Live AUDIO ENGINEERING TECHNOLOGY

AT TENNESSEE TECH

Training Students for Careers in Live Audio/Sound Reinforcement Engineering

A Partnership Program Offered by
The School of Music and
The College of Engineering

Curriculum Guide 25/26

Tennessee TECH

Come join us!

1 OUR COMMITMENT TO STUDENTS

Our goal is to provide students with the most comprehensive education possible in order to prepare them for future careers as audio engineers in the live audio/sound reinforcement industry.

2 WHAT MAKES OUR PROGRAM UNIQUE?

Most audio programs train students to work in recording studios, and the vast majority of instruction in these programs takes place in recording studios. Our program focuses the entire curriculum on audio for live events. Artists today make less income from the sale of albums and more income from the sale of concert tickets. To attract larger audiences, live shows have evolved to become stunning displays of technical complexity—requiring sophisticated production crews with higher levels of expertise and training. Industry experts report that the availability of jobs in recording studios has plummeted, while the number of jobs available in the live audio industry has grown sharply.

3 THE BEST OF BOTH WORLDS

The Live Audio Engineering Technology degree program at Tennessee Tech is the result of a partnership between the School of Music and the College of Engineering. Live Audio majors will earn a B.S. in Live Audio Engineering Technology with a minor in Electrical and Computer Engineering (ECE).

4 A NEW NAME

Our Live Audio Program was originally called, "Live Audio Arts and Sciences". Our new name (beginning Fall 2025) is "Live Audio Engineering Technology"—which more accurately reflects the academic rigor of our program.

5 WHAT KINDS OF "GIGS" DO WE DO?

Our Live Audio students provide production support for: The Golden Eagle Marching Band, TTU Jazz Ensembles, TTU Choirs, The Bryan Symphony Orchestra, select guest artists in the School of Music and select faculty and student performances.

6 QUESTIONS?

If you have any questions about Live Audio Engineering Technology at Tennessee Tech, please feel free to contact the program director, **Dr. Eric L. Harris**. He can be reached at **eharris@tntech.edu**. Please include your name, the name of the high school you attend, and a contact phone number in the email message. You may also call the **Tennessee Tech School of Music** office at **(931) 372-3161**.

FRESHMAN YEAR • INTRODUCTORY LEVEL

LIVE AUDIO ENGINEERING TECHNOLOGY • INTRODUCTORY LEVEL • YEAR 1 BASIC SYLLABUS

MUSA 2010 (Fall) **MUSA 2020 (Spring)** 2 Credit Hours Each (4 credit hours per year)

Course Description
Introductory courses in live audio (two consecutive semesters in the freshman year) will focus on the basics of electron flow (including conductors, semiconductors, and insulators), an introduction to electricity and circuits, cables and connectors, personal and crew safety, magnetism and electromagnetism, microphone designs and applications, essential math and measurements for audio engineering, and hand tools/shop tools used in live production work environments.

Laboratory Requirement
Live Audio majors will be required to work a variety of live audio production events ("gigs") throughout the semester which serve as laboratory experiences for our students. Students will be given a "gig calendar" at the beginning of each semester so that they might plan accordingly.

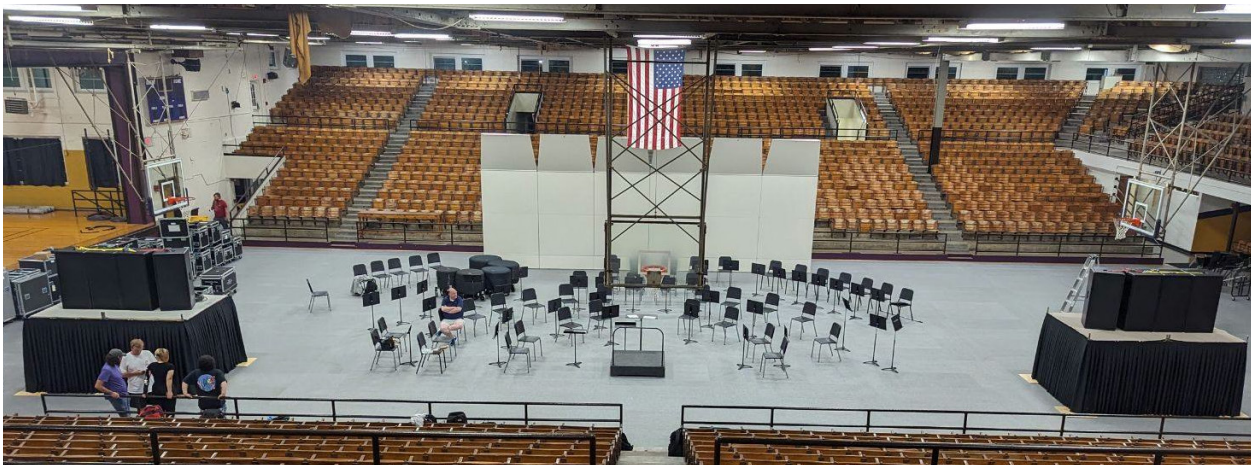
Grading
Student grades will be based upon tests, quizzes, and other class assignments as well as active participation as crew members working scheduled production events on the "gig calendar". A final exam will be required for all students.

