MUSIC TECHNOLOGY (B.M.)

The B.M. in Music Technology prepares students for careers in audio engineering, sound design, or graduate study in music. Program objectives are located at: http://www.keene.edu/catalog/programs/detail/music-technology-bm/outcomes/. The degree conforms to standards in music technology set by the National Association of Schools of Music, including audio recording, audio engineering, and studio sound. Students will achieve fluency in microphone technique and develop a knowledge base of other peripheral equipment. The program emphasizes fundamentals of recording equipment and practice, including equipment calibration, alignment, and testing, and studio set-up for recording in various professional settings. In addition, students receive advanced practica in professional recording studio operation.

All students are auditioned before admission to the program.

A grade C or higher must be earned in each music course counted toward the major.

Mid-Level Review

All music majors must complete a Mid-Level Review prior to the junior year. The Review is normally conducted during the student's fourth semester of study, with adjustments made for transfer credits, participation in national and international exchange programs, and official leaves of absence. The Mid-Level Review consists of an application (information form, transcript, and reflective essay) and an assessment meeting between the candidate and the Faculty Review Panel. Application forms and additional information are available from the Music Department Office.

The purpose of the Mid-Level Review is threefold:

1. to assess the student's academic progress,
2. to assess the student's artistic progress, and
3. to advise the student on academic, artistic, and career goals.

Music Education and Music Performance majors whose academic record and/or artistic growth are not at an appropriate level based on state and national standards cannot continue in either of those two Bachelor of Music degree programs, but may continue to be a music major in the Bachelor of Arts in Music program.

Integrative Studies Requirements

40 credits minimum

Code	Title	Credits	Completed
Major Requirements (82 credits)			_____
Language Requirement		*4*	_____
The minimal requirement for all students with a major in Music is one course in a foreign language, normally French, Spanish, or German			_____
*Select **one** of the following World Music courses:*		*4*	_____
IAMU-112	Latin Amer Music Survey		_____
IAMU-114	Music Cultures of World		_____
IIMU-241	Afro-Brazilian Music & Culture		_____
IHMU-305	History of Jewish Music		_____
IAMU-312	Latin Amer Mus Soc Culture		_____
MU-100	Music Workshop (6 semesters)	1	_____
MUA-101 & MUA-102 & MUA-201 & MUA-202 & MUA-301 & MUA-302 & MUA-401	Applied Music and Applied Music and Applied Music and Applied Music and Applied Music and Applied Music and Applied Music	14	_____
Select **six** of the following Large Ensembles: [1]		6	_____
MU-172	KSC Concert Choir		_____
MU-173	KSC Chamber Singers		_____
MU-174	Orchestra		_____
MU-175	Jazz Ensemble		_____
MU-177	Concert Band		_____
MU-178	Guitar Orchestra		_____
During semesters of applied music study, enrollment in at least one large ensemble appropriate to the student's program is required. Pianists/organists may substitute up to two semesters of MU-171 (Piano Ensemble).			_____
MU-118 & MU-119 & MU-218 & MU-219	Functional Piano I and Functional Piano II and Functional Piano III and Functional Piano IV [2]	4	_____
Pianists/organists may substitute MU-181 Collaborative Piano Skills for MU-118 and MU-119 for a total of 2 credits			_____
MU-151 & MU-152 & MU-251 & MU-252	Music Theory I and Music Theory II and Music Theory III and Music Theory IV	8	_____

MU-161 & MU-162 & MU-261 & MU-262	Aural Skills I and Aural Skills II and Aural Skills III and Aural Skills IV	4	_____
MU-211	Intro to Music Technology	4	_____
MU-212	Audio Recording Techniques	2	_____
MU-213 & MU-214	Composition Class I and Composition Class II	4	_____
MU-222	Musical Improvisation	1	_____
MU-281	Aural Skills Prof Assess Exam	0	_____
MU-282	Mid-Level Review Assess Exam	0	_____
MU-283	Piano Prof Assess Exam	0	_____
IIPHYS-305	Physics of Music	4	_____
MU-310	Western Music Before 1700	4	_____
IAMU-311	Sound Design for Video	4	_____
MU-312	Western Music After 1700	4	_____
MU-315	Conducting I	2	_____
MU-412	Recording Studio	2	_____
MU-495	Seminar	4	_____
MU-496	Senior Project	2	_____
or MU-497	Internship Music Technology		_____
Electives		*1*	_____
Select a music course or an allied discipline recommended by National Association of Schools of Music, such as Computer Science, Physics, Film Studies, or Management to reach 120 credits.			_____
Total Credits		**83**	_____

Electives

Select courses to reach a total of 120 credits for the degree.

