Music Technology (BS): Electronics & Circuits Concentration

The undergraduate major in Music Technology is an interdisciplinary program that provides a foundation of theoretical and practical skills in music and electrical and computer engineering to prepare students to design, develop, and implement advanced music technologies. In addition to a variety of supporting courses, it has three primary components: a musicianship core (29 hours including applied and ensemble study); an engineering core (26 hours including calculus and physics); and a music technology core (18 hours). All students will complete a two-semester senior design project.

Students pursuing the Electronics and Circuits concentration will take an additional 10 hours of engineering courses focusing on the design of electronic systems.

Plan Requirements

Code	Title	Hours	Counts towards
Musicianship Core			
MUS 103	Theory and Musicianship I	3	
MUS 104	Theory and Musicianship Lab I	1	
MUS 107	Keyboard Skills I	1	
MUS 153	Theory and Musicianship II	3	
MUS 154	Theory and Musicianship Lab II	1	
MUS 200	Understanding Music: Global Perspectives	3	
MUS 203	Music Theory II	3	
MUS 204	Aural Skills II	1	
MUS 207	Class Piano II	1	
MUS 253	Theory and Musicianship IV	3	
MUS 254	Theory and Musicianship Lab IV	1	
Applied Study			
MUS 193	Applied Music Lessons I (2 Semesters)	2	
MUS 293	Applied Music Lessons II (2 Semesters)	2	
Ensemble Study			
Four Semesters of approved ensemble from:		4	
MUS 112	Tenor-Bass Choir		
MUS 113	Women's Choir		
MUS 115	State Chorale		
MUS 121	Raleigh Civic Symphony		
MUS 122	Raleigh Civic Chamber Orchestra		
MUS 134	Wind Ensemble		
MUS 135	Symphonic Band		
MUS 142	Jazz Lab Band		
MUS 144	Jazz Orchestra		
Additional Study			
MUS 240	Introduction to the Music Industry	3	
EMA 110	Introduction to Arts Entrepreneurship	3	
D 100	Design Inquiry I: Methods and Processes	3	
Math and Science			
MA 141	Calculus I	4	
MA 241	Calculus II	4	
PY 205 & PY 206	Physics for Engineers and Scientists I and Physics for Engineers and Scientists I Laboratory	4	
PY 208 & PY 209	Physics for Engineers and Scientists II and Physics for Engineers and Scientists II Laboratory	4	
Electrical & Computer Engineering Core			
ECE 109	Introduction to Computer Systems	3	
ECE 200	Introduction to Signals, Circuits and Systems	4	
ECE 209	Computer Systems Programming	3	
Music Technology Core			
MUT 303	Introduction to Audio Technology I	3	
MUT 304	Introduction to Audio Technology II	3	

MUT 315	Music Acoustics & Psychoacoustics	3
MUT 403	Music Recording & Mixing	3
MUT 431	Music Technology I	3
MUT 432	Music Technology II	3
Capstone		
MUT 461	Music Technology Senior Project I	3
MUT 462	Music Technology Senior Project II	3
Electronics and Circuits Concentration		
ECE 211	Electric Circuits	4
ECE 302	Microelectronics	4
ECE 403	Electronics Engineering	3
GEP Courses		
ENG 101	Academic Writing and Research	4
GEP Humanities (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/)		6
GEP Social Sciences (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-social-sciences/)		6
GEP Additional Breadth (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/)		3
GEP Health and Exercise Studies (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/)		2
GEP U.S. Diversity (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-us-diversity/)		
GEP Global Knowledge (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-global-knowledge/)		
Total Hours		**120**

First Year

Fall Semester		**Hours**
MUS 103	Theory and Musicianship I	3
MUS 104	Theory and Musicianship Lab I	1
MUS 107	Keyboard Skills I	1
MUS 193	Applied Music Lessons I	1
Approved Ensemble		1
MA 141	Calculus I [1]	4
ENG 101	Academic Writing and Research	4
GEP Health and Exercise Studies (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/)		1
	Hours	**16**
Spring Semester		
MUS 153	Theory and Musicianship II	3
MUS 154	Theory and Musicianship Lab II	1
MUS 207	Class Piano II	1
MUS 193	Applied Music Lessons I	1
Approved Ensemble		1
MA 241	Calculus II	4
PY 205 & PY 206	Physics for Engineers and Scientists I and Physics for Engineers and Scientists I Laboratory [1]	4
ECE 109	Introduction to Computer Systems [1]	3
	Hours	**18**

Second Year

Fall Semester		
MUS 203	Music Theory II	3
MUS 204	Aural Skills II	1
MUS 293	Applied Music Lessons II	1
Approved Ensemble		1
PY 208 & PY 209	Physics for Engineers and Scientists II and Physics for Engineers and Scientists II Laboratory [1]	4
ECE 209	Computer Systems Programming [1]	3
MUT 303	Introduction to Audio Technology I	3
	Hours	**16**
Spring Semester		
MUS 200	Understanding Music: Global Perspectives	3
MUS 253	Theory and Musicianship IV	3
MUS 254	Theory and Musicianship Lab IV	1
MUS 293	Applied Music Lessons II	1
ECE 200	Introduction to Signals, Circuits and Systems [2]	4
MUT 304	Introduction to Audio Technology II	3
D 100	Design Inquiry I: Methods and Processes	3
	Hours	**18**

Third Year

Fall Semester		
MUS 240	Introduction to the Music Industry	3
Approved Ensemble		1
ECE 211	Electric Circuits [2]	4
MUT 403	Music Recording & Mixing	3
MUT 431	Music Technology I	3
GEP Health and Exercise Studies (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/)		1
	Hours	**15**

Spring Semester		
EMA 110	Introduction to Arts Entrepreneurship	3
MUT 432	Music Technology II	3
ECE 302	Microelectronics	4
GEP Requirement (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/)s		3
	Hours	**13**
Fourth Year		
Fall Semester		
MUT 461	Music Technology Senior Project I	3
ECE 403	Electronics Engineering	3
GEP Requirement (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/)		3
GEP Requirement (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/)		3
	Hours	**12**
Spring Semester		
MUT 462	Music Technology Senior Project II	3
MUT 315	Music Acoustics & Psychoacoustics	3
GEP Requirement (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/)		3
GEP Requirement (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/)		3
	Hours	**12**
	Total Hours	**120**