DUAL DEGREE: B.A. IN MUSIC (from Butler University) *PLUS* B.S. IN COMPUTER ENGINEERING (from Purdue University)

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• The B.A. degree in Music requires 124 hours.
--66 hours must be non-music credits.
--40 hours must be 300 or 400-level courses.

• The Dual Degree of Music and Computer Engineering will fulfill the following Areas of Inquiry in the Butler University Core Curriculum: Perspectives of the Creative Arts, The Natural World, The Social World, and Analytical Reasoning. In addition, the B.A. Music curriculum fulfills the Writing Across the Curriculum, Speaking Across the Curriculum, and Social Justice and Diversity requirements of the Butler University Core Curriculum; music majors are exempted from the Butler Cultural Requirement because of the arts event attendance requirements for all arts majors. The Indianapolis Community Requirement is NOT satisfied.

Semester 1			*Semester 2*		
AM 021*	Keyboard Skills 1	1	AM 022*	Keyboard Skills 2	1
**If the major instrument is piano, the student should take AM 031, Piano Major: Keyboard Skills 1 and AM 032, Piano Major: Keyboard Skills 2 instead of AM 021, AM 022, AM 023, and AM 024.*					
AM ____	Major Instrument or Voice	2	AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1	ES ____	Major Ensemble	1
MT 101	Music Theory 1	3	MT 102	Music Theory 2	3
MT 111	Aural Skills 1	1	MT 112	Aural Skills 2	1
FYS 101	First Year Seminar	3	FYS 102	First Year Seminar	3
PWB ____	Physical Well Being	1			
CH 105	General Chemistry 1	5	CH 106	General Chemistry 2	5
DD 190	Elementary Engr Design	3	MA 106**	Calculus & Anal. Geo. 1	4

***Math placement test required. There is the possibility that the student will need to take MA 101 (Algebra, 3 cr.) and/or MA 102 (Precalculus, 3 cr.) prior to MA 106 and MA 107.*

TOTAL Credit Hours:		20			20

Semester 3			*Semester 4*		
AM 023	Keyboard Skills 3	1	AM 024	Keyboard Skills 4	1
AM ____	Major Instrument or Voice	2	AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1	ES ____	Major Ensemble	1
MT 201	Music Theory 3	3	MT 202	Music Theory 4	3
MT 211	Aural Skills 3	1	MT 212	Aural Skills 4	1
			TI ____	Texts and Ideas	3
CS 142	Intro to Comp Sc & Prog	3	MA 208	Calculus & Anal. Geo. 3	4
MA 107	Calculus & Anal Geo. 2	4	PH 202	Intro to Anal. Physics 2	5

PH 201	Intro to Anal. Physics 1	5
TOTAL Credit Hours:		20

Semester 5

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
MH 308-SJD	Music in Global Contexts	3
COM 101	Rhetoric & the Amer Dem Tra	3
DD 297	MATLAB	1
MA 215	Linear Algebra	3
PH 351-W	Analog Electronics	4
SW 220-EC	The Economy and Society	3
TOTAL Credit Hours:		20

Semester 6

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
ME 330-C	Self-Representation for Mus	1
MH 305	Music History 1	2
GHS ____	Global and Historical Studies	3
ECE 21000	Sophomore Seminar	1
ECE 26400	Advanced Computer Progr	3
ECE 28200	Unix Programming for Eng	1
MA 334	Differential Equations	3
TCM 250	Career Planning for Engineers	1
TCM 360-W/C	Comm in Engineering Prac	2
		20

Semester 7

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
MH 306-W	Music History 2	3
CSCI 24000	Advanced Programming	4
CSCI 34000	Discrete Mathematics	3
ECE 20200	Circuit Analysis 2	3
ECE 27000	Digital Logic Design	4
TOTAL Credit Hours:		20

Semester 8

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
ME 430	E-Portfolio Capstone	0
MH 307	Music History 3	3
CSCI 36200	Data Structures	3
ECE 30100	Signals and Systems	3
ECE 30200	Probabilistic Methods	3
ECE 36200	Microprocessors Sys & Inter	4
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Semester 9

