300 or MATH 2325	Discrete Mathematics Intro. to Higher Mathematics	3
MATH 3325	Principles of Mathematics	3
POLS 2310	Introduction to Politics	3
STAT 3330	Probability	3
<b>Spring</b>		
CIS 3301	Intro to Data Process & Prog	3
FIN 3315	Investments	3
MATH 3323 or MATH 4326	Matrix Algebra Linear Algebra	3
MATH 3341	Introduction to Analysis	3
QMB 3350	Business Analytics	3
POLS 2311	American Gover & Politics	3
<b>SENIOR</b>		
<b>Fall</b>		
FIN 4310 & FIN 4311A	Managerial Finance and Managerial Finance Laboratory	4.5
MATH 2320	Mathematics of Interest	3
RWS 3359	Technical Writing	3

STAT 3320	Probability and Statistics	3
STAT 4380	Statistics Inference	3
or STAT 4385	Applied Regression Analysis	
<b>Spring</b>		
FIN 4315 & 4315A	Portfolio Analysis and Portfolio Analysis Laboratory	4.5
FIN 4316	Analysis of Derivatives	3
MATH 3320	Actuarial Mathematics	3
MATH 4329	Numerical Analysis	3
<b>Total Hours</b>		<b>125</b>

### BS in Mathematics with a Concentration in Applied Math (Starting with Calculus)

Code	Title	Hours
<b>BS IN MATHEMATICS WITH A CONCENTRATION IN APPLIED MATHEMATICS</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
RWS 1301	Rhetoric & Composition I	3
UNIV 1301	Seminar/Critical Inquiry	3
<b>Spring</b>		
MATH 1312	Calculus II	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PSYC 1301	Introduction to Psychology	3
RWS 1302	Rhetoric & Composition 2	3
<b>SOPHOMORE</b>		
<b>Fall</b>		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
CS 1320	Computer Programming Sci/Engr	3
HIST 1301	History of U.S. to 1865	3
MATH 2313	Calculus III	3
PHIL 2306	Ethics	3
<b>Spring</b>		
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
HIST 1302	History of U.S. Since 1865	3
MATH 2300	Discrete Mathematics	3
MATH 2326	Differential Equations	3
Field of Study Approved Courses		3
<b>JUNIOR</b>		
<b>Fall</b>		
ART 1300	Art Appreciation	3
MATH 3325	Principles of Mathematics	3
POLS 2310	Introduction to Politics	3
STAT 3330	Probability	3
Upper Division Course		3
<b>Spring</b>		
MATH 3335	Applied Analysis I	3
POLS 2311	American Gover & Politics	3
STAT 4385	Applied Regression Analysis	3

Upper Division Course		3
Additional hours as approved by advisor		3
<b>SENIOR</b>		
<b>Fall</b>		
RWS 3359	Technical Writing	3
MATH 3323	Matrix Algebra	3
Upper Division Math Course		3
Upper Division Course		3
Additional hours as approved by advisor		4
<b>Spring</b>		
MATH 4329	Numerical Analysis	3
MATH 4336	Applied Analysis II	3
Field of Study Course		3
Field of Study Course		3
Field of Study Course		3
<b>Total Hours</b>		<b>120</b>

### BS in Mathematics with a Concentration in Applied Math (Starting with Pre-Calculus)

Code	Title	Hours
<b>BS IN MATHEMATICS WITH A CONCENTRATION IN APPLIED MATHEMATICS</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
ART 1300	Art Appreciation	3
MATH 1508	Precalculus	5
RWS 1301	Rhetoric & Composition I	3
UNIV 1301	Seminar/Critical Inquiry	3
<b>Spring</b>		
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PSYC 1301	Introduction to Psychology	3
RWS 1302	Rhetoric & Composition 2	3
<b>SOPHOMORE</b>		
<b>Fall</b>		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
HIST 1301	History of U.S. to 1865	3
MATH 1312	Calculus II	3
PHIL 2306	Ethics	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
<b>Spring</b>		
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
COMM 1302	Business/Profession Comm	3
HIST 1302	History of U.S. Since 1865	3
MATH 2313	Calculus III	3
Field of Study Approved Courses		3
<b>JUNIOR</b>		
<b>Fall</b>		
MATH 2300	Discrete Mathematics	3
MATH 2326	Differential Equations	3
MATH 3325	Principles of Mathematics	3

