

MUSIC TECHNOLOGY

MASTER OF MUSIC PROGRAM (33 CREDITS)

The Master of Music in Music Technology builds upon the strong foundation of an undergraduate degree in music. Students can expect a rigorous graduate-level learning environment where they will use many hardware and software technologies to produce a variety of creative and strategic musical projects. Research, analysis, evaluation, and interpretation of current and trending topics, texts, and human interaction with music will advance critical thinking skills. Students will have the opportunity to more fully define their Christian world-view and functional leadership skills as part of the program, both in theory and practice.

The program may be completed in 33 credit hours total. The degree may be earned in three summers or in a traditional two-year approach. Each course is 3 credit hours except applied-performance courses, which vary from 1 to 2 credits each.

PROGRAM REQUIREMENTS - ALL TRACKS

MUS 510	Research Methodology	Applied Performance - Choose three credits
MUS 515	Research Project	MTN 580 Applied Mixing
MTN 595	Foundations of Music Technology	MUS 690 Composition (Required for composition track. Permission required for others)
Music Theory Course - Choose one		MUS 800 Applied Conducting
MUS 520	Advanced Chromatic Harmony	MUS 821 Applied Music Instruction - Piano
MUS 535	Composition and Arranging for School Bands	MUS 831 Applied Music Instruction - Organ
MUS 560	Analysis of Beethoven Piano Sonatas	MUS 841 Applied Music Instruction - Voice
Music History Course - Choose one		MUS 851 Applied Music Instruction - Guitar
MUS 525	History of Jazz	MUS 861 Applied Music Instruction - Percussion
MUS 530	Seminar in Music History	MUS 871 Applied Music Instruction - Woodwinds
		MUS 881 Applied Music Instruction - Brass
		MUS 891 Applied Music Instruction - Strings

ADDITIONAL REQUIREMENTS BY TRACK

COMPOSITION TRACK	EDUCATION TRACK	PRODUCTION TRACK
MUS 690 Composition	MED 510 Notation, Production, and Instruments	MTN 530 Advanced Sequencing and Music Production
MTN 530 Advanced Sequencing and Production	MED 520 Multimedia and Instructional Applications	MTN 540 Digital Audio
MTN 540 Digital Audio	MED 530 Integrating Technology into the Music Curriculum	MTN 545 Pro Tools User
MTN 545 Pro Tools User		MTN 551 Pro Tools Operator
Choose one	Choose one	MTN Elective
MTN 510 Advanced Notation (Finale)	MTN 510 Advanced Notation	Recommended: MTN 535 Sound Reinforcement
MTN 511 Sibelius Certification	MTN 520 Electronic Instruments	
	MTN 530 Advanced Sequencing and Music Production	
	Choose one	
	MTN 540 Digital Audio	
	MTN 545 Pro Tools User	
	MTN 550 Digital Video	

PROGRAM STUDENT LEARNING OUTCOMES

1. Students will creatively and effectively express music and communicate ideas through the use of music technology.
2. Students will perform quality academic research in the field of music technology using the most advanced and up to date scholarly works on music technology, and prepare them for entry into additional degree programs and doctoral studies.
3. Students will demonstrate interpersonal skills by leading and collaborating in music technology settings.
4. Students will integrate music technology knowledge and practice within the framework of Christian values and a Christian worldview.
5. Students will develop music ministry, education, and performance in schools, churches, and the broader community.

Additional specific goals for each track in the degree program are as follows:

COMPOSITION TRACK

After completing the Composition track in Music Technology, students will:

1. Apply the historical, philosophical, and research concepts of music technology to the practice of musical composition.
2. Master the technologies useful in the composition of music including the following: notation, music and video production.
3. Produce compositions integrating audio, video, and multimedia.
4. Present a capstone recital of original compositions developed in conjunction with their advisor.
5. Create a written description of their capstone project from a historical, descriptive, or research perspective.

