This master course syllabus is meant simply as a guide and overview of the course. Each instructor will further clarify their criteria for grading, classroom procedures, attendance, exams and dates, etc. on his/her course syllabus.

Course Title: MST-1330 Studio Maintenance
Credits: 3
Class Hours: 2 Class Hours, 2 Lab Hours
Course description from catalog including prerequisites and co-requisites. An introduction to studio maintenance. Topics include basic electronics, troubleshooting equipment problems, soldering techniques and the use of test equipment.

Instructor Information:
Name:
Email:
Office Phone:
Office Location:

Textbook and Other Materials:
Reference Materials: TBD
Supplies: TBD

Course Outcomes:
Upon successful completion of this course, students should be able to:
1. Troubleshoot common recording studio problems and choose appropriate solutions.
2. Analyze recording systems for proper setup, signal flow, and gain structure.
3. Demonstrate the proper use of tools, soldering equipment, and test instruments.
4. Identify proper performance of audio equipment using test instruments.
5. Demonstrate proper safety procedures.
Course Competencies:
The following are detailed course competencies intended to support the course outcomes:

1. Solder XLR connectors to industry specifications.
2. Solder RCA connectors to industry specifications.
3. Solder 1/4” TRS connectors to industry specifications.
4. Solder 1/4” TS connectors to industry specifications.
5. Solder stereo headphone connectors to industry specifications.
6. Solder D-sub connectors to industry specifications.
7. Solder patchbay jackfields to industry specifications.
8. Perform continuity checks and interpret the results.
9. Interpret basic audio specifications.
10. Demonstrate the effective use of a multi-meter.
11. Demonstrate the effective use of an oscilloscope.
12. Given a misaligned analog tape recorder, align the recorder to industry specifications.
13. Without notes or other materials, accurately identify common audio cables and connectors.
14. Without notes or other materials, identify the components and peripherals common to modern day computers.
15. Without notes or other materials, define acoustical and electrical phase and the effect they have on recording quality.
16. Without notes or other materials, specify the various forms of digital sync and the technical considerations an engineer faces when working with digital audio devices.
17. Without notes or other materials, specify the various forms of SMPTE Time Code and the technical considerations an engineer faces when working with SMPTE.
18. Without notes or other materials, accurately explain the effect that proper and improper grounding practices has on audio sound quality.
19. Using notes and provided materials, articulate the effect that the acoustical properties of recording, mixing, and performance spaces has on aural perception.
20. Given the proper tools, demonstrate standard labeling and documentation methods and techniques.
22. Without notes or other materials, explain the purpose of power supplies.
23. Given hypothetical and real world situations, troubleshoot basic audio and computer problems.
24. Demonstrate proper use of soldering equipment.
25. Without notes or other materials, identify common audio schematic symbols.
26. Without notes or other materials, identify the basic principles of dynamic, ribbon, and condenser microphones.
27. Without notes or other materials, describe how dynamic speakers function.
28. Without notes or other materials, describe how digital devices convert sound to digital data.
29. Without notes or other materials, describe how magnetic recording heads work.
The following are general education competencies intended to support the course outcomes:

**Topics to Be Covered:**

1. The need for studio maintenance
2. Basic DC circuits
3. Ohm’s Law. Series and Parallel circuits
4. Lab: Basic DC measurements
5. Basic AC Circuits
6. Lab: Viewing Audio on an Oscilloscope
7. Electrical Components
8. Scientific Notation
9. Human Hearing and audio theory
10. The deciBel
11. Power supplies
12. Lab: rectifiers and capacitors
13. Amplifiers and Pads
14. Lab: Power Amplifiers
15. Balanced and unbalanced circuits
16. Connectors
17. Effects of bad connections on performance and sound
18. Lab: soldering basics
19. Equipment interconnection
20. Recording Console Signal Flow and Gain Structure
21. Tape and Disc Recording
22. Lab: tape machine alignment
23. Outboard Equipment
24. Lab: performance measurements
25. Emergency Procedures

**Course Assessments:**

The following performance assessments will be used to demonstrate students’ understanding, knowledge and skills:

Exams, quizzes, labs, and in-class activities

**Grading Policy:**

<table>
<thead>
<tr>
<th>GRADING CRITERIA</th>
<th>(% of Final Grade)</th>
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<tbody>
<tr>
<td>Review 1</td>
<td>10%</td>
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<tr>
<td>Review 2</td>
<td>10%</td>
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<tr>
<td>Mid-term</td>
<td>25%</td>
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<tr>
<td>Final</td>
<td>25%</td>
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<tr>
<td>Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Proficiency (Mic Cable)</td>
<td>20%</td>
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</tbody>
</table>
Grading Scale:
A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F = 0-59%
FA (see below)
FN (see below)

Per TBR policy, a student who does not officially drop or withdraw from a course, but receives a failing grade, will receive an “FA” if the last day of attendance was earlier than two-thirds into the part-of-term. That date equates to the last day to withdraw from the course.