Student Role for Production Events
First year students will assist older students (and the program director) with the load-in, set-up, tear-down, and load-out of production events for the School of Music on and off campus. Emphasis on professional collaboration as well as personal and crew safety will be stressed.

Pre-Requisites
None

Co-Requisites
Harmony 1 and 2; Aural Techniques 1 and 2.

Instruction and Assessment Methods
Lecture and hands-on instruction in class as well as at-event instruction (see/do). Students will also have reading assignments and online video-based assignments (watching and critical listening) that will be required.



Live Audio students in the early stages of setting-up concert sound for The Bryan Symphony Orchestra Children's Concerts.

SOPHOMORE YEAR • INTERMEDIATE LEVEL

LIVE AUDIO ENGINEERING TECHNOLOGY • INTERMEDIATE LEVEL • YEAR 2 BASIC SYLLABUS

MUSA 3010 (Fall) **MUSA 3020 (Spring)** 2 Credit Hours Each (4 credit hours per year)

Course Description
Intermediate courses in live audio (two consecutive semesters in the sophomore year) will focus on types of waveforms and wave propagation, the basics of architectural acoustics, the behavior of sound waves in enclosed spaces and free-field environments, the human hearing spectrum, the overtone series, how the human ear perceives sound, hearing health and safety, microphone choice and placement for all instruments, the construction and function of speaker elements (including horns and horn manifolds) and enclosures, classes and characteristics of power amplifiers, crossovers, AC power systems and generators.

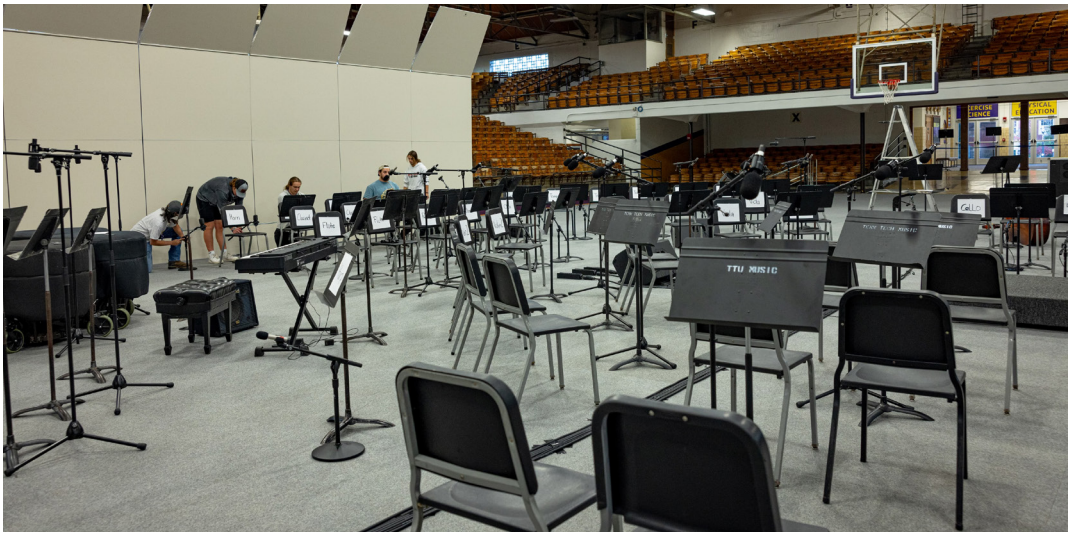
Laboratory Requirement
Live Audio majors will be required to work a variety of live audio production events ("gigs") throughout the semester which serve as laboratory experiences for our students. Students will be given a "gig calendar" at the beginning of each semester so that they might plan accordingly.

