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To: CE&CS Undergraduate Committee  
UCAPC

From: Tom Sudkamp, Chair, Department of Computer Science and Engineering

Topic: BA in Computer Science, Music Option

Please find attached the proposal for the creation of a Music Option in the Bachelor of Arts in Computer Science Program. This option has been developed jointly between the Department of Music and the Department of Computer Science and Engineering and has been approved by both departments. A letter of support from Dr. Herbert Dregalla, Chair of the Music Department, is included with this proposal.

The objective of the program is to provide students with the opportunity to pursue both a computer science and music in a rigorous program that meets the requirements of both disciplines.

The documentation provided consists of the current general BA in Computer Science degree requirements and the BA in Computer Science with Music Option requirements. The shaded regions indicate the differences between the programs. A check sheet of the new program is included to provide overview of the complete program.

## Bachelor of Arts in Computer Science (Music Option)

Current (General Option)		New (Music Option)	
	Hours		Hours
Required Courses	52	Required Courses	52
Area I: (GE Substitution. See Quantitative Reasoning Requirements below)		Area I: (GE Substitution. See Quantitative Reasoning Requirements below)	
Area VI: College Component: Select any Area VI College of Liberal Arts Course		Area III: Courses must be chosen from EC 200, PLS 200, PSY 105, SOC 200, and SOC 205	
*Courses taken to satisfy GE requirements may not be counted toward the major.		Area IV: MUS 121 and MUS 122	
		Area VI: CST 242	
		*Courses taken to satisfy GE requirements may not be counted toward the major.	
Department Requirements	43	Department Requirements	43
CS 240, 241, 242, 302,400, 415, 466	27	CS 240, 241, 242, 302,400, 415, 466	27
CEG 233, 320, 355, 460	16	CEG 233, 320, 355, 460	16
Computer Science/Engineering Electives	32	Computer Science/Engineering Electives	29
At least 16 hours must be at the 400 level. Courses from Computer Science or Computer Engineering to provide additional breadth in the discipline.	32	At least 16 hours must be at the 400 level. Courses from Computer Science or Computer Engineering to provide additional breadth in the discipline.	29
		Technical Music Course	3
		MUS 466	3
Quantitative Reasoning Requirements	17	Quantitative Reasoning Requirements	17
MTH 228, 257	8	MTH 228, 257	8
STT 160	5	STT 160	5
PHL 223	4	PHL 223	4
Technical Communications	3	Technical Communications	3
EGR 335	3	EGR 335	3
General Electives	40		
Must include at least two courses from COM 101, 203, 221, or PHL 124, 200, 211	20		
		Music Concentration Courses	45
		Music Theory: MUS 101, 102, 103, 201, 202, 203	18
		Musicianship: MUS 151, 152, 153, 251, 252, 253	6
		Keyboard: MUS 155, 156, 157	3
		Music Theory, Musicianship, and Keyboard courses must be taken and passed in sequence.	12
		Applied Music (6 quarters)	6
		Large Ensemble (6 quarters)	0
		Recitals: MUS 100 (6 quarters)	0
Total	187	Total	192
NOTE: ALL ELECTIVE COURSES MUST BE APPROVED BY A DEPARTMENT ADVISOR.		NOTE: ALL ELECTIVE COURSES MUST BE APPROVED BY A DEPARTMENT ADVISOR. STUDENTS PURSUING THIS OPTION MUST COMPLETE AN APPLICATION FOR AUDITION WITH THE MUSIC DEPARTMENT AND PERFORM A SATISFACTORY AUDITION IN A MAJOR PERFORMANCE AREA.	