POLS 2310	Introduction to Politics	3
STAT 3330	Probability	3
Upper Division Course		3
<b>Spring</b>		
CS 1320	Computer Programming Sci/Engr	3
MATH 3335	Applied Analysis I	3
POLS 2311	American Gover & Politics	3
STAT 4385	Applied Regression Analysis	3
Upper Division Course		3
<b>SENIOR</b>		
<b>Fall</b>		
RWS 3359	Technical Writing	3
MATH 3323	Matrix Algebra	3
STAT 3330	Probability	3
Upper Division Math Course		3
Upper Division Course		3
<b>Spring</b>		
MATH 4329	Numerical Analysis	3
MATH 4336	Applied Analysis II	3
Field of Study Course		3
Field of Study Course		3
Field of Study Course		3
<b>Total Hours</b>		<b>124</b>

### BS in Mathematics with Concentration in 7-12 Math (Starting with Calculus)

Code	Title	Hours
<b>BS IN MATHEMATICS WITH A CONCENTRATION IN 7-12 MATH</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
RWS 1301	Rhetoric & Composition I	3
SCI 1301	Inquiry in Math & Science	3
<b>Spring</b>		
ART 1300	Art Appreciation	3
MATH 1312	Calculus II	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
RWS 1302	Rhetoric & Composition 2	3
PSYC 1301	Introduction to Psychology	3
<b>SOPHOMORE</b>		
<b>Fall</b>		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
COMM 1301	Public Speaking	3
HIST 1301	History of U.S. to 1865	3
MATH 2313	Calculus III	3
PHIL 2306	Ethics	3
<b>Spring</b>		
CS 1320 or CS 1401	Computer Programming Sci/Engr Intro to Computer Science	3
MATH 2300	Discrete Mathematics	3

MATH 2326	Differential Equations	3
HIST 1302	History of U.S. Since 1865	3
POLS 2310	Introduction to Politics	3
Elective		3
<b>JUNIOR</b>		
<b>Fall</b>		
EDPC 3300	Intro to Youth Dev & Spec Ed	3
MATH 3300	History of Mathematics	3
MATH 3325	Principles of Mathematics	3
STAT 3330	Probability	3
SCED 3311	Curriculum Plan-Secondary Schl	3
SCED 4367	Teaching Math in Sec School	3
<b>Spring</b>		
MATH 3341	Introduction to Analysis	3
MATH 4303	Fundamental Math/Adv. Standpt	3
MATH 4326	Linear Algebra	3
POLS 2311	American Gover & Politics	3
RED 3342	Content Area Literacy	3
STAT 4380	Statistics Inference	3
<b>SENIOR</b>		
<b>Fall</b>		
MATH 3329	Geometry	3
MATH 4325	Modern Algebra	3
MATH 4341	Real Analysis	3
RWS 3359	Technical Writing	3
SCED 3317	Multicultural Ed in Sec School	3
<b>Spring</b>		
SCED 4691	Student Teaching in Sec School	6
<b>Total Hours</b>		<b>121</b>

### BS in Mathematics with Concentration in 7-12 Math (Starting with Pre-Calculus)

Code	Title	Hours
<b>BS IN MATHEMATICS WITH A CONCENTRATION IN 7-12 MATH</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
MATH 1508	Precalculus	5
POLS 2310	Introduction to Politics	3
RWS 1301	Rhetoric & Composition I	3
SCI 1301	Inquiry in Math & Science	3
<b>Spring</b>		
ART 1300	Art Appreciation	3
MATH 1411	Calculus I	4
POLS 2311	American Gover & Politics	3
RWS 1302	Rhetoric & Composition 2	3
PSYC 1301	Introduction to Psychology	3
<b>SOPHOMORE</b>		
<b>Fall</b>		
COMM 1301	Public Speaking	3
HIST 1301	History of U.S. to 1865	3
MATH 1312	Calculus II	3

PHIL 2306	Ethics	3
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
<b>Spring</b>		
CS 1320 or CS 1401	Computer Programming Sci/Engr Intro to Computer Science	3
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
HIST 1302	History of U.S. Since 1865	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
Elective		3
<b>JUNIOR</b>		
<b>Fall</b>		
MATH 2300	Discrete Mathematics	3
MATH 3300	History of Mathematics	3
MATH 3325	Principles of Mathematics	3
STAT 3330	Probability	3
SCED 3311	Curriculum Plan-Secondary Schl	3
SCED 4367	Teaching Math in Sec School	3
<b>Spring</b>		
EDPC 3300	Intro to Youth Dev & Spec Ed	3
MATH 3341	Introduction to Analysis	3
MATH 4303	Fundamental Math/Adv. Standpt	3
MATH 4326	Linear Algebra	3
RED 3342	Content Area Literacy	3
STAT 4380	Statistics Inference	3
<b>SENIOR</b>		
<b>Fall</b>		
MATH 3329	Geometry	3
MATH 4325	Modern Algebra	3
MATH 4341	Real Analysis	3
RWS 3359	Technical Writing	3
SCED 3317	Multicultural Ed in Sec School	3
<b>Spring</b>		
SCED 4691	Student Teaching in Sec School	6
<b>Total Hours</b>		<b>126</b>