Grading
Student grades will be based upon tests, quizzes, and other class assignments as well as active participation as crew members working scheduled production events on the "gig calendar". A final exam will be required for all students.

Student Role for Production Events
Second year students will assist older students (and the program director) with the load-in, set-up, tear-down, and load-out of production events for the School of Music on and off campus. Emphasis on professional collaboration as well as personal and crew safety will be stressed.

Pre-Requisites
MUSA 2010 and MUSA 2020

Instruction and Assessment Methods
Lecture and hands-on instruction in class as well as at-event instruction (see/do). Students will also have reading assignments and online video-based assignments (watching and critical listening) that will be required.



Cabling the set for The Bryan Symphony Orchestra Children's Concerts. It takes five days to transform this beautiful old gymnasium into a concert hall that hosts three concerts for nearly 2400 public school children. A very special thanks to Dr. Christy Killman, Chair, Exercise Science.

JUNIOR YEAR • ADVANCED LEVEL

LIVE AUDIO ENGINEERING TECHNOLOGY • ADVANCED LEVEL • YEAR 3 BASIC SYLLABUS

MUSA 4010 (Fall) **MUSA 4020 (Spring)** 3 Credit Hours Each (6 credit hours per year)

Course Description
Advanced level courses in live audio (two consecutive semesters in the junior year) will focus on mixing console architecture and gain staging (DiGiCo and Yamaha platforms), equalization and tonality, dynamics processing with gates and compressors, digital effects processing with reverb and delay, understanding wireless system designs and configurations, additional coverage of tubes, transistors, electrical circuits and systems, mixing for large orchestral events, and event planning and scheduling.

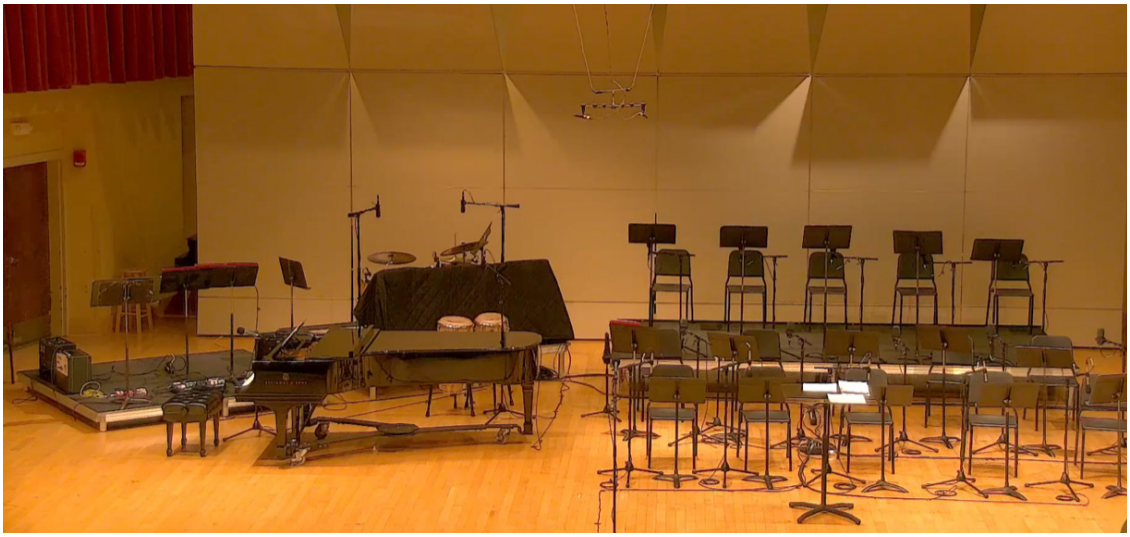
Laboratory Requirement
Live Audio majors will be required to work a variety of live audio production events ("gigs") throughout the semester which serve as laboratory experiences for our students. Students will be given a "gig calendar" at the beginning of each semester so that they might plan accordingly.

Grading
Student grades will be based upon tests, quizzes, and other class assignments as well as active participation as crew members working scheduled production events on the "gig calendar". A final exam will be required for all students.

