

Program Change Request

Date Submitted: 11/07/18 3:42 pm

Viewing: **BS-MATH : Mathematics - BS**

Last approved: 03/20/18 5:24 pm

Last edit: 11/13/18 12:04 pm

Changes proposed by: donnalh

Catalog Pages Using
this Program

[Mathematics - BS](#)

Contact(s)

Name	E-mail	Phone
Donna Hoffman	donnalh@tamu.edu	979-862-4306

Academic level	Undergraduate
Effective Term	2019-2020
Department	Mathematics
College	Science
Program type	Degree
Degree designation	BS - Bachelor of Science
With a major in	Mathematics (MATH)
Associated Program	Not Applicable
Catalog Program Title	Mathematics - BS
CIP and Fund code	27010100

Rationale for Proposal

- To comply with new course numbers established by the Chemistry Department.**
- To comply with new course numbers established by the Physics Department.**
- To comply with new course numbers established by the Physics Department.**
- To comply with new course number established by the Academic Success Center.**
- ~~*Adding ENGL 103 as an acceptable Communication Requirement will assist students who have earned credit for ENGL 1301.*ATMO 201/ATMO 202, CHEM 107/CHEM 117, GEOL 101/GEOL 102, and OCNG 251/OCNG 252 have been approved by Undergraduate Studies Committee as eligible to satisfy the Freshman Science requirement. Adding ATMO 201/ATMO 202, GEOL 101/GEOL 102 and OCNG 251/OCNG 252 as an option for 4 credits will allow students more flexibility in their degree plans.*The course content of MATH 220 and CSCE 222/ECEN 222 is too similar to allow credit both courses.*Removing MATH 150 from the ineligible General Elective list will assist students with the new Financial Aid regulations.~~**To be in compliance with**
~~*With the development of the new Core Curriculum requirement for Cultural Discourse, undergraduate program in Statistics, new upper level Statistics courses have been created that should be included in Major GPR calculations.~~
- The *The course content of CHEM 119 MATH 220 and CHEM 107/117 CSCE 222/ECEN 222 is too similar to allow credit for both courses.**
- There is no longer other courses equivalent to CHEM 102/CHEM 112, so the Limitation is no longer needed.**
- This course is foundational and fundamental to virtually all upper level coursework in our degrees and as such, we are moving this course to a number that will more accurately reflect its inherent maturity level, and to stress the course's importance and pivotal role within our degree programs.** ~~*To correct error in Howdy degree evaluation Rule A. of General Electives that erroneously omits MATH 304 from the list of ineligible General Electives. MATH 304 is included in Footnote 4 of the 2017-2018 Undergraduate Catalog.*The "Elective hours" requirement should reference Footnote 5 since it lists the ineligible elective courses.*Correcting the typo on MATH 446 is an editorial change.~~

In Workflow

- MATH Department Head**
- Curricular Services Review**
- SC Committee Preparer UG**
- SC Committee Chair UG**
- SC College Dean UG**
- UCC Preparer**
- UCC Chair**
- Faculty Senate Preparer**
- Faculty Senate
- Provost II
- President
- Curricular Services

Approval Path

- 11/07/18 4:42 pm
Emil Straube (e-straube): Approved for MATH Department Head
- 11/13/18 4:00 pm
Angel Mario Carrizales (carri1214): Approved for Curricular Services Review
- 11/13/18 4:09 pm
Sara Thigpin (sarathigpin): Approved for SC Committee Preparer UG
- 11/13/18 4:09 pm
Lucas Macri (lmacri): Approved for SC Committee Chair UG
- 11/13/18 4:10 pm
Lucas Macri (lmacri): Approved for SC College Dean UG
- 11/14/18 10:50 am
Sandra Williams (sandra-williams): Approved for UCC Preparer
- 12/10/18 10:45 am
Terra Bissett (t.bissett): Approved for UCC Chair

History

- Mar 7, 2017 by Donna Hoffman (donnalh)
- Mar 20, 2018 by Donna Hoffman (donnalh)

Program hours	120
Is this program eligible for financial aid?	No
Will program hours change (increase/decrease) due to the proposed curriculum changes?	No
Program delivery mode	On-campus

