

1. General Information

1a. Submitted by the College of: FINE ARTS

Date Submitted: 5/22/2013

1b. Department/Division: Fine Arts - Music

1c. Contact Person

Name: Diana Deen

Email: deen@uky.edu

Phone: 859-266-4167

Responsible Faculty ID (if different from Contact)

Name: David Sogin

Email: sogin@uky.edu

Phone: 859-257-1038

1d. Requested Effective Date: Specific Term/Year ¹ Summer 2013

1e. Should this course be a UK Core Course? Yes

Inquiry - Nat/Math/Phys Sci

2. Designation and Description of Proposed Course

2a. Will this course also be offered through Distance Learning?: Yes ⁴

2b. Prefix and Number: MUS 140

2c. Full Title: Acoustics of Music

2d. Transcript Title:

2e. Cross-listing:

2f. Meeting Patterns

LECTURE: 1

LABORATORY: 2

DISCUSSION: 1

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 3

2i. Is this course repeatable for additional credit? No

If Yes: Maximum number of credit hours:

If Yes: Will this course allow multiple registrations during the same semester?

2j. **Course Description for Bulletin:** In this class you will investigate the basic principles relating to the nature and production of musical sound. An understanding of these principles will enable you to make meaningful comparisons among sounds, appreciate how the characteristics of sound are dependent on the way it is created, and apply your knowledge in making health conscious decisions concerning the sound environment in which you live. In addition, you will gain some understanding of the acoustical principles in the design of instruments and performance spaces.

2k. Prerequisites, if any:

2l. Supplementary Teaching Component:

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Winter,

Will the course be offered every year?: Yes

If No, explain:

5. Are facilities and personnel necessary for the proposed new course available?: Yes

If No, explain:

6. What enrollment (per section per semester) may reasonably be expected?: 60

7. Anticipated Student Demand

Will this course serve students primarily within the degree program?: No

Will it be of interest to a significant number of students outside the degree pgm?: Yes

If Yes, explain: [var7InterestExplain]

8. Check the category most applicable to this course: Traditional – Offered in Corresponding Departments at Universities Elsewhere,

If No, explain:

9. Course Relationship to Program(s).

a. Is this course part of a proposed new program?: No

If YES, name the proposed new program:

b. Will this course be a new requirement for ANY program?: No

If YES, list affected programs:

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500?: No

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from 10.a above) are attached: Yes

Distance Learning Form

Instructor Name: Diana Deen

Instructor Email: deen@uky.edu

Internet/Web-based: Yes

Interactive Video: No

Hybrid: No

1. How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations? Weekly assignments will include discussion board questions (see Syllabus Appendix: Sample Discussion Questions, pages 12-13) Group assignments will also provide for interaction between students and faculty (see Syllabus Appendix: What is scientific inquiry, pg 9), How loud is loud?, pg 10, and Musical Expectations, pg 11). An Ask the Instructor discussion forum will be monitored daily by the professor for questions that do not fit in any of the other forums. The syllabus conforms to the University Senate Syllabus Guidelines and is designed for the online environment.

2. How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc. The course was designed for an online delivery method. However, assignments were designed such that, if funds become available, the course could also be offered as a hybrid course with the lectures online and class activities to include discussions and some group work on assignments and experiments.

3. How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc. The course will be delivered through Blackboard requiring a password to access the course materials. Unit quizzes will be required, but they will be open-book and can be taken up to three times, therefore, the use of proctors is not needed. Since written reports are based on experimental data, it would be difficult for the students to find the specific material online. However, random checks of the reports will be conducted for plagiarism.

4. Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above? no

If yes, which percentage, and which program(s)? 0%, no program

5. How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting? See Syllabus: pages 3-4, Technology Requirements and Distance Learning Library Services.

6. How do course requirements ensure that students make appropriate use of learning resources? Web addresses will be provided for online readings. Several assignments require use of other online resources. Discussion regarding validity of online resources is part of the class.

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program. Field work (experiments) for this class will require equipment that can be downloaded on cell phones, laptops, or tablets (PCs or iPads). Instructions for finding the resources are provided for the students. Links to other types of online resources (i.e., Flash interactive programs and YouTube videos) will be provided.

