



MEMORANDUM

FINAL FACULTY SENATE APPROVAL ON 05/06/2014

TO: Faculty Senate

FROM: Jack Kirby 

DATE: April 23, 2014

SUBJECT: Curriculum Proposal #13-14-13, REVISION #1

MATH course deletion to Attribute IA, Critical Analysis, General Studies

I recommend approval of the attached REVISION # 1 Curriculum Proposal #13-14-13. MATH 2212 (Sets, Functions, and Relations) will be removed from the General Studies/Critical Analysis Attribute IA for B.S. Mathematics and B.A. Education: Specialization in Mathematics, 5-Adult.

C: Dr. Christina Lavorata
Dr. Anthony Gilberti
Dr. Dennine LaRue
Ms. Leslie Lovett
Ms. Evie Brantmayer



CURRICULUM PROPOSAL (Submit one hard copy and an electronic copy to the Associate Provost by the second Tuesday of the month.)

Proposal Number: 13-14-13

School/Department/Program: College of Science and Technology/CSMP/Math

Preparer/Contact Person: Dennine LaRue

Telephone Extension: X4621

Date Originally Submitted: 3-20-2014

**Revision (Indicate date and label it
Revision #1, #2, etc.):** Revision #1 (4-23-14)

Implementation Date Requested: April 2014

- I. **PROPOSAL.** Write a brief abstract, not exceeding 100 words, which describes the overall content of the proposal.

The Math department has deleted/withdrawn one course from the General Studies program under the Critical Analysis attribute. The course is MATH 2212-Sets, Relations and Functions. This changes ONE course in the General Studies Options for our two programs, Bachelor of Science in Mathematics and Bachelor of Arts in Education: Specialization in Mathematics 5-Adult.

In response, we were asked to submit a proposal indicating the adjustment of the General Studies program for Bachelor of Science in Mathematics and Bachelor of Arts in Education: Specialization in Mathematics 5-Adult.

Changes are due to a major's course being deleted from the General Studies program under the Critical Analysis attribute and to make the selection process more flexible for students in these degree programs.

- II. **DESCRIPTION OF THE PROPOSAL.** Provide a response for each letter, A-H, and for each Roman Numeral II-V. If any section does not apply to your proposal, reply N/A.

- A. Deletion of course(s) or credit(s) from program(s)

Total hours deleted. 0

- B. Addition of course(s) or credit(s) from program(s)

Total hours added. 0

- C. Provision for interchangeable use of course(s) with program(s)

N/A

- D. Revision of course content. Include, as an appendix, a revised course description, written in complete sentences, suitable for use in the university catalog.

N/A

- E. Other changes to existing courses such as changes to title, course number, and elective or required status.

N/A

- F. Creation of new course(s). For each new course

1. Designate the course number, title, units of credit, prerequisites (if any), ownership (FSU or shared) and specify its status as an elective or required course. If you are creating a shared course, attach a memo from the Deans of the affected Schools explaining the rationale for the course being shared.

N/A

2. Include, as an appendix, a course description, written in complete sentences, suitable for use in the college catalog. N/A
3. Include, as an appendix, a detailed course outline consisting of at least two levels. N/A
4. In order to meet the requirements as outlined in Goal One of the Strategic Plan, please include Outcome Competencies and Methods of Assessment as an appendix. Examples are available upon request from the Chair of the Curriculum Committee.

N/A

- G. Attach an itemized summary of the present program(s) affected, if any, and of the proposed change(s).

Describe how this proposal affects the hours needed to complete this program. Specifically, what is the net gain or loss in hours? Use the format for Current and Proposed Programs in Appendix A.

There is no change in the number of hours for either program.