EDUCATION TRACK

After completing the Education track in Music Technology, students will:

1. Apply the historical, philosophical, and research concepts of music technology to the practice of musical education.
2. Master the technologies useful in the music classroom including the following: notation, music production, electronic instruments, instructional software, multimedia, course systems including distance learning, and computer systems operation.
3. Produce audio, video, multimedia and print materials for the music classroom using music technology.
4. Effectively integrate music technologies including instructional software and programs which can be used to enhance instruction into the teaching of all areas of the music curriculum.
5. Complete a capstone project in curriculum development, education research, or other topic in music technology as directed by their advisor.
6. Create a written description of their capstone production project from a historical, descriptive, or research perspective.

PRODUCTION TRACK

After completing the Production track in Music Technology, students will:

1. Apply the historical, philosophical, and research concepts of music technology to the practice of musical production.
2. Plan, setup, record, edit, and produce audio and video musical productions using consumer and professional equipment in a manner that yields a professional and artistically satisfying result.
3. Complete production projects in which they indicate their ability to inspire and motivate musicians.
4. Complete production projects indicating their ability to create and work with a variety of audio and video media.
5. Complete a professional quality capstone project in which the students integrate audio and/or video as directed by their advisor.
6. Create a written description of their capstone production project from a historical, descriptive, or research perspective.

COURSE DESCRIPTIONS

MUSIC EDUCATION

MED 510 Notation, Electronic Keyboards, and Music Production 3 credits

The course will cover basic skills in music notation, music production, and electronic instruments in K-12 education. Participants will explore many ways to incorporate these tools into the curriculum. The course will be taught in a hands-on environment. Satisfactory participation in class activities and successful completion of several projects will be required.

MED 520 Multimedia and Instructional Applications 3 credits

The course will cover using computer instructional software, configuring and using computers on networks and the internet, and the basics of using digital media in K-12 education. Participants will explore ways to incorporate these tools into the curriculum. The course will be taught in a hands-on environment.

MED 530 Integrating Technology into the Music Curriculum 3 credits

This course will provide a venue for creating lesson plans and study units to integrate technology into the K-12 music curriculum. Participants should be familiar with most of the common applications of music technology including music notation software, music production, the internet, and electronic instruments. Participants will incorporate music and other materials and activities from their curriculum into technology projects. The course will be taught in a hands-on environment. This course is designed for the teacher who has experience using technology as the goal is to apply the use of technology in the instructional setting. This course will not teach how to use software.

Prerequisites: MED 510 and MED 520, or completed a minimum of 2 courses in music technology, or comparable experience using music production software.

MUSIC TECHNOLOGY

MTN 510 Advanced Notation (Finale) 3 credits

This course is designed to train instrumental, choral, and classroom music specialists to use Finale for notating and printing music. Participants will learn how to input music using an external keyboard and print out scores and parts. Topics include: transposing band and orchestra parts; printing a choral score; music notation problem solving; incorporation of notation examples into word processors; composing and arranging music; and using notation software with students. Participants will bring several examples of music notation to be entered during the course.

MTN 511 Sibelius Certification 3 credits

A course designed to train instrumental, choral, and classroom music specialists to use Sibelius for notating and printing music. Participants will learn how to input music using an external keyboard and print out scores and parts. Topics include: transposing band and orchestra parts; printing a choral score; music notation problem solving; incorporation of notation examples into Word documents; composing and arranging music; and using notation software with students. Participants will bring several examples of music notation to be entered during the course. Successful completion of exams will lead to Sibelius certification.

MTN 520 Electronic Instruments 3 credits

This course is designed for the classroom, instrumental, and choral teacher who would like to explore ways to use electronic instruments and electronic keyboards in the music curriculum at the elementary and secondary level. Topics to be covered include: virtual instruments and live performance application, electronic instruments as a performance instrument, selecting an electronic instrument/keyboard, and electronic instrument labs for classroom and ensemble instruction. The course will review curriculum materials that can be used for instruction and performance in an electronic instrument lab setting.