Catalog Program Requirements

Plan of Study Grid

First Year		
Fall		Semester Credit Hours
ENGL 104	Composition and Rhetoric	3
or ENGL 103	or Introduction to Rhetoric and Composition	
MATH 171	Analytic Geometry and Calculus	4
Select one of the following:		3
American history		
Government/Political science		
Elective 1		1
Freshman Science elective 2		4
Elective hours 2		±
	Semester Credit Hours	15
Spring		
MATH 172	Calculus	4
Select one of the following:		3
American history		
Government/Political science		
Select one of the following:		4
CSCE 110	Programming I	
CSCE 111	Introduction to Computer Science Concepts and Programming	
CSCE 121	Introduction to Program Design and Concepts	
CSCE 206	Structured Programming in C	
Elective 1		1
Freshman Science elective 2		4
Elective hours 2		±
	Semester Credit Hours	16
Second Year		
Fall		
MATH 220	Foundations of Mathematics	3
MATH 221	Several Variable Calculus	4
MATH 300	Foundations of Mathematics	3
Select one of the following:		3
American history		
Government/Political science		
Science elective 3		4
	Semester Credit Hours	14
Spring		
MATH 308	Differential Equations	3
MATH 323	Linear Algebra	3
PHYS 218	Mechanics	4
PHYS 206	Newtonian Mechanics for Engineering and Science	4
& PHYS 226	and Physics of Motion Laboratory for the Sciences	
Select one of the following:		3
American history		
Government/Political science		
Language, philosophy and culture	4	3
	Semester Credit Hours	16
Third Year		
Fall		

MATH 409	Advanced Calculus I	3
MATH 415	Modern Algebra I	3
Select one of the following:		3
COMM 203	Public Speaking	
COMM 205	Communication for Technical Professions	
COMM 243	Argumentation and Debate	
Elective 5		3
Science elective 3		3
Semester Credit Hours		15
Spring		
MATH 410	Advanced Calculus II	3
or MATH 446	or Principles of Analysis I	
MATH 416	Modern Algebra II	3
PHYS 208	Electricity and Optics	4
or OCNG 451	or Mathematical Modeling of Ocean Climate	
Select one of the following:		4
OCNG 451	Mathematical Modeling of Ocean Climate	
PHYS 207	Electricity and Magnetism for Engineering and Science	
& PHYS 227	and Electricity and Magnetism Laboratory for the Sciences	
Elective 5		3
Semester Credit Hours		13
Fourth Year		
Fall		
MATH 411	Mathematical Probability	3
or STAT 414	or Mathematical Statistics I	
MATH elective 6		3
Elective 5		3
Elective 5		4
Science elective 3		3
Semester Credit Hours		16
Spring		
MATH elective 6		9
Elective 5		6
Semester Credit Hours		15
Total Semester Credit Hours		120

1 [MATH 170](#) is highly recommended for math majors co-enrolled in [MATH 150](#), [MATH 151](#), [MATH 152](#), [MATH 171](#) or [MATH 172](#).

2 Select 4 hours from: [ASTR 111](#), [BIOL 111](#), [BIOL 112](#), [CHEM 119](#), [CHEM 120](#), [CHEM 107/CHEM 117](#). The remaining 4 hours may be selected from:

[ASTR 111](#), [ATMO 201/ATMO 202](#), [BIOL 111](#), [BIOL 112](#), [CHEM 119](#), [CHEM 120](#), [CHEM 107/CHEM 117](#), [GEOL 101/GEOL 102](#), [OCNG 251/OCNG 252](#).

3 Six (6) hours must be selected from [BICH 401-489](#); [BIOL 200-470](#); [CHEM 222-474](#); [GENE 301-452](#); [OCNG 251-252](#), [401-420](#); [PHYS 221](#), [302-305](#), [307-314](#), [324-428](#).

Four (4) hours must be selected from [ASTR 111](#); [BICH 401-489](#); [BIOL 111](#), [BIOL 112](#), [BIOL 200-470](#), [318-438](#); [CHEM 119](#), [CHEM 120](#), [CHEM 222-474](#); [GENE 301-452](#); [OCNG 251](#), [OCNG 252](#), [OCNG 401-420](#); [PHYS 221](#), [302-305](#), [307-314](#), [324-428](#).