### BS in Mathematics with Concentration in 7-12 Math/Physics (Starting with Calculus)

Code	Title	Hours
<b>BS IN MATHEMATICS WITH A CONCENTRATION IN 7-12 MATH/PHYSICS</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
RWS 1301	Rhetoric & Composition I	3
SCI 1301	Inquiry in Math & Science	3
<b>Spring</b>		
MATH 1312	Calculus II	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PSYC 1301	Introduction to Psychology	3

RWS 1302	Rhetoric & Composition 2	3
<b>SOPHOMORE</b>		
<b>Fall</b>		
COMM 1301	Public Speaking	3
HIST 1301	History of U.S. to 1865	3
MATH 2313	Calculus III	3
PHIL 2306	Ethics	3
PHYS 2325	Survey of Modern Physics	3
<b>Spring</b>		
ART 1300	Art Appreciation	3
CS 1320	Computer Programming Sci/Engr	3
HIST 1302	History of U.S. Since 1865	3
MATH 2300	Discrete Mathematics	3
MATH 2326	Differential Equations	3
<b>JUNIOR</b>		
<b>Fall</b>		
MATH 3325	Principles of Mathematics	3
PHYS 3323	Physical Optics	3
POLS 2310	Introduction to Politics	3
SCED 3311	Curriculum Plan-Secondary Schl	3
SCED 4367	Teaching Math in Sec School	3
STAT 3330	Probability	3
<b>Spring</b>		
EDPC 3300	Intro to Youth Dev & Spec Ed	3
MATH 3341	Introduction to Analysis	3
MATH 4303	Fundamental Math/Adv. Standpt	3
POLS 2311	American Gover & Politics	3
RED 3342	Content Area Literacy	3
STAT 4380	Statistics Inference	3
<b>SENIOR</b>		
<b>Fall</b>		
MATH 3329	Geometry	3
MATH 4325	Modern Algebra	3
MATH 4341	Real Analysis	3
RWS 3359	Technical Writing	3
SCED 3317	Multicultural Ed in Sec School	3
<b>Spring</b>		
MATH 3300	History of Mathematics	3
MATH 4326	Linear Algebra	3
SCED 4691	Student Teaching in Sec School	6
<b>Total Hours</b>		<b>120</b>

### BS in Mathematics with Concentration in 7-12 Math/Physics (Starting with Pre-Calculus)

Code	Title	Hours
<b>BS IN MATHEMATICS WITH A CONCENTRATION IN 7-12 MATH/PHYSICS</b>		
<b>FRESHMAN</b>		
<b>Fall</b>		
ART 1300	Art Appreciation	3
MATH 1508	Precalculus	5
RWS 1301	Rhetoric & Composition I	3
SCI 1301	Inquiry in Math & Science	3
<b>Spring</b>		



MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PSYC 1301	Introduction to Psychology	3
RWS 1302	Rhetoric & Composition 2	3
<b>SOPHOMORE</b>		
<b>Fall</b>		
CS 1320	Computer Programming Sci/Engr	3
HIST 1301	History of U.S. to 1865	3
MATH 1312	Calculus II	3
PHIL 2306	Ethics	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
<b>Spring</b>		
COMM 1301	Public Speaking	3
HIST 1302	History of U.S. Since 1865	3
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
PHYS 2325	Survey of Modern Physics	3
<b>JUNIOR</b>		
<b>Fall</b>		
MATH 2300	Discrete Mathematics	3
MATH 3325	Principles of Mathematics	3
POLS 2310	Introduction to Politics	3
SCED 3311	Curriculum Plan-Secondary Schl	3
SCED 4367	Teaching Math in Sec School	3
STAT 3330	Probability	3
<b>Spring</b>		
EDPC 3300	Intro to Youth Dev & Spec Ed	3
MATH 3341	Introduction to Analysis	3
MATH 4303	Fundamental Math/Adv. Standpt	3
POLS 2311	American Gover & Politics	3
RED 3342	Content Area Literacy	3
STAT 4380	Statistics Inference	3
<b>SENIOR</b>		
<b>Fall</b>		
MATH 3329	Geometry	3
MATH 4325	Modern Algebra	3
MATH 4341	Real Analysis	3
PHYS 3323	Physical Optics	3
RWS 3359	Technical Writing	3
SCED 3317	Multicultural Ed in Sec School	3
<b>Spring</b>		
MATH 3300	History of Mathematics	3
MATH 4326	Linear Algebra	3
SCED 4691	Student Teaching in Sec School	6
<b>Total Hours</b>		<b>125</b>