SENATE PROGRAM PROPOSAL FORM for:							(Do not write in this space)			
OHECK ONE: ☐ Add, ☑ Change, ☐ Combine, ☐ Drop, ☐ Archive							ROUTING:	Initials	Date	
CHECK ONE: ☑ Degree program, ☐ Minor, ☐ Certificate, ☐ Emphasis area							Academic Affairs	BAT	3/14/13	
From:	Chemistry	Approved By	y: Chris Spilling	Date:	3/7/	13	Graduate School (if applicable)			
	Department		Department Chair				Senate C & I	MTA	4/12/13	
	-		-				Reported to Senate			
From:	Arts & Science	Approved By	y: Ronald E. Yasbin	Date:	3/13	3/13	_ Academic Affairs	-		
	School or College	_ 11 .	Dean							
Title of Degree, Minor, or Certificate Program: Degrees with Certification to Teach Chemistry in Secondary Schools										
Page(s) and year of the current Bulletin listing.										
If other departments are affected by this proposal, please secure "sign-offs" and indicate for each department the following:										
Department Contact Person Phone #										
1.	•			Proposal received: ☐ No major objections, ☐ Objections						
2.					Proposal received: ☐ No major objections, ☐ Objections					
3.						Prop	posal received:   No major objective	ections, 🗆 (	Objections	
Current Bulletin listing: Proposed Bul					ıg:		Rationale:			
Degree	es with Certification to Tea	Degrees with Certification								
	stry in Secondary Schools	Chemistry in Secondary Schools								
	n be certified to teach chemist		One can be certified to teach chemistry at the							
	ary level with a degree either	secondary level with a degree either in Education				n				
	nemistry. All candidates for ce	or in Chemistry. All candidates for certification								
	nroll in a program that include III course work in the College	must enroll in a program that includes Levels I, II, and III course work in the College of								
	on. The Missouri Department	Education. The Missouri Department of								
	tary and Secondary Education	Elementary and Secondary Education requires								
	ndidates for certification to tea	that candidates for certification to teach								
	ary chemistry complete certain	secondary chemistry complete certain Science								
Core Co	ourses and specialized courses	Core Courses and specialized courses in chemistr				ry				
	e Core Courses	Science Core Courses								
	<b>880</b> , Philosophy of Science <b>.831</b> , Introductory Biology I:	<b>Phil 3380</b> , Philosophy of Science <b>BIOL 1831</b> , Introductory Biology I: From								
	es to Organisms	Molecules to Organisms								
	<b>1111</b> , Introductory Chemistry	CHEM 1111, Introductory Chemistry I								
	1121, Introductory Chemistry	CHEM 1121, Introductory Chemistry II								
BIOL 1	<b>202,</b> Environmental Biology,	BIOL 1202, Environmental Biology, or another								
	mental science	environmental science								
	CS 2111, Physics: Mechanics	PHYSICS 2111, Physics: Mechanics and Heat								
and	1001 Canaral Caalagy ar	and GEOL 1001 Conoral Coology or								
	<b>l001,</b> General Geology <b>or</b> <b>CI 1001,</b> Elementary Meteoro	logy <b>or</b>	GEOL 1001, General Geology or ATM SCI 1001, Elementary Meteorology or							
	N 1001 or equivalent		ASTRON 1001 or equivalent							
	•									

## **Chemistry Endorsement**

**CHEM 2223,** Quantitative Analysis

CHEM 2612, Organic Chemistry I

CHEM 2622, Organic Chemistry II

**CHEM 2633,** Organic Chemistry Laboratory

CHEM 3312, Physical Chemistry I or CHEM

**3302,** Physical Chemistry for the Life Sciences

**CHEM 4712,** Biochemistry

CHEM 4802 or SEC ED 3240, Curriculum and Methods of Teaching Physical Sciences

**CHEM 4837**, Chemistry/Physics Teaching Intern Seminar

**SEC ED 4990,** Secondary School Student Teaching

## **Bachelor of Arts in Chemistry with Teacher Certification**

Students must complete the B.A. in chemistry requirements, as well as the requirements for teacher certification. (See the College of Education section of this *Bulletin*.) There are a few science courses beyond the minimum listed above.

**PHYSICS 2112,** Physics: Electricity, Magnetism, and Optics

**CHEM 3322,** Physical Chemistry II **CHEM 3333,** Physical Chemistry Laboratory I and one additional advanced laboratory course **CHEM 3412,** Basic Inorganic Chemistry

Students earning BA or BS degrees in chemistry must achieve a GPA of 2.0 or higher for the combination of chemistry courses and required related area courses

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SEC ED 4989, Practicum I: Site based

Experience

SEC ED 4990, Practicum II: Site based

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Courses are no longer cross-listed with CHEM

Course title changes

Revised: October, 2008