4 Select 3 hours from any 200- to 400-level [Language, philosophy and culture](#) course.

5 Of the 21 hours shown as Elective, three hours must be [creative arts](#) and three hours must be [social and behavioral sciences](#). In addition, three hours must be in the area of [international and cultural diversity](#) and three hours must be in the area of [cultural discourse](#). These may be in addition to other [University Core Curriculum](#) courses, or if a course in this category satisfies an area of the Core, it can be used to meet both requirements. Students desiring teacher certification should consult the requirements for certification before registering for electives. Remaining electives may be selected from any 100-499 course not used elsewhere, (except [ALED 125](#); [ASCC 102](#); [ASTR 109/PHYS 109](#), [ASTR 119/PHYS 119](#); [BMEN 101](#); [BUSN 100](#); [ISEN 101](#); [KINE 199](#); [LAND 101](#); [MATH 102-148](#), [MATH 151 - 166](#), [MATH 304](#), [MATH 309](#), [MATH 311](#), [MATH 367](#), [MATH 368](#), [MATH 375](#), [MATH 376](#); [PHYS 109/ASTR 109](#), [PHYS 119/ASTR 119](#), [PHYS 201](#), [PHYS 202](#), [PHYS 205](#); [PSYC 301](#); [STAT 201](#), [STAT 301 - 303](#); [URPN 200](#); [WFSC 101](#)).

6 Twelve hours must be chosen from [MATH 407 - MATH 499](#) or any 600-level MATH (excluding [MATH 601](#)). Students are required to take at least one of the following: [MATH 427](#), [MATH 431](#), [MATH 436](#), [MATH 439](#). Students are encouraged to take [MATH 412](#), [MATH 414](#), [MATH 442](#), or [MATH 470](#). Students who plan to attend graduate school are encouraged to take [MATH 447](#) and at least one 600-level course. Departmental permission is required to take [MATH 485](#) or to enroll in a 600-level MATH course.

Maximum of 4 hours of [MATH 147](#), [MATH 151](#), or [MATH 171](#) may be used in this degree program.

Maximum of 4 hours of [MATH 148](#), [MATH 152](#), or [MATH 172](#) may be used in this degree program.

Maximum of 3 hours of [MATH 300](#), [MATH 220](#) or [CSCE 222/ECEN 222](#) may be used in this degree program.

Maximum of 3 hours of [MATH 411](#) or [STAT 414](#) may be used in this degree program.

Maximum of 3 hours of [MATH 417](#), [MATH 437](#) or [CSCE 442](#) may be used in this degree program.

Maximum of 4 hours of [CHEM 119](#), [CHEM 107/CHEM 117](#) may be used in this degree program.

If a grade of D or F is earned in any of the following courses, [MATH 151/MATH 171](#), [MATH 152/MATH 172](#), [MATH 221/MATH 251/MATH 253](#), [MATH 300](#), [MATH 220](#), [MATH 323](#) or [MATH 308](#), this course must be immediately retaken and a grade of C or better earned. The department will allow at most two D's in upper-level (325-499) courses. If a third D is earned, one of the three courses in which a D was earned must be retaken and a grade of C or better earned.

Additional information Description of changes:

1. To change the ~~add CHEM 107/CHEM 117 as an acceptable course number of CHEM 101/111 to CHEM 119 for the 8 credits~~

listed in Footnote 1 and CHEM 102/112 to CHEM 120 in Footnote 1. in Howdy degree evaluation Rule C. and Rule B., to Rule C., and Rule F. ~~E and Rule E.~~ of Life and Physical Sciences in Howdy Degree Evaluation. ~~Sciences.~~

2. To ~~change the course number range of PHYS 218 STAT courses to PHYS206/PHYS226 STAT 404 482 in Second Year Spring Semester and Howdy degree evaluation Rule A. of Life and Physical Sciences in Howdy Degree Evaluation. Sciences.~~

3. To change the course number of PHYS 208 ~~to apply Footnote 5 to PHYS 207/PHYS 227 the "Elective hours" requirement in Third Year Spring Semester Year, fall semester and Rule D. Fourth Year, fall semester of the Undergraduate Catalog of Life and Physical Sciences in Howdy Degree Evaluation.~~

4. ~~To add ENGL 103 as an acceptable alternative to ENGL 104 in the Undergraduate Catalog, First Year, fall semester and in Howdy degree evaluation Rule A. of the Communication. To change~~ ~~To replace the course number listing of STLC 102 to ASCC 102 Freshman Science electives in the degree plan with Footnote 5. 1 in the Undergraduate Catalog. To add CHEM 107/CHEM 117 as an acceptable course for the 8 credits listed in Footnote 1 and in Howdy degree evaluation Rule C. and Rule A. D. of General Electives to be in Howdy Degree Evaluation. agreement with the Undergraduate Catalog.~~