MTN 530 Advanced Sequencing and Music Production 3 credits

This hands-on course is designed to make participants proficient in the art of sequencing a production. The material will include explanations and demonstrations of specific recording, editing and arranging techniques for creating dynamic, musical sequences in any musical style. Topics to be covered include: 1) techniques for making individual tracks sound more musical; 2) creating a balanced stereo image; 3) creating/editing drum parts; 4) using effects devices; 5) using quantization; 6) creating tempo maps; and 5) adding vocals/acoustic instruments to sequences. Participants should bring music (piano music, choral accompaniments, orchestra and band scores, etc.) to use for projects. Keyboard skills are helpful but not necessary. Evaluation will be through completion of class assignments and the submission of a final project demonstrating techniques learned in class.

Pre-requisite: MTN 540 or permission.

MTN 535 Sound Reinforcement 3 credits

This course will cover selecting, setting up and operating a sound system to achieve the best musical results. Topics include microphones, mixers, amplifiers, monitoring systems, effects, cables, wiring, acoustics, training, communications during performance, soundboard principles, and techniques for effective mixing.

MTN 540 Digital Audio 3 credits

This course explores modern techniques for recording, editing, mixing, storing, and sharing sound in digital form. Consumer grade and professional recording equipment will be used. Students will work with Apple Garage Band and Avid Pro Tools. This course is designed for the experienced computer user.

Qualified students may request permission to substitute advanced MTN courses.

MTN 545 Pro Tools User (Certification Option) 3 credits

This course explores the digital audio recording system Pro Tools. An exploration of Pro Tools principles including necessary skills to complete a Pro Tools project from initial set up to final mix. Projects including recording live instruments, MIDI sequencing of software synthesizers, or audio editing or region looping and all the key concepts and skills needed to operate a Pro Tools system at the User level will be studied. The course will cover official AVID courseware for ProTools 101 and PT 110. Successful completion of exams will lead to Pro Tools USER certification.

Pre-requisite: MTN 540 or permission.

MTN 550 Digital Video 3 credits

Digital Video covers techniques for recording, editing and storing video. Entry-level and professional recording equipment will be used. All video projects will be stored on high-quality media but videos will also be converted to compressed formats. In-service teachers who complete this course will create several videos appropriate for music instruction in the K-12 classroom. The format of the course will alternate presentations with class activities in which student progress is assessed and in which the material presented is reinforced. Evaluation will be through written homework, completion of class projects, and the submission of a final project demonstrating techniques learned in class.

MTN 551 Pro Tools Operator (Certification Option) 3 credits

The coursework covers the core concepts and skills needed to operate an Avid® Pro Tools® HD system in a professional studio environment. The main topics in this course are followed by exercises that bring the student step-by-step through the Pro Tools functions that are critical for successful work in the digital audio field. Students will have access to a Pro Tools HD software to complete the exercises. The course covers Official AVID courseware for Pro Tools 201: Pro Tools Production II and Pro Tools 210 M: Music Production Techniques. Students may achieve Pro Tools Operator Certification upon successful completion of the 201 & 210 Certification Exams.

Pre-requisites: MTN 540, MTN 546 or permission.

MTN 555 Advanced Digital Video 3 credits

Advanced Digital Video covers advanced techniques for recording, editing and storing video. Professional recording equipment will be used. All video projects will be stored on high-quality media but videos will also be converted to compressed formats. In-service teachers who complete this course will create several recordings appropriate for music instruction in the K-12 classroom. The format of the course will alternate presentations with class activities in which student progress is assessed and in which the material presented is reinforced. Evaluation will be through written homework, completion of class projects, and the submission of a final project demonstrating techniques learned in class.

