



MUSIC AND TECHNOLOGY MAJOR (graduate) 2010 and later

Core Courses

60 units

A specific set of core courses will be identified by the Graduate Advisory Committee in consultation with each student on the basis of his or her background and experience. At least 24 units will be courses in the School of Music and at least 24 units will be courses in Computer Science or Electrical and Computer Engineering. Courses fulfilling this requirement include but are not limited to the courses listed below. Core courses and support courses may include thesis research units.

When?	Grade?	Title	Units
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

Support Courses

36 units

Additional courses will be chosen by the student. A graduate student should not repeat courses previously taken as an undergraduate student at Carnegie Mellon or elsewhere. Courses fulfilling this requirement include but are not limited to the courses listed below. Core courses and support courses may include thesis research units.

When?	Grade?	Title	Units
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

Performance/Capstone Thesis

18 units

When?	Grade?	Title	Units
—	—	57-971 Performance/Thesis	<u>18</u>

Music and Technology Seminar

4 units

Candidates for the School of Music Master of Science degree in music and technology are required to pass Sound and Music Computing Seminar every semester of residence in the School of Music.

When?	Grade?	Title	Units
—	—	57-970 Sound and Music Computing Seminar	<u>1</u>
—	—	57-970 Sound and Music Computing Seminar	<u>1</u>
—	—	57-970 Sound and Music Computing Seminar	<u>1</u>
—	—	57-970 Sound and Music Computing Seminar	<u>1</u>

Elective Courses

26 units

When?	Grade?	Title	Units
—	—	—	—
—	—	—	—

TOTAL UNITS: 144

M.S. in Music and Technology Courses

This is not a complete list of options. Masters students are encouraged to take courses in Music, Computer Science, and Electrical Engineering and any other departments that are not specifically Music and Technology courses. For example, there are several excellent graduate courses on Machine Learning offered by various departments at Carnegie Mellon. Any of these courses can be taken, even though they are not listed here. Please see the Undergraduate Catalog for a complete undergraduate course listing. Courses, including graduate courses, are listed in the University Schedule of Classes (with link to short course descriptions). Your advisory committee will help you select courses.

Computer Music Systems and Technology		85-785 Auditory Perception: Sense of Sound	var.
15-322 Introduction to Computer Music	9u	57-377 Psychology of Music	9u
15-323 Computer Music Systems and Information Processing	9u	Music Theory	
60-439 Advanced SIS: Hybrid Instrument Building	10u	57-441 Analysis of 19 th Century Music	9u
Signal Processing		57-442 Analytical Techniques	9u
18-290 Signals and Systems	12u	57-430 Music of Iran	9u
18-491 Digital Signal Processing	12u	57-605 Theory and Analysis for Graduate Students	6u
18-551 Digital Communication and Signal Processing System Design	12u	57-760 Schenker Analysis	9u
18-792 Advanced Digital Signal Processing	12u	57-934 Advanced Analytic Techniques	9u
18-798 Image, Video, and Multimedia	12u	57-968 20 th Century Techniques	6u
Music Information Retrieval		57-954 Shaping Time in Performance	9u
11-755 Machine Learning for Signal Processing	12u	Music History	
15-826 Multimedia Databases and Datamining	12u	57-606 Music History for Graduate Students 1	9u
Machine Learning		57-609 Music History for Graduate Students 2	9u
10-601 or 10-701 Intro to Machine Learning	12u	57-209 The Beatles	9u
10-705 Intermediate Statistics	12u	79-345 The Roots of Rock and Roll, 1870-1970	9u
Acoustics/Recording/Instrument Design		Composition	
18-493 Electroacoustics	12u	57-721 Major Studio (Composition)	9u
57-947 Sound Recording	6u	57-258 20 th and 21 st Century Techniques	6u
57-948 Sound Editing and Mastering	6u	57-27x Orchestration	6u
57-949 Multitrack Recording	9u	Performance	
48-726 Environment II: Acoustics and Lighting	9u	57-969 (Graduate) Score Reading/Keyboard Harmony	6u
Music Cognition/Perception		57-xxx Technologically-assisted performance independent study	var.
85-756 (Graduate) Music and Mind: The Cognitive Neuroscience of Sound	9u		

In addition, many of our masters students take undergraduate courses to strengthen their knowledge in areas where they do not already have a strong background. See the B.S. in Music and Technology Curriculum for suggestions.