8. How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (<http://www.uky.edu/UKIT/>)? Some basic information is covered in the Syllabus (pg 3), including links to these resources. More information will be covered in the START HERE section of the Blackboard course. Individual questions can be posted to the Ask the Instructor discussion forum.

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? YES

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology. The course will use Blackboard and possibly Adobe Connect Pro for virtual meetings with students.

10. Does the syllabus contain all the required components? YES

11. I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name: Diana Deen

Courses	Request Tracking
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New Course Form

https://myuk.uky.edu/sap/bc/soap/rfc?services=

Open in full window to print or save

Generate F

Attachments:

Browse...

Upload File

ID	Attachment
Delete 810	Distance Learning Form.doc
Delete 811	Interfactual Inquiry Natural Physical Mathematic
Delete 813	MUS 140 - Overview.pdf

First 1 2 Last

Select saved project to retrieve...

Get New

(*denotes required fields)

1. General Information

- a. * Submitted by the College of: FINE ARTS Today's Date: 5/22/2013
- b. * Department/Division: Fine Arts - Music
- c.
 - * Contact Person Name: Diana Deen Email: deen@uky.edu Phone: 859-266-4167
 - * Responsible Faculty ID (if different from Contact) David Sog'n Email: sog'n@uky.edu Phone: 859-257-1038
- d. * Requested Effective Date: Semester following approval OR Specific Term/Year Summer 2013
- e. Should this course be a UK Core Course? Yes No

If YES, check the areas that apply:

- Inquiry - Arts & Creativity Composition & Communications - II
- Inquiry - Humanities Quantitative Foundations
- Inquiry - Nat/Math/Phys Sci Statistical Inferential Reasoning
- Inquiry - Social Sciences U.S. Citizenship, Community, Diversity
- Composition & Communications - I Global Dynamics

2. Designation and Description of Proposed Course.

- a. * Will this course also be offered through Distance Learning? Yes No
- b. * Prefix and Number: MUS 140
- c. * Full Title: Acoustics of Music
- d. Transcript Title (if full title is more than 40 characters):
- e. To be Cross-Listed with (Prefix and Number):
- f. * Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours for each meeting pattern type.

1 Lecture	2 Laboratory ¹	Recitation	1 Discussion
Indep. Study	Clinical	Colloquium	Practicum
Research	Residency	Seminar	Studio
Other	If Other, Please explain:		
- g. * Identify a grading system: Letter (A, B, C, etc.) Pass/Fail Graduate School Grade Scale
- h. * Number of credits: 3
- i. * Is this course repeatable for additional credit? Yes No
 - If YES: Maximum number of credit hours:
 - If YES: Will this course allow multiple registrations during the same semester? Yes No

j. * Course Description for Bulletin:

In this class you will investigate the basic principles relating to the nature and production of musical sound. An understanding of these principles will enable you to make meaningful comparisons among sounds, appreciate how the characteristics of sound are dependent on the way it is created, and apply your knowledge in making health conscious decisions concerning the sound environment in which you live. In addition, you will gain some understanding of the acoustical principles in the design of instruments and performance spaces.

k. Prerequisites, if any:

l. Supplementary teaching component, if any: Community-Based Experience Service Learning Both

3. * Will this course be taught off campus? Yes No

If YES, enter the off campus address:

4. Frequency of Course Offering.

a. * Course will be offered (check all that apply): Fall Spring Summer Winter

b. * Will the course be offered every year? Yes No

If No, explain:

5. * Are facilities and personnel necessary for the proposed new course available? Yes No

If No, explain:

6. * What enrollment (per section per semester) may reasonably be expected? 60

7. Anticipated Student Demand.

a. * Will this course serve students primarily within the degree program? Yes No

b. * Will it be of interest to a significant number of students outside the degree program? Yes No

If YES, explain:

This course fulfills the Inquiry in the Natural/Physical/Mathematical Sciences requirements for undergraduates.

8. * Check the category most applicable to this course:

Traditional – Offered in Corresponding Departments at Universities Elsewhere

Relatively New – Now Being Widely Established

Not Yet Found in Many (or Any) Other Universities

9. Course Relationship to Program(s).

a. * Is this course part of a proposed new program? Yes No

If YES, name the proposed new program:

b. * Will this course be a new requirement for ANY program? Yes No

If YES, list affected programs:

10. Information to be Placed on Syllabus.

a. * Is the course 400G or 500? Yes No

If YES, the differentiation for undergraduate and graduate students must be included in the information required in 10.b. You must include: (i) identification of add assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR 3.1.4.)

b. * The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from 10 attached.