Student Role for Production Events
Third year students will assist fourth year students (and the program director) with the planning, load-in, set-up, operation/production, tear-down, and load-out of production events for the School of Music on and off campus. Third year students will also serve as peer-mentors to first and second year students. Emphasis on professional collaboration as well as personal and crew safety will be stressed.

Pre-Requisites
MUSA 2010 and MUSA 2020, MUSA 3010 and MUSA 3020

Instruction and Assessment Methods
Lecture and hands-on instruction in class as well as at-event instruction (see/do). Students will also have reading assignments and online video-based assignments (watching and critical listening) that will be required.



The stage in Wattenbarger Auditorium is wired and ready for sound-check with the TTU Jazz Ensembles.

PROGRAM OVERVIEW • SENIOR YEAR • PROFESSIONAL LEVEL

LIVE AUDIO ENGINEERING TECHNOLOGY • PROFESSIONAL LEVEL • YEAR 4 BASIC SYLLABUS

MUSA 4030 (Fall) **MUSA 4040 (Spring)** 3 Credit Hours Each (6 credit hours per year)

Course Description

Professional level courses in live audio (two consecutive semesters in the senior year) will focus on the role of the live audio engineer as a collaborative artist, monitor mixing for performer support (including IEMs), the use of Dante, MADI, AES and other networking systems, advanced system tuning using Lake® and SMAART® software programs, audio design for systems integration installs, acoustic simulation software (such as EASE Focus®), and digital audio workstations (including Ableton® and MainStage®). Professional organizations including IATSE (International Alliance of Theatrical Stage Employees) and AES (The Audio Engineering Society) will also be introduced.

Laboratory Requirement

Live Audio majors will be required to work a variety of live audio production events ("gigs") throughout the semester which serve as laboratory experiences for our students. Students will be given a "gig calendar" at the beginning of each semester so that they might plan accordingly.

Grading

Student grades will be based upon tests, quizzes, and other class assignments as well as active participation as crew members working scheduled production events on the "gig calendar". A final exam will be required for all students.

Student Role for Production Events

Fourth year students will assist third year students (and the program director) with the planning, load-in, set-up, operation/production, tear-down, and load-out of production events for the School of Music on and off campus. Fourth year students will also serve as peer-mentors to first, second, and third year students. Emphasis on professional collaboration as well as personal and crew safety will be stressed.

Pre-Requisites

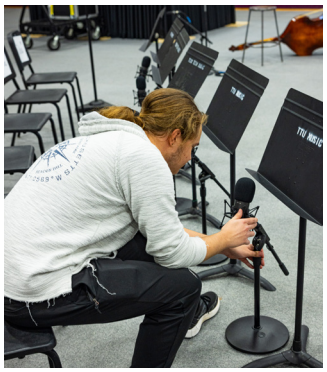
MUSA 2010 and MUSA 2020, MUSA 3010 and MUSA 3020, MUSA 4010 and MUSA 4020

Instruction and Assessment Methods

Lecture and hands-on instruction in class as well as at-event instruction (see/do). Students will also have reading assignments and online video-based assignments (watching and critical listening) that will be required.

Preparing a diesel generator before a show.

Point source speaker cabinets on scaffolding. Each box weighs 250 pounds and can use over 6000 watts of power.



Placing microphones for orchestral brasses.

MATH TRACK OPTIONS

Students in the Live Audio Engineering Technology degree will earn a minor in Electrical/Computer Engineering (ECE) as a required component of the degree. Courses in Electrical and Computer Engineering require advanced mathematics—Calculus 1 and Calculus 2.

To maximize the potential for student success in advanced math courses, two approach tracks have been developed. Students entering the Live Audio program will be asked to take the Accuplacer Math Exam. The Accuplacer Math Exam score and the student's ACT score will be used to determine which math track the student should follow.

Math Track 1—is for students who score below 260 on the Accuplacer Math Exam or have an ACT score lower than 27.

Math Track 2—is for students who score a 260–300 on the Accuplacer Math Exam and have an ACT score of 27 or higher.

Both math tracks lead to an earned minor in electrical and computer engineering and do not require extra semesters of coursework prior to graduation. One track is simply for students who are more confident in math and have had advanced mathematics in high school; the other is for students who need a thorough review of algebra and trigonometry before beginning Calculus 1.