An FN is awarded to students who never attended class.

Late Work Policy & Make-up Procedures for Missed Assignments and Work:
Each instructor will provide policy.

Attendance Policy
A student is expected to attend all scheduled classes and laboratories. Absences in a course may affect a student's final grade. The student is responsible for all assigned work in the course regardless of excused or unexcused absences. Tardiness may also affect a student's final grade.

D2L Brightspace/NSOnline and myNSCC email
It is the student's responsibility to check D2L and MyNSCC email on a regular basis. These are the official communication channels between the college and students. Students are responsible for the information communicated through those channels. D2L contains specific course information and MyNSCC contains information important for other purposes.

Technology Statement
Nashville State's classes are considered to be web-enhanced. Faculty have an expectation that students will use a computer and the Internet to complete assignments, engage in online discussions, and access various course materials through Desire2Learn (D2L) course shells. Computers are available for student use at each campus during campus open hours.

ADA Compliance Statement
Nashville State complies with the Americans with Disabilities Act. If you wish to request any special accommodations for any courses in which you are enrolled, contact the Access Center at 615.353.3741 or 615.353.3721.

Classroom Misconduct
Nashville State Community College has a zero tolerance policy for disruptive conduct in the classroom. Students whose behavior disrupts the classroom will be subject to disciplinary sanctions. The Nashville State Student Code of Conduct policy is available at https://s3.amazonaws.com/nscc.edu/PDFs/dean-students/Student_Code_of_Conduct_Policy.pdf
Please be aware that children are not allowed in class or unattended on campus.

**Academic Misconduct**

Any form of academic dishonesty, cheating, plagiarizing, or other academic misconduct is prohibited. Students are responsible for understanding and aiding by the Academic Misconduct Policy in the Nashville State Student Code of Conduct that can be found at https://s3.amazonaws.com/nscc.edu/PDFs/dean-students/Student_Code_of_Conduct_Policy.pdf

In addition to other possible disciplinary sanctions that may be imposed through regular college procedures as a result of academic dishonesty the instructor has the authority to assign an “F” or a “Zero” for the exercise, paper, or examination or to assign an “F” for the course. Students may appeal through the appropriate college grade appeal procedures.

**Academic Early Warning System**

Nashville State Community College has implemented an Early Warning System to notify students via e-mail about academic problems such as poor classroom attendance, poor performance on assignments/tests, poor communication skills, late/missing assignments, and/or lack of classroom participation. *Please note that Early Warning Alerts do not affect a student’s academic standing.

**RAVE Emergency Alert System**

Emergency events can happen at any time and Nashville State Community College wants to be able notify students if and when they occur. For this reason, all students have been enrolled in the free RAVE alert system. If you have not already done so, please log in at https://getrave.com/login/nscc to confirm and update your contact information and notification preferences. It is critical that your information be correct so that you will receive any emergency notifications. Your RAVE Username is your NSCC email address. If you've never received an email from RAVE with your password, or if you need to reset your password, select “Forgot your password?” and a new password will be emailed to you. Should the RAVE system indicate “user not found”, select Register and create your own RAVE account.

**Inclement Weather Policy**

Nashville State will use the RAVE alert system to send a text message to students, staff, and faculty about adjusted hours of operation and/or closings at individual campuses. All students should check the Nashville State web site home page at www.nscc.edu for announcements on campus closures, which may vary from campus to campus. Campus closures will also be announced on local television stations.

When classes are cancelled, an online assignment will be posted in NS Online. Check NS Online for a message from your instructor regarding your online assignment requirements.

Students should use their own best judgment in determining whether to report to campus during inclement weather when classes are not cancelled.
Class Cancellation Policy
If the class is cancelled, the instructor will notify all students by posting in the NSOnline/D2L course, e-mailing through NSOnline/D2L, and/or by posting a sign on the classroom door. In the event of class cancellation, students must access NSOnline/D2L to complete classwork and the assignment that will be posted in the course D2L site.