# BACHELOR OF ARTS in Computer Science- Music Option

## 192 Hours

### I. COMPUTER SCIENCE AND ENGR COURSES (77 Hours)

#### A. Required Computer Science Courses (27 hours)

CS 240 Computer Programming I	4	___
CS 241 Computer Programming II	4	___
CS 242 Computer Programming III	4	___
CS 302 Client Server Databases	4	___
CS 400 Data Structures & Algorithms	4	___
CS 415 Soc. Implications of Comp.	3	___
CS 466 Formal Languages	4	___

#### B. Required Computer Engineering Courses (16 Hours)

CEG 233 Linux and Windows	4	___
CEG 320 Computer Organization	4	___
CEG 355 Information Tech Systems	4	___
CEG 460 Intro. to Software Engineering	4	___

#### C. CS/CEG Technical Electives (29 Hours)

At least 16 hours must be at the 400 level.

1. _____	___	___
2. _____	___	___
3. _____	___	___
4. _____	___	___
5. _____	___	___
6. _____	___	___
7. _____	___	___

#### D. Required Technical Music Course

MUS 466 Computer Applications	3	___
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#### E. Technical Communication (3 Hours)

EGR 335 Technical Communications	3	___
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### II. GENERAL EDUCATION COURSES (48 Hours)

#### Area I- Communication and Mathematical Skills

ENG 101 - Composition I	4	___
ENG 102 - Composition II	4	___
Mathematics (see Quantitative Reasoning section)		

#### Area II – Cultural-Social Foundations-(8 Hours)

History – Select 1 Course:

CLS 150, HST 101, HST 102, HST 103	4	___
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The Non Western World(WI) – Select 1Course:

CSE/CST, RSE/RST, HLT 202, SW 272, URS 200	4	___
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#### Area III – Human Behavior –8 Hours

Select Two Courses from Different Rows:

Economics: EC 200

Political Science: PLS 200

Psychology: PSY 105

Sociology (WI): SOC200, SOC205

1. _____	4	___
2. _____	4	___

#### Area IV – Human Expression – 4 Hours

MUS 121 Music Listening	2	___
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MUS 122 Music Listening	2	___
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#### Area V – Natural Science – 12 Hours

1. _____	___	___
2. _____	___	___
3. _____	___	___

#### Additional courses from Areas II, III, and IV-(8 Hours)

Select one course from two of these three areas.

Except for Area II, the course selected must

come from a different subcategory than the

course(s) chosen to meet the area requirement.

(See undergraduate catalog- Gen. Ed. Section

for complete details).

1. _____	4	___
2. _____	4	___

#### Area VI – College Component 4 Hours

CST 242-Comparative Non-Western Cultures -Music	4	___
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### III. QUANTITATIVE REASONING COURSES (17 Hours)

MTH 228 Calculus for Social Sciences	5	___
MTH 257 Discrete Mathematics	3	___
STT 160 Statistical Concepts	5	___
PHL 223 Symbolic Logic	4	___

### IV. MUSIC CONCENTRATION COURSES (45 Hours)

#### A. Music Theory: (18 hrs)

MUS 101,102,103, 201, 202, 203	
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#### B. Musicianship: (6 hrs)

MUS 151, 152, 153, 251, 252, 253	
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#### C. Keyboard: (3 hrs)

MUS 155,156,157	
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#### D. Applied music (6 quarters, 12 hrs)

#### E. Large ensemble (6 quarters, 6 hrs)

#### F. Recitals: MUS 100 (6 quarters/0 credit)

**AUDITION:** Students pursuing this option must complete an application for audition with the Music Department and perform a satisfactory audition in a major performance area.

**GENERAL EDUCATION:** Courses must be chosen to satisfy the University General Education requirements.

**SCIENCE COURSES:** Courses must meet the General Education science requirements.

**CS/CEG ELECTIVES:** An approved selection of Computer Science/Computer Engineering electives to provide additional breadth in the discipline.

**MUSIC THEORY, MUSICIANSHIP, and KEYBOARD:** Courses must be taken and passed in sequence.

**APPLIED MUSIC:** MUA credit hours

**LARGE ENSEMBLE:** MUE credit hours. As appropriate to instrument/voice and background, as determined by director of bands, director of choral studies, director of orchestral studies (as appropriate) in consultation with a student's applied teacher.