



**SOUTH DAKOTA BOARD OF
REGENTS
ACADEMIC AFFAIRS FORMS**

**Institutional Substantive Program
Modification Requests**

Institution: Dakota State University ***Date:*** 05/10/2018

Institutional representatives should provide direct links to PDF documents for each of the program modification requests represented below. All requests should be posted on the campus Curriculum and Instruction website one week prior to the Academic Affairs Council meeting where the program modification request is being considered.

<i>Program Title</i>	<i>Approval</i>
B.S. in Computer Information Systems/M.S. Analytics Fast Track	JP
B.S. Professional Accountancy	PT
B.S. Math Information Systems & B.S.Ed. Mathematics	JP

Program modifications referenced above for approval have been reviewed by the Academic Affairs Council and the System Vice President for Academic Affairs and may be advanced forward for entry in Colleague. For those program modifications listed above that did not receive approval, additional clarification or justification will be necessary and should be re-routed through the review process on a separate "Institutional Substantive Program Modification Requests" form once all issues have been resolved.

Paul Turner

Signature: System Vice President for Academic Affairs 6/19/2018
Date

Jos Perry

Signature: Interim System Vice President for Academic Affairs 4/16/19
Date



**SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS**

Substantive Program Modification Form

Use this form to request minor changes in existing programs (majors, minors, certificates, or specializations).

UNIVERSITY:	DSU
CURRENT PROGRAM TITLE:	Fast Track (4+1) for B.S. in Computer Information System toward the M.S. in Analytics
CIP CODE:	11.0401
UNIVERSITY DEPARTMENT:	College of Business & Information Systems
UNIVERSITY DIVISION:	

University Approval

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

Vice President of Academic Affairs or
President of the University

2/2/2018

Date

1. This modification addresses a change in (place an "X" in the appropriate box):

- | | |
|---|--|
| <input type="checkbox"/> Total credits required within the discipline | <input type="checkbox"/> Total credits of supportive course work |
| <input type="checkbox"/> Total credits of elective course work | <input type="checkbox"/> Total credits required for program |
| <input type="checkbox"/> Program name | <input type="checkbox"/> Existing specialization |
| <input type="checkbox"/> CIP Code | <input checked="" type="checkbox"/> Other (explain below) |

2. Effective date of change: 5/14/2018

3. Program Degree Level (place an "X" in the appropriate box):

Associate Bachelor's Master's Doctoral

4. Category (place an "X" in the appropriate box):

Certificate Specialization Minor Major

5. If a name change is proposed, the change will occur (place an “X” in the appropriate box):

- On the effective date for all students
- On the effective date for students new to the program (enrolled students will graduate from existing program)

Proposed new name: _____

Reminder: Name changes may require updating related articulation agreements, site approvals, etc.

6. Primary Aspects of the Modification (add lines or adjust cell size as needed):

<i>Existing Curriculum</i>				<i>Proposed Curriculum (highlight changes)</i>			
Pref.	Num.	Title	Cr. Hrs.	Pref.	Num.	Title	Cr. Hrs.
CIS	368	Predictive Analytics	3	INFS	768	Predictive Analytics for Decision Making	3
CIS	372	Programming for Analytics	3	INFS	772	Programming for Analytics	3
CIS	474	Business Intelligence and Big Data	3	INFS	776	Business Intelligence and Visualization	3

7. Explanation of the Change:

Currently students in the BS in Computer Information Systems can be in the Fast Track or 4+1 Program for the MS in Information Systems. The College is proposing a Fast Track or 4+1 Program for the BS in Computer Information Systems and the MS in Analytics. This 4+1 Program will offer our BS in Computer Information Systems students a unique opportunity to obtain both bachelor’s and master’s degrees in five years. Students will be allowed to take up to 9 credits of graduate course work (see above) which will count towards both the BS in Computer Information Systems and the MS in Analytics.

Students in the program must meet the admissions requirements already established for this and other Fast Track programs at the university. This admissions requirement includes senior status by the time a student begins the undergraduate/graduate program and a cumulative GPA requirement of 3.25 or higher.



**SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS**

Substantive Program Modification Program

Use this form to request minor changes in existing programs (majors, minors, certificates, or specializations).