MATH TRACK 1

Math Accuplacer Score below 260.
ACT Score below 27.

Math Track 1 is designed for students who need extra preparation in mathematics before taking Calculus 1. This track requires students to take Math 1710 (Pre-Calculus Algebra) in the fall semester of the freshman year, and Math 1720 (Pre-Calculus Trigonometry) in the spring semester of the freshman year. Both classes must be passed with a minimum grade of C before progressing to Calculus 1.

MATH TRACK 2

Math Accuplacer Score of 260–300.
ACT Score of 27 or higher.

Math Track 2 is designed for students who are stronger in mathematics. These students have typically taken calculus in high school—either as an Advanced Placement® course, or as part of a dual enrollment program at a community college. Students who place into Math Track 2 are not required to take Pre-Calculus Algebra or Pre-Calculus trigonometry. Students in Math Track 2 can take Calculus 1 during the fall semester of the freshman year and Calculus 2 during the spring semester of the freshman year.

Any student in the Live Audio degree program may choose to follow Math Track 1—even if their Accuplacer and ACT scores would allow them to enter Math Track 2.

THE ECE MINOR TRACKS

The minor in Electrical and Computer Engineering (ECE) is a required part of the Live Audio Engineering Technology degree. Students will be allowed to choose one of two ECE minors.

ECE Minor Track 1—provides a solid background in the fundamentals of electrical and computer engineering. ECE Minor Track 1 only requires Calculus 1 and Calculus 2. **Students who place in Math Track 1 must follow ECE Minor Track 1**.

ECE Minor Track 2—provides a more specialized minor in Electrical and Computer Engineering that can uniquely benefit future audio engineers. ECE Minor Track 2 requires one additional advanced math course—Differential Equations—to be taken after Calculus 1 and Calculus 2. **Students who place in Math Track 2 may choose ECE Minor Track 2 or ECE Minor Track 1.**

Track 1

Math Track 1/ECE Minor Track 1 ACT: below 27 Accuplacer: below 260

COURSE REQUIREMENTS BY SEMESTER

FRESHMAN YEAR

Fall Semester

MUS 1120	Harmony I	3
MUS 1130	Aural Techniques I	1
MUS 1011	Beginning Class Piano I	1
MUS 1013	Recital Class[5]	0
MUS 1XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
ENGL 1010	Writing I[3]	3
MATH 1710	Pre-Calculus Algebra[4] *(pre-requisite)*	3
MUSA 2010	Live Audio Introductory A	2
Semester Credit Hours Total		**15**

Spring Semester

MUS 1140	Harmony II	3
MUS 1150	Aural Techniques II	1
MUS 1012	Beginning Class Piano II[9]	1
MUS 1030	MAMM[2]	3
MUS 1013	Recital Class[5]	0
MUS 1XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
ENGL 1020	Writing II[3]	3
MATH 1720	Pre-Calculus Trigonometry *(pre-requisite)*	3
MUSA 2020	Live Audio Introductory B	2
Semester Credit Hours Total		**18**

SOPHOMORE YEAR

Fall Semester

MUS 2110	Harmony III	2
MUS 2120	Aural Techniques III	1
MUS 1013	Recital Class[5]	0
MUS 1XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
ENGL 2130	English Gen. Ed. Core[6]	3
MATH 1910	Calculus 1	4
MUSA 3010	Live Audio Intermediate A	2
Semester Credit Hours Total		**14**

Spring Semester

MUS 2130	Harmony IV	2
MUS 2140	Aural Techniques IV	1
MUS 1013	Recital Class[5]	0
MUS 1XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
Gen. Ed. Core	Natural Science[7] (Physics 2010)	4 *(Acoustics)*
MATH 1920	Calculus 2	4
MUSA 3020	Live Audio Intermediate B	2
Semester Credit Hours Total		**15**

Notes

1. Live Audio students will attend scheduled repertory classes in audio. When the audio repertory class is not in session, students may attend the repertory class for their applied instrument—but are not required to do so. Students may also perform in studio ensembles with the permission of the Live Audio Program Director and the Applied Studio Professor.
2. MUS 1030, Music Appreciation for Music Majors (MAMM), also satisfies the Humanities/Fine Arts Elective requirement shown in the fall semester of the senior year.
3. English must be taken in consecutive semesters beginning with the fall semester of the freshman year.
4. Students must take a mathematics course no later than the second semester of the freshman year.
5. Live Audio students will receive recital attendance credit for all concerts they work as crew.
6. It is recommended that Live Audio students take American Literature to satisfy the English General Education Core requirement in the fall semester.
7. Live Audio majors *must take* Physics 2010 to satisfy the Natural Science General Education Core requirement in the spring semester. *This will be a special Acoustics for Audio Engineers course created by the Physics Department*.
8. Students must make a grade of C or better in all courses assigned to the major degree program.
9. Live Audio students must take Piano I and Piano II. They are not required to take Piano III and Piano IV.