Distance Learning Form

This form must accompany every submission of a new/change course form that requests distance learning delivery. This form may be required when changing a course already approved for DL fields are required!

Introduction/Definition: For the purposes of the Commission on Colleges Southern Association of Colleges and Schools accreditation review, *distance learning* is defined as a to educational process in which the majority of the instruction (interaction between students and instructors and among students) in a course occurs when students and instructors are not in the same place. Instruction may be synchronous or asynchronous. A distance learning (DL) course may employ correspondence study, or audio, video, or computer technologies. A number of specific requirements are listed for DL courses. **The department proposing the change in delivery method is responsible for ensuring that the requirements are satisfied at the individual course level.** It is the responsibility of the instructor to have read and understood the university-level assurances regarding an equivalent experience for students utilizing DL. (available at <http://www.uky.edu/AUSE/Requirements.htm>).

Course Number and Prefix:	MUS 140	Date:	8/10/2012
Instructor Name:	Diana Deen	Instructor Email:	deen@uky.edu
Check the method below that best reflects how the majority of the course content will be delivered.			
Internet/Web-based <input checked="" type="checkbox"/> Interactive Video <input type="checkbox"/> Hybrid <input type="checkbox"/>			

Curriculum and Instruction

- How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Syllabus Guidelines, specifically the Distance Learning Considerations?
Weekly assignments will include discussion board questions (see Syllabus Appendix: Sample Discussion Questions, pages 12-13) Group assignments will also provide for interaction between students and faculty (see Syllabus Appendix: What
- How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, as student learning outcomes, etc.
The course was designed for an online delivery method. However, assignments were designed such that, if funds become available, the course could also be offered as a hybrid course with the lectures online and class activities to
- How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic policy; etc.
The course will be delivered through Blackboard requiring a password to access the course materials. Unit quizzes will be required, but they will be open-book and can be taken up to three times, therefore, the use of proctors is
- Will offering this course via DL result in at least 25% or at least 50%* (based on total credit hours required for completion) of a degree program being offered via any for defined above?
no
If yes, which percentage, and which program(s)?
0%, no program
*As a general rule, if approval of a course for DL delivery results in 50% or more of a program being delivered through DL, the effective date of the course's DL delivery is months from the date of approval.
- How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?
See Syllabus: pages 3-4, Technology Requirements and Distance Learning Library Services.

Library and Learning Resources

- How do course requirements ensure that students make appropriate use of learning resources?
Web addresses will be provided for online readings. Several assignments require use of other online resources. Discussion regarding validity of online resources is part of the class.
- Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.
Field work (experiments) for this class will require equipment that can be downloaded on cell phones, laptops, or tablets (PCs or iPads). Instructions for finding the resources are provided for the students. Links to other types of

Student Services

- How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or re-course, such as the Information Technology Customer Service Center (<http://www.uky.edu/ITCSC/>)?
Some basic information is covered in the Syllabus (pg 3), including links to these resources. More information will be covered in the START HERE section of the Blackboard course. Individual questions can be posted to the Ask the
- Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)?
 Yes
 No
If no, explain how students enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.
The course will use Blackboard and possibly Adobe Connect Pro for virtual meetings with students.
- Does the syllabus contain all the required components, below? Yes
 - Instructor's virtual office hours, if any.
 - The technological requirements for the course.
 - Contact information for Distance Learning programs (<http://www.uky.edu/DistanceLearning>) and Information Technology Customer Service Center (<http://www.uky.edu/ITCSC/>; 859-218-HELP).
 - Procedure for resolving technical complaints.
 - Preferred method for reaching instructor, e.g. email, phone, text message.
 - Maximum timeframe for responding to student communications.
 - Language pertaining academic accommodations:
 - "If you have a documented disability that requires academic accommodations in this course, please make your request to the University Disability Resource Center will require current disability documentation. When accommodations are approved, the Center will provide me with a Letter of Accommodation which recommended accommodations. Contact the Disability Resource Center, Jake Karnes, Director at 859-257-2754 or jakarnes@uky.edu."