Prerequisites: MTN 550

MTN 560 Multimedia Authoring 3 credits

Multimedia Authoring covers the creation of multimedia for the music classroom. Teachers who complete this course will create and use multimedia presentations and interactive lessons that are appropriate for the K-12 music classroom. Teachers will incorporate digital multimedia files including text, graphics, video, sound, and music into presentations and will incorporate interactivity into music lessons. Software to be used in the class will include a presentation program and either a stack-based or time-line authoring program. The format of the course will alternate presentations with class activities in which student progress is assessed and in which the material presented is reinforced. Evaluation will be through written homework assignments, completion of class assignments, and the submission of a final project demonstrating techniques learned in class.

MTN 570 Internet Authoring 3 credits

Interactive Internet Authoring covers the creation of interactive internet sites for the music classroom. Teachers who complete this course will create web sites that include interactive lessons which are appropriate for the K-12 music classroom. Teachers will incorporate digital multimedia files including text, graphics, video, sound, and music into their projects. Software to be used in the class will include an authoring program which allows the incorporation of interactive elements. The format of the course will alternate presentations with class activities in which student progress is assessed and in which the material presented is reinforced. Evaluation will be through written homework assignments, completion of class assignments, and the submission of a final project demonstrating techniques learned in class.

MTN 575 Distance Learning in Music 3 credits

This course provides the expertise to design and implement distance learning classes using a variety of free and commercially available tools. Topics include synchronous and asynchronous approaches, course management systems, testing, assessment, motivation, retention, media development, improving interactivity, criteria for evaluating, notable examples, and issues inherent to musical instruction.

MTN 580 Applied Mixing

Offered at all levels of instruction. Projects would include mixing small and large ensembles of classical and contemporary instruments according to the student's ability. Please see Other Charges (page 21) for fee information.

MTN 590 Music Technology for Performance 3 credits

A study of the technologies used in professional performances including media, audio, video, sound reinforcement, projection, and lighting. Includes the development of a performance incorporating a variety of types of music technology.

MTN 595 Foundations of Music Technology 3 credits

A study of the philosophical and historical fundamentals of music technology. Covers purposes of media and music technology, principles of effective communication and musical performance, criteria for defining quality, principles of organizational leadership, applicable laws, and research and concerns within the discipline.

GENERAL MUSIC

MUS 510 Research Methodology 3 credits

This course will train the student in the advanced skills of scholarly research, design, writing and documentation as a direct preparation for the final research project of the degree. An emphasis will be given to research techniques in music and music technology.

MUS 515 Research Project 3 credits

This course will consist of a major written project that reflects graduate-level research, creativity, and artistry in an area of study agreed upon and under the direct supervision of a professor who has specialization in the chosen topic of study in keeping with the degree. The final project must receive committee approval. This course requires a fee of \$770. If the project is not completed in one semester a project extension fee of \$770 will be applied each semester until project is completed.

Prerequisites: MUS 510. Fee: \$770 (applied each semester of enrollment).

MUS 520 Advanced Chromatic Harmony 3 credits

This course will provide an overview of music theory of the common practice period through the present.

Prerequisite: Sufficient score on entrance exam.

MUS 525 The History of Jazz 3 credits

To introduce the student to jazz music with an overview of historical events, music, and social impact connected to the genre. An appreciation of this music will be encouraged through the emphasis of style, genre, and form representing the performers and composers along with their respective biographical data.

MUS 530 Seminar in Music History 3 credits

This course will provide an overview of music history from earliest recorded history through the present.

Prerequisite: Sufficient score on entrance exam.

MUS 535 Composition and Arranging for School Bands 3 credits

Students will create original compositions, arrangements, and transcriptions for band. Topics will include getting works published, the process for submitting unsolicited scores to publishers; the criteria for various levels of school band music, and creating the best demo recording. Participants will compose and/or arrange pieces for students in their ensembles.

MUS 560 Analysis of Beethoven Piano Sonatas 3 credits

This course is an in-depth analysis of several of the 32 Beethoven Piano Sonatas. Special attention is given to detailed analysis of harmony, tonal design, thematic interrelationships, recurring musical ideas, use of dissonances, formal structure, and metric ambiguity. The course includes score study, a listening exam and an analysis paper.