Students who pursue a **double major** in live audio and electrical engineering (ECE) will not be required to perform in a major ensemble once the music portion of their degree(s) has been completed.

Math Track 1/ECE Minor Track 1 ACT: below 27 Accuplacer: below 260

Track 1

COURSE REQUIREMENTS BY SEMESTER

JUNIOR YEAR

Fall Semester

MUS 1013	Recital Class[3]	0
MUS 3XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
Gen. Ed. Core	SPCH 2410 or PC 2500	3
Gen. Ed. Core	Natural Science[8] (Chemistry 1010)	4
ECE 2140	Intro to Digital Systems	4
MUSA 4010	Live Audio Advanced A	3
Semester Credit Hours Total		**16**

Spring Semester

MUS 3020	Music History and Literature II	3
MUS 1013	Recital Class[3]	0
MUS 3XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
Gen. Ed. Core	Social/Behavioral Sciences	3
CSC1300	Intro to Problem Solving and Computer Programming	4
ECE 3140	Digital System Design	3
MUSA 4020	Live Audio Advanced B	3
Semester Credit Hours Total		**18**

SENIOR YEAR

Fall Semester

MUS 1013	Recital Class[3]	0
Gen. Ed. Core	Humanities/Fine Arts Elective[2]	3
HIST 2010	American History I	3
ECE 2050	Circuits and Electronics I (with Lab)	4
MUSA 4030	Live Audio Professional A	3
Semester Credit Hours Total		**13**

Spring Semester

MUS 1013	Recital Class[3]	0
MUS 4010	Senior Project[4]	1
HIST 2020	American History II	3
Gen. Ed. Core	Social/Behavioral Sciences	3
ECE 3130	Microcomputer Systems (with Lab)	4
MUSA 4040	Live Audio Professional B	3
Semester Credit Hours Total		**14**

Notes

1. Live Audio students will attend scheduled repertory classes in audio. When the audio repertory class is not in session, students may attend the repertory class for their applied instrument—but are not required to do so. Students may also perform in studio ensembles with the permission of the Live Audio Program Director and the Applied Studio Professor.
2. MUS 1030, Music Appreciation for Music Majors (MAMM), also satisfies the Humanities/Fine Arts Elective requirement shown in the fall semester of the senior year.
3. Live Audio students will receive recital attendance credit for all concerts they work as crew.
4. Live Audio students will complete a Senior Project under the supervision of the program director.
5. Students must make a grade of C or better in all courses assigned to the major degree program.
6. Live Audio students *will not be required* to perform a senior recital.
7. Live Audio students who do not finish the degree in eight semesters will be required to perform with a major ensemble each semester they remain in school. They *will not be required* to take an applied lesson.
8. Live Audio students *must take* Chemistry 1010 to satisfy the Natural Science General Education Core requirement in the fall semester.
9. Live Audio students *will not take an applied lesson or play in an ensemble* during the fall or spring semesters of the senior year.

Track 2

Math Track 2/ECE Minor Track 2 Requires: ACT: 27+ Accuplacer: 260–300

COURSE REQUIREMENTS BY SEMESTER

FRESHMAN YEAR

Fall Semester

MUS 1120	Harmony I	3
MUS 1130	Aural Techniques I	1
MUS 1011	Beginning Class Piano I[8]	1
MUS 1013	Recital Class[5]	0
MUS 1XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
ENGL 1010	Writing I[3]	3
MATH 1910	Calculus 1[4]	4
MUSA 2010	Live Audio Introductory A	2
Semester Credit Hours Total		**16**