UNIVERSITY:	DSU
CURRENT PROGRAM TITLE:	B.S. in Professional Accountancy
CIP CODE:	52.0301
UNIVERSITY DEPARTMENT:	
UNIVERSITY DIVISION:	College of Business and Information Systems

University Approval

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

3/14/2018

Vice President of Academic Affairs or
President of the University

Date

1. This modification addresses a change in (place an "X" in the appropriate box):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Total credits required within the discipline | <input checked="" type="checkbox"/> Total credits of supportive course work |
| <input type="checkbox"/> Total credits of elective course work | <input type="checkbox"/> Total credits required for program |
| <input type="checkbox"/> Program name | <input type="checkbox"/> Existing specialization |
| <input type="checkbox"/> CIP Code | <input type="checkbox"/> Other (explain below) |

Arrangement of courses within the discipline to create more defined pathways for students seeking specific career opportunities.

2. Effective date of change: 8/1/2018

3. Program Degree Level (place an "X" in the appropriate box):

Associate Bachelor's Master's Doctoral

4. Category (place an "X" in the appropriate box):

Certificate Specialization Minor Major

5. If a name change is proposed, the change will occur (place an “X” in the appropriate box):

- On the effective date for all students
- On the effective date for students new to the program (enrolled students will graduate from existing program)

Proposed new name: _____

Reminder: Name changes may require updating related articulation agreements, site approvals, etc.

6. Primary Aspects of the Modification (add lines or adjust cell size as needed):

<i>Existing Curriculum</i>				<i>Proposed Curriculum (highlight changes)</i>			
Pref.	Num.	Title	Cr. Hrs.	Pref.	Num.	Title	Cr. Hrs.
General Education			30	General Education			30
Business Core			39	Business Core			39
Information Systems			49	Information Systems			20
CIS	206	Advanced Applications	1	CIS	206	Advanced Applications	1
CIS	207	Adv Applications: Spreadsheets	1	CIS	207	Adv Applications: Spreadsheets	1
CIS	208	Adv Applications: Database	1	CIS	208	Adv Applications: Database	1
CIS	210	Quickbooks I	1	CIS	210	Quickbooks I	1
				CIS	211	Quickbooks II	1
CIS	251	Business Applications Prog	3	CIS	251	Business Applications Prog	3
CIS	325	Management Info Systems	3	CIS	325	Management Info Systems	3
CIS	427	Info Systems Planning & Mgmt	3	CIS	427	Info Systems Planning & Mgmt	3
CSC	105	Into to Computers	3	CSC	105	Into to Computers	3
CSC	150	Computer Science I	3	CSC	150	Computer Science I	3
Accounting Core			33	Accounting Core			33
Electives			29	Electives			28
Total number of hours required for major, minor, or specialization			91	Total number of hours required for major, minor, or specialization			92
Total number of hours required for degree			150	Total number of hours required for degree			150

7. Explanation of the Change:

CIS 211 Quickbooks II is a new course and will be required for the students in the BS in Professional Accountancy majors. Electives will be reduced by one credit.



**SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS**

Substantive Program Modification Program

Use this form to request minor changes in existing programs (majors, minors, certificates, or specializations).

UNIVERSITY:	DSU
CURRENT PROGRAM TITLE:	Mathematics Education & Mathematics for Information Systems
CIP CODE:	27.0101
UNIVERSITY DEPARTMENT:	DMATH
UNIVERSITY DIVISION:	College of Arts and Sciences

University Approval

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

Vice President for Academic Affairs or
President of the University

3/23/2018

Date

1. This modification addresses a change in (place an "X" in the appropriate box):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Total credits required within the discipline | <input checked="" type="checkbox"/> Total credits of supportive course work |
| <input type="checkbox"/> Total credits of elective course work | <input type="checkbox"/> Total credits required for program |
| <input checked="" type="checkbox"/> Program name | <input type="checkbox"/> Existing specialization |
| <input type="checkbox"/> CIP Code | <input checked="" type="checkbox"/> Other (explain below) |

2. Effective date of change: 8/1/2018

3. Program Degree Level (place an "X" in the appropriate box):

Associate Bachelor's Master's Doctoral

4. Category (place an "X" in the appropriate box):

Certificate Specialization Minor Major

5. If a name change is proposed, the change will occur (place an "X" in the appropriate box):

- On the effective date for all students
- On the effective date for students new to the program (enrolled students will graduate from existing program)

Proposed new name: Mathematics

Reminder: Name changes may require updating related articulation agreements, site approvals, etc.