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
ECE 36500	Intro to Design of Dig Comp	3
ECE 40100	Engineering Ethics	1
ECE 48700	Senior Design 1	1
Computer Engineering Electives		6
Advanced Computer Engineering Electives		3
TOTAL Credit Hours:		17

Semester 10

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
GHS ____	Global and Historical Studies	3
ENGR 20010	Engineering Internship	1
ECE 40800	Operating Systems	3
ECE 48800	Senior Design 2	2
Computer Engineering Electives		3
Advanced Computer Engineering Electives		3
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SUMMARY

REQUIRED MUSIC COURSES:

Note: The 10-semester sequence shown above includes AM 021 and AM 022, 12 additional hours of Applied Music, and 4 additional hours of Major Ensemble, in addition to the courses listed below. While not required in the B.A. degree, most music majors will take these additional classes for placement or scholarship reasons.

AM 023, 024*	Keyboard Skills 3, 4	2
**AM 031 & AM 032 if major instrument is piano*		
AM ____	Major Instrument or Voice	8
ES ____	Major Ensemble	6
ME 330-C	Self-Representation for Musicians	1
ME 430	E-Portfolio Capstone	0
MH 305	Music History and Literature 1	2
MH 306-W	Music History and Literature 2	3
MH 307	Music History and Literature 3	3
MH 308-SJD	Music in Global Contexts	3
MT 101	Music Theory 1	3
MT 111	Aural Skills 1	1
MT 102	Music Theory 2	3
MT 112	Aural Skills 2	1
MT 201	Music Theory 3	3
MT 211	Aural Skills 3	1
MT 202	Music Theory 4	3
MT 212	Aural Skills 4	1
	TOTAL	***44 (plan shows 62 music credits per the note above)***

BUTLER UNIVERSITY CORE CURRICULUM:

FYS 101, 102	First Year Seminar	3, 3
GHS ____	Global & Historical Studies	3, 3
TI ____	Texts and Ideas	3
PWB ____	Physical Well Being/Marching Band	1
	TOTAL	***16***

COURSES REQUIRED FOR THE COMPUTER ENGINEERING DEGREE:

CH 105	General Chemistry 1	5
CH 106	General Chemistry 2	5
COM 101	Rhetoric & the Amer Dem Tradition	3
CS 142	Intro to Computer Sci & Prog	3
CSCI 24000	Advanced Programming	4
CSCI 34000	Discrete Mathematics	3
CSCI 36200	Data Structures	3
Computer Engineering Electives		9
Advanced Computer Engineering Electives		6
DD 190	Elementary Engineering Design	3
DD 297	MATLAB	1
ECE 20200	Circuit Analysis 2	3
ECE 21000	Sophomore Seminar	1
ECE 26400	Advanced Computer Programming	3
ECE 27000	Digital Logic Design	4
ECE 28200	Unix Programming for Engineering	1
ECE 30100	Signals and Systems	3
ECE 30200	Probabilistic Methods	3

ECE 36200	Microprocessors Sys & Interface	4
ECE 36500	Intro to Design of Digital Computers	3
ECE 40100	Engineering Ethics	1
ECE 40800	Operating Systems	3
ECE 48700	Senior Design 1	1
ECE 48800	Senior Design 2	2
ENGR 20010	Engineering Internship	1
MA 106**	Calculus & Anal Geometry 1	4
MA 107**	Calculus & Anal Geometry 2	4
MA 208	Calculus & Anal Geometry 3	4
MA 215	Linear Algebra	3
MA 334	Differential Equations	3
PH 201	Intro to Analytical Physics 1	5
PH 202	Intro to Analytical Physics 2	5
PH 351-W	Analog Electronics	4
SW 220-EC	The Economy and Society	3
TCM 250	Career Planning for Engineers	1
TCM 360-W+C	Comm in Engineering Practice	2
	TOTAL	***116***

***Students get credit for MA 106 if they receive a 4 or 5 on the Calculus AB AP exam; they receive credit for both MA 106 and MA 107 if they receive a 4 or 5 on the Calculus BC AP exam with a 4 or 5 on the AB subscore.*