**See Appendix A - Bachelor of Science in Mathematics
and
Bachelor of Arts in Education: Specialization in Mathematics 5-Adult.**

III. **RATIONALE FOR THE PROPOSAL.**

A. **Quantitative Assessment:** Indicate the types of assessment data, i.e., surveys, interviews, capstone courses, projects, licensure exams, nationally-normed tests, locally developed measurements, accreditation reports, etc., that were collected and analyzed to determine that curricular changes were warranted. Quantitative data is preferred.

The mathematics program has decided to withdraw MATH 2212-Sets, Relations, and Functions from the General Studies List under the Critical Analysis Attribute. In the Critical Analysis attribute, there are 19 other courses from which a student may choose. One of those classes is English 1108 which students are required to take. Hence, math majors can receive credit in Critical Analysis in other areas which are required or are available in the category. Math 2212 – Sets, Relations, and Functions is an upper level class and not needed for General Studies hours. The student needs to have 30 hours outside the MATH prefix. No program besides the two math programs cited in this proposal have this course as a requirement.

B. **Qualitative Assessment:** Based upon the assessment data above, indicate why a curricular change is justified. Indicate the expected results of the change. Be sure to include an estimate of the increased cost, or reduction in cost of implementation. FOR EXAMPLE: Will new faculty, facilities, equipment, or library materials be required?

Students have a large selection of courses for Critical Analysis and can meet the outcome in multiple ways. This allows more freedom for math majors instead of using a required math class in the General Studies program.

IV. Should this proposal affect any course or program in another school, a memo must be sent to the Dean of each school impacted and a copy of the memo(s) must be included with this proposal. In addition, the Deans of the affected schools must sign below to indicate their notification of this proposal.

By signing here, you are indicating your college's/school's notification of this proposal.

College/School	Dean	Signature

V. Should this proposal affect any course to be added or deleted from the general studies requirements, a memo from the chair of the General Studies Committee indicating approval of the change must be included with this proposal.

VI. **ADDITIONAL COMMENTS.**

APPENDIX A
B.S. Degree in Mathematics
Current Program

Required Major Courses		HRS
MATH 1113	Applied Statistics	3
MATH 1125	Math Reasoning: Reading & Writing	3
MATH 1190	Calculus I	4
MATH 2200	Mathematical Logic	3
MATH 2212	Sets, Relations, & Functions	3
MATH 3315	Calculus II	4
MATH 3316	Calculus III	4
MATH 3335	Probability & Statistics	3
MATH 3361	Abstract Algebra	3
MATH 3362	Linear Algebra	3
COMP 1102	Principles of Programming I	3
	Any one of the following science courses	
CHEM 1101	General Chemistry I	Counted
CHEM 1105	Chemical Principles	as
PHYS 1101	Introduction to Physics I	General
PHYS 1105	Principles of Physics I	Studies
		hours XX
TOTAL Required Major Courses		36
Major Electives		9
Choose three courses from Groups A and B. At least one course must be chosen from Group A.		
Group A		
MATH 3375 Topology		
MATH 3391 Real Analysis		
Group B		
MATH 2206 Introduction to the Theory of Numbers		
Math 2216 Introduction to Discrete Mathematics		
MATH 3342 Numerical Analysis		
MATH 3372 Modern Geometry		
MATH 4401 Differential Equations		
Minor Electives		18-24
TOTAL HOURS FOR MAJOR		63-69