6. Primary Aspects of the Modification (add lines or adjust cell size as needed):

<i>Existing Curriculum</i>				<i>Proposed Curriculum (highlight changes)</i>			
Prof.	Num.	Title	Cr. Hrs	Prof.	Num.	Title	Cr. Hrs.
System Wide General Education Requirement			30	System Wide General Education Requirement (All students are required to take MATH 123 as part of the general education requirements)			30
Mathematics Core Requirements			12	Mathematics Core Requirements			12
MATH	201	Introduction to Discrete Math	3	MATH	201	Introduction to Discrete Math	3
MATH	281	Introduction to Statistics	3	MATH	281	Introduction to Statistics	3
MATH	315	Linear Algebra	3	MATH	315	Linear Algebra	3
MATH	316	Discrete Mathematics	3	MATH	316	Discrete Mathematics	3
				Information Systems Specialization			
MATH	125	Calculus II	4	MATH	125	Calculus II	4
Choose 12 credits from the following			12	Choose 12 credits from the following			12
MATH	225	Calculus III	4	MATH	225	Calculus III	4
MATH	282	Mathematics of Games	3	MATH	282	Mathematics of Games	3
MATH	318	Adv. Discrete Mathematics	3	MATH	318	Adv. Discrete Mathematics	3
MATH	321	Differential Equations	3-4	MATH	321	Differential Equations	3-4
MATH	361	Modern Geometry	3	MATH	361	Modern Geometry	3
MATH	381	Intro to Probability and Stats	3-4	MATH	381	Intro to Probability and Stats	3-4
MATH	413	Abstract Algebra I	3	MATH	413	Abstract Algebra I	3
MATH	418	Mathematical Modeling	3	MATH	418	Mathematical Modeling	3
				MATH	436	Number Theory and Cryptography	3
				MATH	437	Cryptography and Codes	3
MATH	471	Numerical Analysis I	3	MATH	471	Numerical Analysis I	3
MATH	475	Operations Research	3	MATH	475	Operations Research	3
MATH	492	Topics	1-6*	MATH	492	Topics	1-6*
MATH	498	Undergrad Research/Scholarship	1-6	MATH	498	Undergrad Research/Scholarship	1-6
*May be repeated provided student does not enroll in the same topics course.				*May be repeated provided student does not enroll in the same topics course.			
Computer Information Systems Minor			24	Computer Information Systems Minor			24
Minor (Biology, Business Administration, Chemistry, Computer			18-21	Minor (Biology, Business Administration, Chemistry, Computer Forensics, Cyber Operations, Computer Science, Physics)			18-21

MATH	381	Intro to Probability and Stats	3-4	MATH	381	Intro to Probability and Stats	
MATH	418	Mathematical Modeling	3	MATH	418	Mathematical Modeling	
				MATH	436	Number Theory and Cryptography	
				MATH	437	Cryptography and Codes	
MATH	471	Numerical Analysis I		MATH	471	Numerical Analysis I	
MATH	475	Operations Research		MATH	475	Operations Research	
MATH	492	Topics		MATH	492	Topics	
MATH	498	Undergrad Research/Scholarship		MATH	498	Undergrad Research/Scholarship	
*May be repeated provided student does not enroll in the same topics course.				*May be repeated provided student does not enroll in the same topics course.			
K-12 Educational Technology Minor				K-12 Educational Technology Minor			
CSC	105	Introduction to Computers	3	CSC	105	Introduction to Computers	3
Choose one course from the following				Choose one course from the following			
CIS	123	Problem Solving and Programming	3	CIS	123	Problem Solving and Programming	3
CIS	130	Visual Basic Programming					
CSC	150	Computer Science I					
Choose three courses from the following				Choose three courses from the following			
CIS	206	Advanced Applications: Spreadsheet	3	CIS	206	Advanced Applications: Spreadsheet	3
CIS	207	Advanced Applications: Database					
CIS	208	Advanced Applications: SAS					
CIS	209	Advanced Applications: Quickbooks					
CIS	210	Quickbooks					
Choose one course from the following				Choose one course from the following			
SEED	301	Technology for Math Teachers	2-3	SEED	301	Technology for Math Teachers	2-3
EDER	415	Educational Assessment					
ELED	422	K-8 Science and Math Technology					
CIS	350	Computer Hardware, Data Communications and Networking	3	CIS	350	Computer Hardware, Data Communications and Networking	
EDFN	365	Computer-Based Technology & Learning	3	EDFN	365	Computer-Based Technology & Learning	3
SEED	401	Methods of Educational Technology	1	SEED	401	Methods of Educational Technology	1
Education Component				Education Component			
SPED	100	Introduction to Persons with Exceptionalities	3	SPED	100	Introduction to Persons with Exceptionalities	3
EDFN	338	Foundations of American Ed	2	EDFN	338	Foundations of American Ed	2
EDFN	475	Human Relations	3	EDFN	475	Human Relations	3
EPSY	302	Educational Psychology	3	EPSY	302	Educational Psychology	3
SEED	295	Practicum	1	SEED	295	Practicum	1
SEED	302	Secondary/Middle/Content Area Major	2	SEED	302	Secondary/Middle/Content Area Major	2
SEED	440	Classroom Management	2	SEED	440	Classroom Management	2
SEED	450	Reading and content Literacy	3	SEED	450	Reading and content Literacy	3
SEED	488	7-12 Student Teaching	8	SEED	488	7-12 Student Teaching	8