- Specific dates of face-to-face or synchronous class meetings, if any.
- Information on Distance Learning Library Services (<http://www.uky.edu/libraries/dl/>)
 - Carla Cantagallo, DL Librarian
 - Local phone number: 859-257-0500, ext. 2171; long-distance phone number: (800) 828-0439 (option #6)
 - Email: dlc@catagallo.uky.edu
 - DL Interlibrary Loan Service: http://www.uky.edu/dl/cantagallo/page.php?docId=2533&ch_id=16

11. I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name: Diana Deen

Abbreviations: DLP = Distance Learning Programs ATG = Academic Technology Group Customer Service Center = 859-218-HELP (<http://www.uky.edu/UKIT/Help>)

Revised 8/09

¹²¹ Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

¹²² The chair of the cross-listing department must sign off on the Signature Routing Log.

¹²³ In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. A meeting, generally, represents at least two hours per week for a semester for one credit hour. (from SR 5.2.1)

¹²⁴ You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

¹²⁵ In order to change a program, a program change form must also be submitted.

Rev 8/09

Submit as New Proposal Save Current Changes

Distance Learning Form

This form must accompany every submission of a new/change course form that requests distance learning delivery. This form may be required when changing a course already approved for DL delivery. **All fields are required!**

Introduction/Definition: For the purposes of the Commission on Colleges Southern Association of Colleges and Schools accreditation review, *distance learning* is defined as a formal educational process in which the majority of the instruction (interaction between students and instructors and among students) in a course occurs when students and instructors are not in the same place. Instruction may be synchronous or asynchronous. A distance learning (DL) course may employ correspondence study, or audio, video, or computer technologies.

A number of specific requirements are listed for DL courses. **The department proposing the change in delivery method is responsible for ensuring that the requirements below are satisfied at the individual course level.** It is the responsibility of the instructor to have read and understood the university-level assurances regarding an equivalent experience for students utilizing DL (available at <http://www.uky.edu/USC/New/forms.htm>).

Course Number and Prefix: MUS 140	Date: 2-1-12
Instructor Name: Diana Deen	Instructor Email: deen@uky.edu
Check the method below that best reflects how the majority of course of the course content will be delivered.	
Internet/Web-based <input checked="" type="checkbox"/>	Interactive Video <input type="checkbox"/>
Hybrid <input type="checkbox"/>	

Curriculum and Instruction	
1.	<p>How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?</p> <p>Weekly assignments will include discussion board questions (see Syllabus Appendix: Sample Discussion Questions, pages 11-12) Group assignments will also provide for interaction between students and faculty (see Syllabus Appendix: What is scientific inquiry (pg 8), How loud is loud? (pg 9), Musical Expectations (pg 10). An Ask the Instructor discussion forum will be monitored daily by the professor for questions that do not fit in any of the other forums. The syllabus conforms to the University Senate Syllabus Guidelines and is designed for the online environment.</p>
2.	<p>How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.</p> <p>The course was designed for an online delivery method. Assignments were designed such that, if funds become available, the course could also be offered as a hybrid course with the lectures online and class activities to include discussions and some work on assignments and experiments.</p>
3.	<p>How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.</p> <p>The course will be delivered through Blackboard requiring a password to access the course materials. Unit quizzes will be required, but they will be open-book and can be taken up to three times. Therefore, the use of proctors is not needed. Since written reports are based on experimental data, it would be difficult for the students to find the specific material online. However, random checks of the reports will be conducted for plagiarism.</p>

Abbreviations: TASC = Teaching and Academic Support Center DL = distance learning DLP = Distance Learning Programs

Distance Learning Form


This form must accompany every submission of a new/change course form that requests distance learning delivery. This form may be required when changing a course already approved for DL delivery. **All fields are required!**