Required General Studies Courses		
Attribute IA – Critical Analysis		X
	Major Course – MATH 2212	
Attribute IB – Quantitative Literacy		X
	Major Course -- MATH 1107 or higher in IB	
Attribute IC – Written Communication		3
	ENGL 1104* or any course in IC	
Attribute ID - Teamwork		3
	COMM 2200* or any course in 1D	
Attribute IE – Information Literacy		3
	ENGL 1108* or any course in 1E	
Attribute IF – Technology Literacy		3
	Any course in IF	
Attribute IG – Oral Communication		X
	COMM 2200* (Met in ID) or any course in 1G	
Attribute III - Citizenship		3
	POLI 1103* or any course in III	
Attribute IV - Ethics		3
	ENGL 2220* or any course in IV	
Attribute V - Health		2-3
	PHED 1100* or any course in V	
Attribute VI - Interdisciplinary		X
	POLI 1103* (Met in III) or any course in VI	
Attribute VIIA - Arts		3
	Any course in VIIA	
Attribute VIIB - Humanities		X
	ENGL 2220* (Met in IV) or any course in VIIB	
Attribute VIIC – Social Sciences		3
	GEOG 2210* or any course in VIIC	
Attribute VIID - Natural Science		4-5
	Required choices: PHYS 1101, PHYS 1105, CHEM 1101, CHEM 1105	
Attribute VIII – Cultural Awareness		X
	GEOG 2210* (Met in VIIC) or any course in VIII	
Additional General Studies hours		X
	Major Course – MATH 3361 writing intensive course	
	*Starred courses are recommended choices. Choosing a different course may result in more than 120 hours needed to graduate.	
TOTAL GENERAL STUDIES HOURS		30-32
TOTAL FREE ELECTIVES		19-27
TOTAL HOURS		120

APPENDIX A
B.S. Degree in Mathematics
Proposed Program

Required Major Courses		HRS
MATH 1113	Applied Statistics	3
MATH 1125	Math Reasoning: Reading & Writing	3
MATH 1190	Calculus I	4
MATH 2200	Mathematical Logic	3
MATH 2212	Sets, Relations, & Functions	3
MATH 3315	Calculus II	4
MATH 3316	Calculus III	4
MATH 3335	Probability & Statistics	3
MATH 3361	Abstract Algebra	3
MATH 3362	Linear Algebra	3
COMP 1102	Principles of Programming I	3
	Any one of the following science courses	
CHEM 1101	General Chemistry I	Counted as
CHEM 1105	Chemical Principles	General
PHYS 1101	Introduction to Physics I	Studies
PHYS 1105	Principles of Physics I	hours XX
TOTAL Required Major Courses		36
Major Electives		9
Choose three courses from Groups A and B. At least one course must be chosen from Group A.		
Group A		
MATH 3375 Topology		
MATH 3391 Real Analysis		
Group B		
MATH 2206 Introduction to the Theory of Numbers		
Math 2216 Introduction to Discrete Mathematics		
MATH 3342 Numerical Analysis		
MATH 3372 Modern Geometry		
MATH 4401 Differential Equations		
Minor Electives		18-24
TOTAL HOURS FOR MAJOR		63-69

Required General Studies Courses		
Attribute IA – Critical Analysis		3
	ENGL 1108* or any course in IA	
Attribute IB – Quantitative Literacy		X
	Major Course MATH 1190* or any course in IB	
Attribute IC – Written Communication		3
	ENGL 1104* or any course in IC	
Attribute ID - Teamwork		3
	COMM 2200* or any course in 1D	
Attribute IE – Information Literacy		X
	ENGL 1108*(Met in IA) or any course in 1E	
Attribute IF – Technology Literacy		3
	Any course in IF	
Attribute IG – Oral Communication		X
	COMM 2200* (Met in ID) or any course in 1G	
Attribute III - Citizenship		3
	POLI 1103* or any course in III	
Attribute IV - Ethics		3
	ENGL 2220* or any course in IV	
Attribute V - Health		2-3
	PHED 1100* or any course in V	
Attribute VI - Interdisciplinary		X
	POLI 1103* (Met in III) or any course in VI	
Attribute VIIA - Arts		3
	Any course in VIIA	
Attribute VIIB - Humanities		X
	ENGL 2220* (Met in IV) or any course in VIIB	
Attribute VIIC – Social Sciences		3
	GEOG 2210* or any course in VIIC	
Attribute VIID - Natural Science		4-5
	Required choices: PHYS 1101, PHYS 1105, CHEM 1101, CHEM 1105	
Attribute VIII – Cultural Awareness		X
	GEOG 2210* (Met in VIIC) or any course in VIII	
Additional General Studies hours		X
	Major Course – MATH 3361 writing intensive course	
	*Starred courses are recommended choices. Choosing a different course may result in more than 120 hours needed to graduate.	
TOTAL GENERAL STUDIES HOURS		30-32
TOTAL FREE ELECTIVES		19-27
TOTAL HOURS		120