Electives	9-10		Electives	9-10		
			Intermediate Education Specialization			
			(Student must take EPSY 210 & INED 211 as part of the general education requirements)			
			Mathematics Component			16
			SEED	301	Technology for Math Teachers	3
			MATH	341	MATH Concepts for Teachers I	3
			MATH	342	Math Concepts for Teachers II	3
			MATH	361	Modern Geometry	3
			ELED	422	K-8 Science and Math Technology	3
			MATH	488	Capstone	1
			K-12 Educational Technology Minor			18
			CSC	105	Introduction to Computers	3
			Choose one of the following courses			
			CIS	123	Problem Solving and Programming	3
			CIS	130	Visual Basic Programming	
			CSC	150	Computer Science I	
			Choose three of the following courses			
			CIS	206	Advanced Applications:	3
			CIS	207	Advanced Applications Spreadsheet	
			CIS	208	Advanced Applications: Database	
			CIS	209	Advanced Applications: SAS	
			CIS	210	Quickbooks	
			EDER	415	Educational Assessment	2
			CIS	350	Computer Hardware, Data Communications and Networking	3
			CIS	350	Computer Hardware, Data Communications and Networking	3
			EDFN	365	Computer-Based Technology & Learning	3
			SEED	401	Methods of Educational Technology	1
			Education Component			28
			SPED	100	Introduction to Persons with Exceptionalities	3
			EDFN	338	Foundations of American Ed	2
			EDFN	475	Human Relations	3
			EPSY	300	Survey of Middle Level Education	1
			EPSY	302	Educational Psychology	3
			SEED	295	Practicum	1
			SEED	302	Secondary/Middle/Content Area Major	2
			SEED	440	Classroom Management	2
			SEED	450	Reading and content Literacy	3
			SEED	488	7-12 Student Teaching	8
			Electives			16

7. Explanation of the Change:

The current Mathematics for Information Systems and Mathematics Education programs are both programs with a major in mathematics, a computer related minor and the equivalent of another minor and thus we propose merging the programs under the same name, distinguishing them by specializations. The title of the major would be B.S. in Mathematics, which four specializations (Cryptography, Information Systems, Intermediate Education and Secondary Education). The information systems and secondary education specializations are essentially the two existing majors.

Adding the Intermediate Education specialization is to keep as many students as possible that plan to teach mathematics as majors in mathematics. Currently the only viable option to the traditional math education degree to teach high school mathematics is to become certified as a teacher in the state (major in a non-math related degree program) then take the middle school Praxis exam to earn the Intermediate Math Education endorsement to complement their initial certification. This alternative program will also enable, if they choose, the department of education to bolster the requirements to earn an intermediate math endorsement in the future.

The Cryptography specialization is to increase the number of students that major in Computer Science to earn a double major in mathematics. The goal of the additional specialization in Cryptography is to allow students to focus on Cryptography and also receive a Computer Science Minor and Cyber Operations Minor. Students that wish to earn a double major in Mathematics with a specialization in Cryptography will only need to complete the mathematics component of the specialization (as it is currently in the University Catalog).