Degree Requirements

120 credits
40 credits at the upper-level

Upon completion of the Music Technology B.M. degree, students will gain the following Common Body of Knowledge and Skills,

- A.1.a. Performance: Technical skills requisite for artistic self-expression in at least one major performance area at a level appropriate for the particular music concentration.
- A.1.b. Performance: An overview understanding of the repertory in their major performance area and the ability to perform from a cross-section of that repertory.
- A.1.c. Performance: The ability to read at sight with fluency demonstrating both general musicianship and, in the major performance area, a level of skill relevant to professional standards appropriate for the particular music concentration.
- A.1.d. Performance: Knowledge and skills sufficient to work as a leader and in collaboration on matters of musical interpretation. Rehearsal and conducting skills are required as appropriate to the particular music concentration.
- A.1.e. Performance: Keyboard competency.
- A.1.f. Performance: Growth in artistry, technical skills, collaborative competence and knowledge of repertory through regular ensemble experiences. Ensembles should be varied both in size and nature. Normally, performance study and ensemble experience continue throughout the baccalaureate program.
- A.2.a. Musicianship Skills and Analysis: Students must acquire, An understanding of the common elements and organizational patterns of music and their interaction, the ability to employ this understanding in aural, verbal, and visual analyses, and the ability to take aural dictation.
- A.2.b. Musicianship Skills and Analysis: Students must acquire, Sufficient understanding of and capability with musical forms, processes, and structures to use this knowledge and skill in compositional, performance, analytical, scholarly, and pedagogical applications according to the requisites of their specializations.
- A.2.c. Musicianship Skills and Analysis: Students must acquire, The ability to place music in historical, cultural, and stylistic contexts.
- A.3. Composition and Improvisation: Students must acquire a rudimentary capacity to create derivative or original music both extemporaneously and in written form; for example, the imitation of various musical styles, improvisation on pre-existing materials, the creation of original compositions, experimentation with various sound sources, and manipulating the common elements in non-traditional ways.
- A.4. History and Repertory: Students must acquire basic knowledge of music history and repertories through the present time, including study and experience of musical language and achievement in addition to that of the primary culture encompassing the area of specialization.
- A.5. Synthesis: While synthesis is a lifetime process, by the end of undergraduate study students must be able to work on musical problems by combining, as appropriate to the issue, their capabilities in performance; aural, verbal, and visual analysis; composition/improvisation; and history and repertory.
- Basic understanding of the scope, integrative nature, and various functions of music technology as a field, including acquaintance with various applications of music technology in music, technological development, research, pedagogy, and in other fields.