5. ~~of Life and Physical Sciences. To add ATMO 201/ATMO 202, GEOL 101/GEOL 102 and OCNG 251/OCNG 252 as acceptable courses for the remaining 4 credits listed in Footnote 1 and in Howdy degree evaluation Rule D. of Life and Physical Sciences. To change the wording in Footnote 5. existing Rule D. To add MATH 304 to Rule E and Rule E. to Rule F. in Howdy degree evaluation due to creation of a new Rule D. To add the statement, "Maximum of 3 hours of MATH 220 or C SCE 222/ECEN 222 may be used in this degree program" to the Undergraduate Catalog and the corresponding "Limitation" in Howdy degree evaluation. To remove MATH 150 from list of excluded General Electives in Footnote 5 of the Undergraduate Catalog and Howdy degree evaluation Rule A. of General Electives. To change the range of STAT courses to STAT 404 482 in Howdy degree evaluation Rule A. of GPR Major to reflect the new requirement list of 3 hrs of Cultural Discourse and add link to the Catalog page listing ICD courses. excluded General Electives in Howdy degree evaluation Rule A. To change Rule A. of International Cultural Diversity to 3 hrs and add Rule B. of Cultural Discourse for 3 hrs in Howdy Degree Evaluation.~~

6. To ~~add the statement, "Maximum of 4 3-hours of CHEM 119, CHEM 107/CHEM 117 MATH 220 or C SCE 222/ECEN 222 may be used in this degree program" to the Undergraduate Catalog and update the corresponding Limitation "Limitation" in Howdy Degree Evaluation. degree evaluation.~~

7. To ~~remove the Limitation, "Maximum MATH 150 from list of 4 hours excluded General Electives in Footnote 5 of CHEM 102, 112 may be used in this the Undergraduate Catalog and Howdy degree program" in Howdy Degree Evaluation. evaluation Rule A.~~

8. To change MATH 220 ~~to add ENGL 103 as an acceptable alternative to MATH 300 ENGL 104 in Second Year Fall Semester, the statement, "Maximum of 3 hours of MATH 300 or C SCE 222/ECEN 222 may be used Undergraduate Catalog, First Year, fall semester and in this Howdy degree program" and in the Departmental GPR Requirements in the Undergraduate Catalog. evaluation Rule A. of General Electives to be in agreement with the Undergraduate Catalog. To apply Footnote 5 to the "Elective hours" requirement in Third Year, fall semester and Fourth Year, fall semester of the Undergraduate Catalog. To correct the typo in Rule G. To change of Major Coursework from MATH 220 466 to MATH 300 in Rule B. 446. of Major Coursework and the corresponding Limitation in Howdy Degree Evaluation. The course MATH 466 does not exist.~~

Required Proposal
Forms

[bs_math_17c.pdf](#)
[BS-MATH.pdf](#)
[012218PresidentApprovalMemo.pdf](#)
[bs_math.pdf](#)

Reviewer Comments

Angel Mario Carrizales (carri1214) (11/13/18 1:10 pm): Edits made to conform to catalog style guidelines.
 Terra Bissett (t.bissett) (12/10/18 10:45 am): UCC approved December 2018.

Key: 427

- Must make a grade of 'C' or better.
- No AND C. MATH 323 3hrs
- Must make a grade of 'C' or better.
- No AND D. MATH 308 3hrs
- Must make a grade of 'C' or better.
- No AND E. MATH 409 3hrs
- No AND F. MATH 415 3hrs
- No AND G. Principles of Analysis 3hrs
- Select from MATH 410, 446.
- No AND H. MATH 416 3hrs
- No AND I. Math Elective 12hrs
- Select from the following:
 - 1. 3 hours must be selected from MATH 427, 431, 436, 439.
 - 2. 9 hours must be selected from MATH 325, 407-499.

Total Credits and GPA 0.000 .00

unofficial evaluation

Area Supporting Coursework (7.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Computer Science Rqmt				4hrs									
								Select from CSCE 110, 111, 121, 206.								
No	AND	B.	MATH 411 or STAT 414													

Total Credits and GPA 0.000 .00

unofficial evaluation

Area Communication (6.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	ENGL 103 or ENGL 104				3hrs									
No	AND	B.	Communication Rqmt				3hrs									
								Select from COMM 203, 205, or 243.								

Total Credits and GPA 0.000 .00

unofficial evaluation

Area Mathematics (8.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	MATH 171				4hrs									
								Must make a grade of 'C' or better.								
No	AND	B.	MATH 172				4hrs									
								Must make a grade of 'C' or better.								