**B.A. in Education Degree in Specialization Mathematics 5-Adult
Current Program**

Required Major Courses		HRS
MATH 1113	Math Reasoning: Reading & Writing	3
MATH 1125	Applied Statistics	3
MATH 1190	Calculus I	4
MATH 2200	Mathematical Logic	3
MATH 2212	Sets, Relations, & Functions	3
MATH 2216	Introduction to Discrete Mathematics	3
MATH 3315	Calculus II	4
MATH 3316	Calculus III	4
MATH 3335	Probability & Statistics	3
MATH 3361	Abstract Algebra	3
MATH 3362	Linear Algebra	3
MATH 3372	Modern Geometry	3
MATH 4431	Methods & Materials of Teaching Math	3
COMP 1102	Principles of Programming I	3
	Any one of the following science courses	
		Counted as General Studies hours XX
CHEM 1101	General Chemistry I	
CHEM 1105	Chemical Principles	
PHYS 1101	Introduction to Physics I	
PHYS 1105	Principles of Physics I	
TOTAL Required Major Courses		45
Major Electives		3
	Choose one course from the following:	
	MATH 3375 Topology	
	MATH 3391 Real Analysis	
Professional Education as required by School of Education		39
TOTAL HOURS FOR MAJOR		87

Required General Studies Courses		
Attribute IA – Critical Analysis		X
	Major Course – MATH 2212	
Attribute IB – Quantitative Literacy		X
	Major course - MATH 1107 or higher in IB	
Attribute IC – Written Communication		3
	ENGL 1104* or any course in 1C	
Attribute ID - Teamwork		3
	COMM 2200* or any course in 1D	
Attribute IE – Information Literacy		3
	ENGL 1108* or any course in 1E	
Attribute IF – Technology Literacy		3
	Any course in IF	
Attribute IG – Oral Communication		X
	COMM 2200* (Met in ID) or any course in 1G	
Attribute III - Citizenship		3
	POLI 1103* or any course in III	
Attribute IV - Ethics		3
	ENGL 2220* or any course in IV	
Attribute V - Health		2-3
	PHED 1100* or any course in V	
Attribute VI - Interdisciplinary		X
	POLI 1103* (Met in III) or any course in VI	
Attribute VIIA - Arts		3
	Any course in VIIA	
Attribute VIIB - Humanities		X
	ENGL 2220* (Met in IV) or any course in VIIB	
Attribute VIIC – Social Sciences		3
	GEOG 2210* or any course in VIIC	
Attribute VIID - Natural Science		4-5
	Required choices: PHYS 1101, PHYS 1105, CHEM 1101, CHEM 1105	
Attribute VIII – Cultural Awareness		X
	GEOG 2210* (Met in VIIC) or any course in VIII	
Additional General Studies hours		X
	Major Course – MATH 3361 writing intensive course	
	*Starred courses are recommended choices. Choosing a different course may result in more than 120 hours needed to graduate	
TOTAL GENERAL STUDIES HOURS		30-32
TOTAL FREE ELECTIVES		1-3
TOTAL HOURS		120

**B.A. in Education Degree in Specialization Mathematics 5-Adult
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MATH 1125	Applied Statistics	3
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	Any course in IF	
Attribute IG – Oral Communication		X
	COMM 2200* (Met in ID) or any course in IG	
Attribute III - Citizenship		3
	POLI 1103* or any course in III	
Attribute IV - Ethics		3
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Attribute V - Health		2-3
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