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CURRENT PROGRAM TITLE:	Fast Track (4+1) for B.S. in Computer Information System toward the M.S. in Analytics
CIP CODE:	11.0401
UNIVERSITY DEPARTMENT:	College of Business & Information Systems
UNIVERSITY DIVISION:	

University Approval

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

Vice President of Academic Affairs or
President of the University

2/2/2018

Date

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- | | |
|---|--|
| <input type="checkbox"/> Total credits required within the discipline | <input type="checkbox"/> Total credits of supportive course work |
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| <input type="checkbox"/> Program name | <input type="checkbox"/> Existing specialization |
| <input type="checkbox"/> CIP Code | <input checked="" type="checkbox"/> Other (explain below) |

2. Effective date of change: 5/14/2018

3. Program Degree Level (place an "X" in the appropriate box):

Associate Bachelor's Master's Doctoral

4. Category (place an "X" in the appropriate box):

Certificate Specialization Minor Major

5. If a name change is proposed, the change will occur (place an “X” in the appropriate box):

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Proposed new name: _____

Reminder: Name changes may require updating related articulation agreements, site approvals, etc.

6. Primary Aspects of the Modification (add lines or adjust cell size as needed):

<i>Existing Curriculum</i>				<i>Proposed Curriculum (highlight changes)</i>			
Pref.	Num.	Title	Cr. Hrs.	Pref.	Num.	Title	Cr. Hrs.
CIS	368	Predictive Analytics	3	INFS	768	Predictive Analytics for Decision Making	3
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7. Explanation of the Change:

Currently students in the BS in Computer Information Systems can be in the Fast Track or 4+1 Program for the MS in Information Systems. The College is proposing a Fast Track or 4+1 Program for the BS in Computer Information Systems and the MS in Analytics. This 4+1 Program will offer our BS in Computer Information Systems students a unique opportunity to obtain both bachelor’s and master’s degrees in five years. Students will be allowed to take up to 9 credits of graduate course work (see above) which will count towards both the BS in Computer Information Systems and the MS in Analytics.

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Substantive Program Modification Program

Use this form to request minor changes in existing programs (majors, minors, certificates, or specializations).

UNIVERSITY:	DSU
CURRENT PROGRAM TITLE:	B.S. in Professional Accountancy
CIP CODE:	52.0301
UNIVERSITY DEPARTMENT:	
UNIVERSITY DIVISION:	College of Business and Information Systems

University Approval

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| <input type="checkbox"/> CIP Code | <input type="checkbox"/> Other (explain below) |

Arrangement of courses within the discipline to create more defined pathways for students seeking specific career opportunities.

2. Effective date of change: 8/1/2018

3. Program Degree Level (place an "X" in the appropriate box):

Associate Bachelor's Master's Doctoral

4. Category (place an "X" in the appropriate box):

Certificate Specialization Minor Major

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CIS	251	Business Applications Prog	3	CIS	251	Business Applications Prog	3
CIS	325	Management Info Systems	3	CIS	325	Management Info Systems	3
CIS	427	Info Systems Planning & Mgmt	3	CIS	427	Info Systems Planning & Mgmt	3
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CSC	150	Computer Science I	3	CSC	150	Computer Science I	3
Accounting Core			33	Accounting Core			33
Electives			29	Electives			28
Total number of hours required for major, minor, or specialization			91	Total number of hours required for major, minor, or specialization			92
Total number of hours required for degree			150	Total number of hours required for degree			150

7. Explanation of the Change:

CIS 211 Quickbooks II is a new course and will be required for the students in the BS in Professional Accountancy majors. Electives will be reduced by one credit.



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Substantive Program Modification Program

Use this form to request minor changes in existing programs (majors, minors, certificates, or specializations).

UNIVERSITY:	DSU
CURRENT PROGRAM TITLE:	Mathematics Education & Mathematics for Information Systems
CIP CODE:	27.0101
UNIVERSITY DEPARTMENT:	DMATH
UNIVERSITY DIVISION:	College of Arts and Sciences

University Approval

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

Vice President for Academic Affairs or
President of the University

3/23/2018

Date

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| <input checked="" type="checkbox"/> Program name | <input type="checkbox"/> Existing specialization |
| <input type="checkbox"/> CIP Code | <input checked="" type="checkbox"/> Other (explain below) |

2. Effective date of change: 8/1/2018

3. Program Degree Level (place an "X" in the appropriate box):

Associate Bachelor's Master's Doctoral

4. Category (place an "X" in the appropriate box):

Certificate Specialization Minor Major

5. If a name change is proposed, the change will occur (place an "X" in the appropriate box):

- On the effective date for all students
- On the effective date for students new to the program (enrolled students will graduate from existing program)

Proposed new name: Mathematics

Reminder: Name changes may require updating related articulation agreements, site approvals, etc.