Total Credits and GPA 0.000 .00

unofficial evaluation

Area Life and Physical Sciences (26.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	PHYS 206/226				4hrs									

No AND

B. Science Rqmt 4 hrs
 Select from ASTR 111; BIOL 111, BIOL 112; CHEM 119, 120, 107/ 117.

No AND

C. Science Rqmt II 4hrs
 Select from ASTR 111; ATMO 201/202; BIOL 111, 112; CHEM 119, 120, 107/117; GEOL 101/102; OCNG 251/252.

No AND

D. Science Rqmt III 4 hrs
 Select from OCNG 451 or PHYS 207/227

No AND

E. Science Rqmt IV 6hrs
 Select from BICH 401-489; BIOL 200-470; CHEM 222-474;
 GENE 301-452; OCNG 251-252, 401-420; PHYS 221, 302-5, 307-14, 324-428.

No AND

F. Science Rqmt V 4 hrs
 Select from ASTR 111; BICH 401-489; BIOL 111, 112; 200-470; 318-438; CHEM 119, 120, 222-474;
 GENE 301-452; OCNG 251, 252, 401-420; PHYS 221, 302-305, 307-314, 324-428.

Total Credits and GPA 0.000 .00

unofficial evaluation

Area Language, Philosophy & Culture (3.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No	A.		Language, Philosophy & Culture													

Total Credits and GPA 0.000 .00

unofficial evaluation

Area Creative Arts (3.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No	A.		Creative Arts Requirement 3hrs													

Total Credits and GPA 0.000 .00

unofficial evaluation

Area Social and Behavioral Sciences (3.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No	A.		Social Science Rqmt 3hrs													

Total Credits and GPA 0.000 .00

unofficial evaluation

Area : Citizenship (12.000 credits) - Not Met

Description Completion of 4 semesters of Upper-Level ROTC may be substituted for 3 hours of American History and 3 hours of Political Science.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No	A.		American History Rqmt 6hrs													
No	AND		B. Political Science Rqmt 6hrs													

Take POLS 206 and POLS 207.

Total Credits and GPA 0.000 .00

unofficial evaluation

Area General Electives (15.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course Title	Attribute	Credits	Grade	Source
No	A.		General Electives 15hrs												
			Select any 100-499 course not used elsewhere. (except ALED 125; ASTR 109/119; BMEN 101; BUSN 100; ISEN 101; KINE 199; LAND 101; MATH 102-148, 151-166, 304, 309, 311, 367-368, 375-376; PHYS 109/119, 201-202, 205; PSYC 301; STAT 201, 225, 301-303; STLC 102 , URPN 200, WFSC 101)												
			ASCC 102;												
													Total Credits and GPA	0.000	.00

unofficial evaluation

Area : Work Not Applied - Met

Description See advisor for acceptable substitutions.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course Title	Attribute	Credits	Grade	Source
No	A.		Courses not applied												
													Total Credits and GPA	0.000	.00

unofficial evaluation

Area University Writing Requirement - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course Title	Attribute	Credits	Grade	Source
No	A.		Writing Requirement												
			Two courses required. Only sections of MATH 100-499; STAT 407; or UGST 491 with the Writing attribute [UWRT] or the Oral Communication attribute [UCRT] may be used to satisfy this requirement.												
													Total Credits and GPA	0.000	.00

unofficial evaluation

Area Int'l & Cult Diversity - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course Title	Attribute	Credits	Grade	Source
No	A.		Int'l & Cultural Diversity 6hr												
			Select from courses with the International and Cultural Diversity attribute [UICD] (except sections of BUSN 289 with the UWRT attribute).												
			B. Cultural Discourse 3 hrs												
													Total Credits and GPA	0.000	.00

unofficial evaluation

Area Foreign Language - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course Title	Attribute	Credits	Grade	Source
No	A.		Foreign Language Rqmt												
			Complete one of the following: 1. Two years of the same foreign language in High School.												

2. A two semester sequence of the same foreign language for University credit.

Total Credits and GPA 0.000 .00

unofficial evaluation

Area : Residence Requirement - Not Met

Description A minimum of 36 hours of 300-400 level coursework must be completed at Texas A&M University. 12 hours must be in the major field.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Residence - Major				12hrs									
No	AND	B.	Residence 300-499				24hrs									

Total Credits and GPA 0.000 .00

unofficial evaluation

Area : GPR-Major - Not Met

Description A GPR of 2.00 must be maintained in all major field courses.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Major GPR				48+hrs									
			Includes MATH 151-499; STAT 404-482.													

Total Credits and GPA 0.000 .00

unofficial evaluation

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