- Knowledge of and ability to use various terminologies and procedures in music technology, music, and technology, and their combinations as employed in and associated with the work of music technology. This includes, but is not limited to, their respective vocabularies of practice, ways work is conceptualized, developed, synthesized, and finalized, and phases of production, presentation, and/or distribution.
- Ability to solve music technology problems, including (a) problem identification, information gathering, solution development, and testing, and (b) knowledge and skill to produce case-specific decisions about what is useful, usable, effective, and desirable during the course of music technology project development and production.
- Ability to describe and respond to the needs or expectations of users, audiences, and/or contexts associated with doing professional work in two or more areas of music technology.
- Advanced capabilities in specific areas of musicianship consistent with the music technology areas that constitute the degree program's focus. Aural skills are essential. Abilities to apply advanced knowledge of the properties of musical structures and processes to solving music technology problems are essential.
- Fundamental knowledge of current technologies and technological principles widely applicable to music technology, including but not limited to those associated with recording, manipulating, and presenting music and sound, signal flow and processing, music communication protocols, synthesis and interface technologies, sound synthesis, and interactive and generative media.
- The ability to use industry standard technologies at a professional level to achieve goals and objectives associated with specific areas of music technology. These goals may be in terms such as mastery of production techniques, artistic expression, support for work in other fields, relationships with other technologies and media, and so forth.
- Ability to apply knowledge of fundamental science, engineering, and math concepts and other aspects of the science of sounds and the electrical manipulations of sounds in music technology situations.
- Basic understanding of connections among music, technology, music technology, and culture, including the evolution of music technology, the impact of technology on music and culture, technological influences on multiple musical styles, including contemporary styles, and their cultural contexts, and information and means for projecting future possibilities in music technology; and basic understanding of these connections with regard to current and emerging Internet- and network-based programs, services, and environments related to the creation, sharing, and distribution of music.
- Knowledge of the basic principles, laws, regulations, and ethical considerations and practices associated with music technology and intellectual property as it is both acquired and created by individuals working in the music technology program.
- Comprehensive capabilities to use and integrate the above competencies in at least one area of music technology to produce professional-level work in at least one area, and basic-level work in a second area.
- Advanced knowledge and technical competence in using industry-standard recording and other types of music technology studios and equipment; expertise in the use of music, digital, and other technological interfaces; high levels of aural and music analysis skills; ability to apply scientific knowledge of acoustics, electrical advanced capabilities in audio recording and sound manipulation; capabilities in audio engineering, studio sound, and live performance sound.
- A knowledge and technical competence in using and creating with technologies, protocols, and techniques associated with analog and digital instruments and various forms of synthesis; interfaces; programming language(s); interactive and generative media; and networks of digital and other instruments; and, the ability to conceive, create, develop, and produce real-time and recorded performances using digital and emerging technologies. Competence in using and creating with various keyboard-based and/or non-keyboard-based controllers and user interfaces is essential. An understanding of compositional principles, logics, narrative structures, and strategies is required.
- Knowledge of the nature, purpose, and the way work is created for the application and the roles of music technology to conceptualization, development, and production; advanced knowledge of and ability to use industry-standard technology, equipment, labs, and studios to produce work in or for the application; the ability to apply science, computer engineering, and software development skills associated with the application.
- Advanced knowledge of and ability to use technological means to conceive and develop specific products associated with instruction and evaluation; the ability to create interactive applications for educational purposes; thorough understanding of the elements, natures, and content of musical instruction in areas such as aural perception, music theory, music history, music teacher preparation, composition, and improvisation, and their relationships to the capabilities of current and emerging technology.
- Knowledge of and ability to use technological means for capturing records of behaviors, conducting measurements and assessments, and producing analyses in fields such as acoustics and psychoacoustics, the neuroscience of music, music perception, music cognition, and music performance. Fundamental understanding of the natures and content of research areas and protocols in two or more of these fields is essential. Experiences should include using technology in research settings for research purposes.
- Knowledge of the science, engineering, and math disciplines integral to the conceptualization, design, development, and production of music technology software, hardware, and equipment. A sample set of these fields includes acoustics, acoustical engineering, electrical engineering, computer science and technology, digital sound processing, and the mathematics required to learn and apply the content of these fields. Advanced knowledge of two or more specific fields of music work in terms of software, hardware, and equipment needs is essential. The ability to conceive and design viable basic solutions to one or more kinds of engineering problems is essential.
- Opportunities to work with a variety of musical genres and styles are strongly recommended.
- Demonstrate associated professional skills through internships in industry or the equivalent.
- Produce a final project demonstrating competence in at least one area of music technology areas at a professional level.

Upon completion of the Music Technology B.M degree, students must demonstrate the following results:

- Achievement of professional, entry-level competence in the major area, including significant technical mastery, capability to produce work and solve professional problems independently, and a coherent set of artistic/intellectual goals that are evident in their work.

- The ability to form and defend value judgments about music, and to communicate musical ideas, concepts, and requirements to professionals and laypersons related to the practice of the major field.

Upon completion of the Music Technology B.M degree, students should have the following opportunities to:

- Gain a basic understanding of the nature of professional work in their major field. Examples are: organizational structures and working patterns; artistic, intellectual, economic, technological, and political contexts; and development potential.
- Acquire skills necessary to assist in the development and advancement of the careers of students, normally including basic competency development in communication, presentation, business, and leadership, all with particular regard to professional practices in their major field.
- Develop teaching skills, particularly as related to their major area of study.
- Continue to develop improvisational skills whether as an aspect of composition, musicianship, or performance studies.
- Experience a broad range of repertory through attendance at events such as recitals, concerts, opera and music theatre productions, and other types of performances.
- Develop an awareness of copyright, licensing, and permission requirements as they relate to access to and use of musical works.
- Explore areas of individual interest related to music in general or to the major. Examples are music bibliography, notations, aesthetics, acoustics, performance practices, specialized topics in history, musicology, ethnomusicology, analysis, and technology.
- Explore multidisciplinary issues that include music.
- Practice synthesis of a broad range of musical knowledge and skills, particularly through independent study that involves a minimum of faculty guidance, where the emphasis is on evaluation at completion