

B.A. IN MUSIC PLUS A SECONDARY MAJOR IN COMPUTER SCIENCE

- The B.A. degree in Music requires 120 credits.
--66 hours must be non-music credits.
--40 hours must be 300 or 400-level courses.
--All music majors have Arts Event Attendance Requirements; for details, check <https://www.butler.edu/jca/for-current-students>.
- The double major of Music and Computer Science will fulfill the following Areas of Inquiry in the University Core Curriculum: Perspectives of the Creative Arts, Analytic Reasoning, and the Indianapolis Community Requirement. In addition, the B.A. Music curriculum fulfills the Butler Cultural Requirement because of the arts event attendance requirements for all arts majors.
- The student will be assigned a Computer Science advisor in addition to their Music advisor.

Semester 1

AM 021*	Keyboard Skills 1	1
AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
MT 101	Music Theory 1	3
MT 111	Aural Skills 1	1
FYS 101	First Year Seminar	3
SW ____	The Social World	3
CS 151	Foundations of Computing 1	3

TOTAL Credit Hours: 17

Semester 2

AM 022	Keyboard Skills 2	1
AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
MT 102	Music Theory 2	3
MT 112	Aural Skills 2	1
FYS 102	First Year Seminar	3
CS 248	Object-Orient Prog & Data Str	5
CS 252	Foundations of Computing 2	3

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Semester 3

AM 023	Keyboard Skills 3	1
AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
MT 201	Music Theory 3	3
MT 211	Aural Skills 3	1
CS 321	Computer Organization	3
CS 333	Database Systems	3
Language Elective		3

Semester 4

AM 024	Keyboard Skills 4	1
AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
ME 330	Self-Represent for Musicians	1
MT 202	Music Theory 4	3
MT 212	Aural Skills 4	1
GHS ____	Global and Historical Studies	3
SE 361	Intro to Software Engineering	3
Language Elective		3

Explanation: 6 hours of the same language at the 200-level or higher are required.

TOTAL Credit Hours:	17	18
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Semester 5

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
MH 305	Music and Devotion	3
WB ____	Well-Being	1
CS 485	Computer Ethics	1
MA 106*	Calculus & Anal. Geo. 1	4
MA 310	Linear Algebra	3

TOTAL Credit Hours:	15
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Semester 6

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
MH 306	Music and Narrative	3
GHS ____	Global and Historical Studies	3
CS 341	Advanced Data Structures	3
MA 107	Calculus & Anal. Geo. 2	4
____	400-level CS/SE Topics Course	3

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**Math placement test required; the student may need to take MA 101 (Algebra, 3 cr.) and/or MA 102 (Precalculus, 3 cr.) prior to MA 106. 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.*

Semester 7

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
MH 307	Music, Globalization & Industry	3
TI ____	Texts and Ideas	3
CS 351	Algorithms	3
CS 382/383	Epics 2 Service Learning	2-3
CS/SE ____	Elective: CS 430-439 or SE 460+	3

TOTAL Credit Hours:	17-18
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Semester 8

AM ____	Major Instrument or Voice	2
ES ____	Major Ensemble	1
ME 430	E-Portfolio Capstone	0
MH 308-SJD	Music and Movement	3
NW ____	The Natural World	5
CS 311	Vocational Expl in Comp Sc	1
CS 452	Parallel Algorithm Des & Progr	3
CS ____	Elective: CS 440-459	3

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SUMMARY

REQUIRED MUSIC COURSES:

Note: The 8-semester sequence shown above includes 4 additional semesters of Applied Music (8 credits) and 2 additional semesters of Major Ensemble (2 credits), in addition to the courses listed below. While not required in the B.A. degree, most music majors will take these additional classes for scholarship reasons.

AM 021,022,023,024	Keyboard Skills 1,2,3,4	4
<i>*Piano majors substitute AM 031 and AM 032 plus two credits of music electives.</i>		
AM ____	Major Instrument or Voice	8
ES ____	Major Ensemble	6
ME 330	Self-Representation for Musicians	1
ME 430	E-Portfolio Capstone	0
MH 305	Music and Devotion	3
MH 306	Music and Narrative	3
MH 307	Music, Globalization, and Industry	3
MH 308-SJD	Music and Movement	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		47 (plan shows 57 music credits per the note above)

UNIVERSITY CORE CURRICULUM:

FYS 101,102	First Year Seminar	3,3
GHS ____	Global and Historical Studies	3,3
NW ____	The Natural World	5
SW ____	The Social World	3
TI ____	Texts and Ideas	3
WB ____	Well-Being	1
TOTAL		24

COURSES REQUIRED FOR THE COMPUTER SCIENCE MAJOR:

CS 151	Foundations of Computing 1	3
CS 248	Object-Oriented Prog & Data Structures	5
CS 252	Foundations of Computing 2	3
CS 311	Vocational Exploration in Computer Science	1
CS 321	Computer Organization	3
CS 333	Database Systems	3
CS 341	Advanced Data Structures	3
CS 351	Algorithms	3
CS 382/3	Epics 2 Service Learning	2-3
CS 452	Parallel Algorithm Design and Programming	3
CS 485	Computer Ethics	1
MA 106*	Calculus and Anal Geometry 1	4
MA 107	Calculus and Anal Geometry 2	4

MA 310	Linear Algebra	3
SE 361	Introduction to Software Engineering	3
CS/SE ____	400-level CS/SE Topics Course	3
ONE Course numbered CS 440-459		3
ONE Course numbered CS 430-439 or SE 460 and higher		3
Language	6 hours of the same language at the 200-level or higher	
TOTAL		59-60

**Math placement test required; the student may need to take MA 101 (Algebra, 3 cr.) and/or MA 102 (Precalculus, 3 cr.) prior to MA 106. 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.*