Spring Semester

MUS 1140	Harmony II	3
MUS 1150	Aural Techniques II	1
MUS 1012	Beginning Class Piano II[8]	1
MUS 1030	MAMM[2]	3
MUS 1013	Recital Class[5]	0
MUS 1XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
ENGL 1020	Writing II[3]	3
MATH 1920	Calculus 2	4
MUSA 2020	Live Audio Introductory B	2
Semester Credit Hours Total		**19**

SOPHOMORE YEAR

Fall Semester

MUS 2110	Harmony III	2
MUS 2120	Aural Techniques III	1
MUS 1013	Recital Class[5]	0
MUS 1XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
ENGL 2130	English Gen. Ed. Core[6]	3
MATH 2120	Differential Equations	3
MUSA 3010	Live Audio Intermediate A	2
Semester Credit Hours Total		**13**

Spring Semester

MUS 2130	Harmony IV	2
MUS 2140	Aural Techniques IV	1
MUS 1013	Recital Class[5]	0
MUS 1XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
Gen. Ed. Core	Social/Behavioral Sciences	3
ECE 2140	Intro to Digital Systems	4
MUSA 3020	Live Audio Intermediate B	2
Semester Credit Hours Total		**14**

Notes

1. Live Audio students will attend scheduled repertory classes in audio. When the audio repertory class is not in session, students may attend the repertory class for their applied instrument—but are not required to do so. Students may also perform in studio ensembles with the permission of the Live Audio Program Director and the Applied Studio Professor.
2. MUS 1030, Music Appreciation for Music Majors (MAMM), also satisfies the Humanities/Fine Arts Elective requirement shown in the fall semester of the senior year.
3. English must be taken in consecutive semesters beginning with the fall semester of the freshman year.
4. Students must take a mathematics course no later than the second semester of the freshman year.
5. Live Audio students will receive recital attendance credit for all concerts they work as crew.
6. It is recommended that Live Audio students take American Literature to satisfy the English General Education Core requirement in the fall semester.
7. Students must make a grade of C or better in all courses assigned to the major degree program.
8. Live Audio students must take Piano I and Piano II. They are not required to take Piano III and Piano IV.

Students who pursue a **double major** in live audio and electrical engineering (ECE) will not be required to perform in a major ensemble once the music portion of their degree(s) has been completed.

Math Track 2/ECE Minor Track 2 Requires: ACT: 27+ Accuplacer: 260–300

Track 2

COURSE REQUIREMENTS BY SEMESTER

JUNIOR YEAR

Fall Semester

MUS 1013	Recital Class[3]	0
MUS 3XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
Gen. Ed. Core	SPCH 2410 or PC 2500	3
Gen. Ed. Core	Natural Science[8] (Chemistry 1010)	4
CSC 1300	Introduction to Problem Solving and Computer Programming	4
MUSA 4010	Live Audio Advanced A	3
Semester Credit Hours Total		**16**

Spring Semester

MUS 3020	Music History and Literature II	3
MUS 1013	Recital Class[3]	0
MUS 3XXX	Private Lesson[1]	1
MUS 10XX	Major Ensemble	1
Gen. Ed. Core	Natural Science[9] (Physics 2010)	4 *(Acoustics)*
ECE 2050	Circuits and Electronics 1 (with Lab)	4
MUSA 4020	Live Audio Advanced B	3
Semester Credit Hours Total		**16**

SENIOR YEAR

Fall Semester

MUS 1013	Recital Class[3]	0
Gen. Ed. Core	Humanities/Fine Arts Elective[2]	3
HIST 2010	American History I	3
ECE 3130	Microcomputer Systems (with Lab)	4
MUSA 4030	Live Audio Professional A	3
Semester Credit Hours Total		**13**

Spring Semester

MUS 1013	Recital Class[3]	0
MUS 4010	Senior Project[4]	1
HIST 2020	American History II	3
Gen. Ed. Core	Social/Behavioral Sciences	3
ECE 4140[10]	Embedded System Design	3
MUSA 4040	Live Audio Professional B	3
Semester Credit Hours Total		**13**