MUS 550's Special Topics in Music 1-3 credits

The objective of these graduate-level courses is to provide students with the latest information on current topics in music. The relationship of the topic to the student's profession will be emphasized. The courses will include reading assignments, and discussion of relevant research and historical contexts. Students will be evaluated based upon participation in class, performance on assignments, and a midterm and final exam.

MUS 560's Special Topics in Music History and Music Theory 1-3 credits

The objective of these graduate-level courses is to provide students with the latest information on current topics in music history or music theory. The relationship of the topic to the student's profession will be emphasized. The courses will include reading assignments, and discussion of relevant research and historical contexts. Students will be evaluated based upon participation in class, performance on assignments, and a midterm and final exam.

MUS 570's Special Topics in Music Education 1-3 credits

The objective of these graduate-level courses is to provide students with the latest information on current topics in music education. The relationship of the topic to the student's profession will be emphasized. The courses will include reading assignments, and discussion of relevant research and historical contexts. Students will be evaluated based upon participation in class, performance on assignments, and a midterm and final exam.

MUS 580's Special Topics in Music Technology 1-3 credits

The objective of these graduate-level courses is to provide students with the latest information on current topics in music technology. The relationship of the topic to the student's profession will be emphasized. The courses will include reading assignments, and discussion of relevant research and historical contexts. Students will be evaluated based upon participation in class, performance on assignments, and a midterm and final exam.

MUS 690 Applied Composition

Lessons are structured to encourage creativity and to lead to the development of a unique individual style of composition. Initial lessons provide experiences in the style of major composers from the Baroque, Classic, Romantic, Impressionist, and Contemporary periods. Students will give attention to musical expression when writing for vocal and instrumental ensembles, and for various performers, occasions and media. Students enroll for 1 credit per semester and may repeat this course.

MUS 800 Applied Conducting

Lessons in conducting are designed to refine conducting technique and further explore choral or instrumental literature.

MUS 821 Applied Music Instruction – Piano

Lessons on piano designed to develop knowledge of literature and skills in performance and reading.

Prerequisite: Permission of instructor. Please see Graduate Tuition and Fees (page 181) for fee information.

MUS 831 Applied Music Instruction – Organ

Lessons on organ designed to develop knowledge of literature and skills in performance and reading.

Prerequisite: Permission of instructor. Please see Graduate Tuition and Fees (page 181) for fee information.

MUS 841 Applied Music Instruction – Voice

Lessons on voice designed to develop knowledge of literature and skills in performance and reading.

Prerequisite: Permission of instructor. Please see Graduate Tuition and Fees (page 181) for fee information.

MUS 851 Applied Music Instruction - Guitar

Lessons on guitar designed to develop knowledge of literature and skills in performance and reading.

Prerequisite: Permission of instructor. Please see Graduate Tuition and Fees (page 181) for fee information.

MUS 861 Applied Music Instruction - Percussion

Lessons on an instrument from the percussion family designed to develop knowledge of literature and skills in performance and reading.

Prerequisite: Permission of instructor. Please see Graduate Tuition and Fees (page 181) for fee information.

MUS 871 Applied Music Instruction - Woodwind Instruments

Lessons on an instrument from the woodwind family designed to develop knowledge of literature and skills in performance and reading.

Prerequisite: Permission of instructor. Please see Graduate Tuition and Fees (page 181) for fee information.

MUS 881 Applied Music Instruction - Brass Instruments

Lessons on an instrument from the brass family designed to develop knowledge of literature and skills in performance and reading.

Prerequisite: Permission of instructor. Please see Graduate Tuition and Fees (page 181) for fee information.

MUS 891 Applied Music Instruction - String Instruments

Lessons on an instrument from the string family designed to develop knowledge of literature and skills in performance and reading.

Prerequisite: Permission of instructor. Please see Graduate Tuition and Fees (page 181) for fee information.