6. Primary Aspects of the Modification (add lines or adjust cell size as needed):

<i>Existing Curriculum</i>				<i>Proposed Curriculum (highlight changes)</i>			
Pref.	Num.	Title	Cr. Hrs	Pref.	Num.	Title	Cr. Hrs.
System Wide General Education Requirement			30	System Wide General Education Requirement (All students are required to take MATH 123 as part of the general education requirements)			30
Mathematics Core Requirements			12	Mathematics Core Requirements			12
MATH	201	Introduction to Discrete Math	3	MATH	201	Introduction to Discrete Math	3
MATH	281	Introduction to Statistics	3	MATH	281	Introduction to Statistics	3
MATH	315	Linear Algebra	3	MATH	315	Linear Algebra	3
MATH	316	Discrete Mathematics	3	MATH	316	Discrete Mathematics	3
				Information Systems Specialization			
MATH	125	Calculus II	4	MATH	125	Calculus II	4
Choose 12 credits from the following			12	Choose 12 credits from the following			12
MATH	225	Calculus III	4	MATH	225	Calculus III	4
MATH	282	Mathematics of Games	3	MATH	282	Mathematics of Games	3
MATH	318	Adv. Discrete Mathematics	3	MATH	318	Adv. Discrete Mathematics	3
MATH	321	Differential Equations	3-4	MATH	321	Differential Equations	3-4
MATH	361	Modern Geometry	3	MATH	361	Modern Geometry	3
MATH	381	Intro to Probability and Stats	3-4	MATH	381	Intro to Probability and Stats	3-4
MATH	413	Abstract Algebra I	3	MATH	413	Abstract Algebra I	3
MATH	418	Mathematical Modeling	3	MATH	418	Mathematical Modeling	3
				MATH	436	Number Theory and Cryptography	3
				MATH	437	Cryptography and Codes	3
MATH	471	Numerical Analysis I	3	MATH	471	Numerical Analysis I	3
MATH	475	Operations Research	3	MATH	475	Operations Research	3
MATH	492	Topics	1-6*	MATH	492	Topics	1-6*
MATH	498	Undergrad Research/Scholarship	1-6	MATH	498	Undergrad Research/Scholarship	1-6
*May be repeated provided student does not enroll in the same topics course.				*May be repeated provided student does not enroll in the same topics course.			
Computer Information Systems Minor			24	Computer Information Systems Minor			24
Minor (Biology, Business Administration, Chemistry, Computer			18-21	Minor (Biology, Business Administration, Chemistry, Computer Forensics, Cyber Operations, Computer Science, Physics)			18-21

MATH	381	Intro to Probability and Stats	3-4	MATH	381	Intro to Probability and Stats	
MATH	418	Mathematical Modeling	3	MATH	418	Mathematical Modeling	
				MATH	436	Number Theory and Cryptography	
				MATH	437	Cryptography and Codes	
MATH	471	Numerical Analysis I		MATH	471	Numerical Analysis I	
MATH	475	Operations Research		MATH	475	Operations Research	
MATH	492	Topics		MATH	492	Topics	
MATH	498	Undergrad Research/Scholarship		MATH	498	Undergrad Research/Scholarship	
*May be repeated provided student does not enroll in the same topics course.				*May be repeated provided student does not enroll in the same topics course.			
K-12 Educational Technology Minor				K-12 Educational Technology Minor			
			18-19				18-19
CSC	105	Introduction to Computers	3	CSC	105	Introduction to Computers	3
Choose one course from the following				Choose one course from the following			
CIS	123	Problem Solving and Programming	3	CIS	123	Problem Solving and Programming	3
CIS	130	Visual Basic Programming					
CSC	150	Computer Science I					
Choose three courses from the following				Choose three courses from the following			
CIS	206	Advanced Applications:	3	CIS	206	Advanced Applications:	3
CIS	207	Advanced Applications: Spreadsheet					
CIS	208	Advanced Applications: Database					
CIS	209	Advanced Applications: SAS					
CIS	210	Quickbooks					
Choose one course from the following				Choose one course from the following			
SEED	301	Technology for Math Teachers	2-3	SEED	301	Technology for Math Teachers	2-3
EDER	415	Educational Assessment					
ELED	422	K-8 Science and Math Technology					
CIS	350	Computer Hardware, Data Communications and Networking	3	CIS	350	Computer Hardware, Data Communications and Networking	3
EDFN	365	Computer-Based Technology & Learning	3	EDFN	365	Computer-Based Technology & Learning	3
SEED	401	Methods of Educational Technology	1	SEED	401	Methods of Educational Technology	1
Education Component				Education Component			
			27				27
SPED	100	Introduction to Persons with Exceptionalities	3	SPED	100	Introduction to Persons with Exceptionalities	3
EDFN	338	Foundations of American Ed	2	EDFN	338	Foundations of American Ed	2
EDFN	475	Human Relations	3	EDFN	475	Human Relations	3
EPSY	302	Educational Psychology	3	EPSY	302	Educational Psychology	3
SEED	295	Practicum	1	SEED	295	Practicum	1
SEED	302	Secondary/Middle/Content Area Major	2	SEED	302	Secondary/Middle/Content Area Major	2
SEED	440	Classroom Management	2	SEED	440	Classroom Management	2
SEED	450	Reading and content Literacy	3	SEED	450	Reading and content Literacy	3
SEED	488	7-12 Student Teaching	8	SEED	488	7-12 Student Teaching	8