Notes

1. Live Audio students will attend scheduled repertory classes in audio. When the audio repertory class is not in session, students may attend the repertory class for their applied instrument—but are not required to do so. Students may also perform in studio ensembles with the permission of the Live Audio Program Director and the Applied Studio Professor.
2. MUS 1030, Music Appreciation for Music Majors (MAMM), also satisfies the Humanities/Fine Arts Elective requirement shown in the fall semester of the senior year.
3. Live Audio students will receive recital attendance credit for all concerts they work as crew.
4. Live Audio students will complete a Senior Project under the supervision of the program director.
5. Students must make a grade of C or better in all courses assigned to the major degree program.
6. Live Audio students *will not be required* to perform a senior recital.
7. Live Audio students who do not finish the degree in eight semesters will be required to perform with a major ensemble each semester they remain in school. They *will not be required* to take an applied lesson.
8. Live Audio students *must take* Chemistry 1010 to satisfy the Natural Science General Education Core requirement in the fall semester.
9. Live Audio students *must take* Physics 2010 to satisfy the Natural Science General Education Core requirement in the spring semester. *This will be a special Acoustics course created by the Physics Department.*
10. Live Audio students *will not take an applied lesson or play in an ensemble* during the fall or spring semesters of the senior year.
11. The following classes may be substituted for ECE 4140, depending on the student's interest. Both classes require Differential Equations as a pre-requisite. Choosing either of these options will result in a spring semester credit hour total of 14—rather than the 13 shown above.

CHOOSE ONE:

ECE 3050 Circuits and Electronics II (with Lab)..... 4 Credits
ECE 3330 Signals and Systems (with Lab)..... 4 Credits

ADMISSIONS CHECKLIST FOR LIVE AUDIO

Students who are interested in pursuing the B.S. in Live Audio Engineering Technology should:

1. ☐ Be enrolled in your high school band, choir, or orchestra program for a minimum of three consecutive years or have taken *weekly* private piano, guitar, or voice lessons for a minimum of three consecutive years. The Live Audio Engineering Technology program is housed in the School of Music at Tennessee Tech and students will be registered as music majors.
2. ☐ Contact the program director, Dr. Eric L. Harris, and schedule a campus visit: **eharris@tntech.edu**
3. ☐ Take the ACT. A minimum composite score of 22 is recommended for students seeking to enter the Live Audio Arts and Sciences Program.
4. ☐ Complete an application for admission to Tennessee Tech University. (The earlier, the better.)
5. ☐ Complete a scholarship application for Tennessee Tech University. ***This application is separate from the application for admission to the university.*** In order to be eligible for scholarship awards, this application must be completed in ScholarWeb.
6. ☐ Schedule a scholarship audition for the School of Music in the spring semester of your senior year. The dates for these auditions are posted on the School of Music web page: **tntech.edu/music**

PHYSICAL SAFETY

The field of live audio requires physical stamina, working long hours, and the ability to individually lift loads of up to forty pounds to chest height. Students must be able to follow highly specific instructions, to move, think, and problem solve quickly, to readily accept constructive criticism, to communicate clearly, and to work well with others. Live Audio students will frequently be required to participate in the set–up and tear–down of large, sometimes heavy audio equipment—including staging, line array towers, large road cases, rigging, and cabling. You will also be required to load and unload large trucks as a member of a crew, and to work safely with load control bars, cargo ramps, large rolling platforms, and hydraulic lifts. (Students must be able to climb steep stairs and ladders.) Students will be exposed to sound equipment that can produce high sound pressure levels (loud volume) and may be required to wear hearing protection in some environments. Hard hats may be required when audio or lighting equipment is being "flown" (suspended overhead by motors, chains, trusses, and spanset straps). Students will also be taught to work safely with, and in close proximity to AC power distribution systems for live audio and lighting equipment (including fueled generators).

TIME MANAGEMENT

Live Audio students have the opportunity to work and study in one of the most unique academic programs on our campus. Our students spend their time with one foot firmly planted in the School of Music—studying the arts, and the other foot firmly planted the College of Engineering—studying applied sciences and mathematics. This requires that students keep a detailed personal calendar with all important dates listed. It also requires that students maintain a disciplined personal study schedule. Music, math, science, and engineering courses cover concepts and skills that cannot be "crammed" at the last minute. Just as musicians need to practice every day (five to six hours per week is recommended for Live Audio students), it is also recommended that time be spent every day studying math and science. This can include reviewing lecture notes, working extra practice problems, or attending tutoring sessions and study groups. Attending class is also essential. It is unwise to skip classes in any of the fields related to your major (and skipping *any* class should be a rarity). Study groups with one or two friends can be highly beneficial. With careful planning and hard work, students can succeed and excel in their academic studies.