Electives	9-10			Electives	9-10		
				Intermediate Education Specialization			
				(Student must take EPSY 210 & INED 211 as part of the general education requirements)			
				Mathematics Component			16
				SEED	301	Technology for Math Teachers	3
				MATH	341	MATH Concepts for Teachers I	3
				MATH	342	Math Concepts for Teachers II	3
				MATH	361	Modern Geometry	3
				ELED	422	K-8 Science and Math Technology	3
				MATH	488	Capstone	1
				K-12 Educational Technology Minor			18
				CSC	105	Introduction to Computers	3
				Choose one of the following courses			
				CIS	123	Problem Solving and Programming	3
				CIS	130	Visual Basic Programming	
				CSC	150	Computer Science I	
				Choose three of the following courses			
				CIS	206	Advanced Applications:	3
				CIS	207	Advanced Applications Spreadsheet	
				CIS	208	Advanced Applications: Database	
				CIS	209	Advanced Applications: SAS	
				CIS	210	Quickbooks	
				EDER	415	Educational Assessment	2
				CIS	350	Computer Hardware, Data Communications and Networking	3
				CIS	350	Computer Hardware, Data Communications and Networking	3
				EDFN	365	Computer-Based Technology & Learning	3
				SEED	401	Methods of Educational Technology	1
				Education Component			28
				SPED	100	Introduction to Persons with Exceptionalities	3
				EDFN	338	Foundations of American Ed	2
				EDFN	475	Human Relations	3
				EPSY	300	Survey of Middle Level Education	1
				EPSY	302	Educational Psychology	3
				SEED	295	Practicum	1
				SEED	302	Secondary/Middle/Content Area Major	2
				SEED	440	Classroom Management	2
				SEED	450	Reading and content Literacy	3
				SEED	488	7-12 Student Teaching	8
				Electives			16

7. Explanation of the Change:

The current Mathematics for Information Systems and Mathematics Education programs are both programs with a major in mathematics, a computer related minor and the equivalent of another minor and thus we propose merging the programs under the same name, distinguishing them by specializations. The title of the major would be B.S. in Mathematics, which four specializations (Cryptography, Information Systems, Intermediate Education and Secondary Education). The information systems and secondary education specializations are essentially the two existing majors.

Adding the Intermediate Education specialization is to keep as many students as possible that plan to teach mathematics as majors in mathematics. Currently the only viable option to the traditional math education degree to teach high school mathematics is to become certified as a teacher in the state (major in a non-math related degree program) then take the middle school Praxis exam to earn the Intermediate Math Education endorsement to complement their initial certification. This alternative program will also enable, if they choose, the department of education to bolster the requirements to earn an intermediate math endorsement in the future.

The Cryptography specialization is to increase the number of students that major in Computer Science to earn a double major in mathematics. The goal of the additional specialization in Cryptography is to allow students to focus on Cryptography and also receive a Computer Science Minor and Cyber Operations Minor. Students that wish to earn a double major in Mathematics with a specialization in Cryptography will only need to complete the mathematics component of the specialization (as it is currently in the University Catalog).