4.	<p>Will offering this course via DL result in at least 25% or at least 50%* (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?</p> <p>no</p> <p>If yes, which percentage, and which program(s)?</p> <p><small>*As a general rule, if approval of a course for DL delivery results in 50% or more of a program being delivered through DL, the effective date of the course's DL delivery will be six months from the date of approval.</small></p>
5.	<p>How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?</p> <p>See Syllabus: page 3, Technology Requirements and Distance Learning Library Services.</p>
<i>Library and Learning Resources</i>	
6.	<p>How do course requirements ensure that students make appropriate use of learning resources?</p> <p>Web addresses will be provided for online readings. Several assignments require use of other online resources.</p>
7.	<p>Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.</p> <p>Field work (experiments) for this class will require equipment that can be downloaded on cell phones or tablets (PCs or iPads). Instructions for finding the resources are provided for the students. Links to other types of online resources (i.e., Flash interactive programs and YouTube videos) will be provided.</p>
<i>Student Services</i>	
8.	<p>How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Teaching and Academic Support Center (http://www.uky.edu/TASC/index.php) and the Information Technology Customer Service Center (http://www.uky.edu/UKIT/)?</p> <p>Some basic information is covered in the Syllabus (pg 3), more complete information will be covered in the START HERE section of the Blackboard course.</p>
9.	<p>Will the course be delivered via services available through the Teaching and Academic Support Center?</p> <p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p> <p>If no, explain how students enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.</p>

Abbreviations: TASC = Teaching and Academic Support Center DL = distance learning DLP = Distance Learning Programs

Distance Learning Form

This form must accompany every submission of a new/change course form that requests distance learning delivery. This form may be required when changing a course already approved for DL delivery. **All fields are required!**

10.	<p>Does the syllabus contain all the required components, below? <input checked="" type="checkbox"/> Yes</p> <p>Instructor's <i>virtual</i> office hours, if any.</p> <p>The technological requirements for the course.</p> <p>Contact information for TASC (http://www.uky.edu/TASC/; 859-257-8272) and Information Technology Customer Service Center (http://www.uky.edu/UKIT/; 859-257-1300).</p> <p>Procedure for resolving technical complaints.</p> <p>Preferred method for reaching instructor, e.g. email, phone, text message.</p> <p>Maximum timeframe for responding to student communications.</p> <p>Language pertaining academic accommodations:</p> <ul style="list-style-type: none">○ "If you have a documented disability that requires academic accommodations in this course, please make your request to the University Disability Resource Center. The Center will require current disability documentation. When accommodations are approved, the Center will provide me with a Letter of Accommodation which details the recommended accommodations. Contact the Disability Resource Center, Jake Karnes, Director at 859-257-2754 or jkarnes@email.uky.edu." <p>Information on Distance Learning Library Services (http://www.uky.edu/Libraries/DLLS)</p> <ul style="list-style-type: none">○ Carla Cantagallo, DL Librarian○ Local phone number: 859 257-0500, ext. 2171; long-distance phone number: (800) 828-0439 (option #6)○ Email: dllservice@email.uky.edu○ DL Interlibrary Loan Service: http://www.uky.edu/Libraries/libpage.php?lweb_id=253&lib_id=16
11.	<p>I, the instructor of record, have read and understood all of the university-level statements regarding DL.</p> <p>Instructor Name: Diana Deen</p> <p>Instructor Signature: </p>

Abbreviations: TASC = Teaching and Academic Support Center DL = distance learning DLP = Distance Learning Programs

**Course Review Form
Inquiry in the Natural/Mathematical/Physical Sciences**

Reviewer Recommendation

Accept Revisions Needed

Course: MUS 140

Using the course syllabus as a reference, identify when and how the following learning outcomes are addressed in the course. Since learning outcomes will likely be addressed multiple ways within the same syllabus, please identify a representative example (or examples) for each outcome.

Course activities that enable students to demonstrate an understanding of methods of inquiry that lead to scientific knowledge and distinguish scientific fact from pseudoscience.

Example(s) from syllabus:

see Syllabus: Appendix for examples (pg 8-12)

Brief Description:

Assignment: What is scientific inquiry? (pg 8) provides an opportunity for students to identify a psuedo-experiment.

Discussion Questions 4 and 5 (pg 11-12): Music factors that increase pulse rate.

Course activities that enable students to demonstrate an understanding of the fundamental principles in a branch of science.

Example(s) from syllabus:

see Syllabus: Appendix for examples

Brief Description:

Assignment: Do you know what loud is? (pg 10) To answer this question, students must be able to integrate information from anatomy, measurements of sound pressure, standards from OSHA, physio-psychological perception of sound.

Course activities that enable students to demonstrate the application of fundamental principles to interpret and make predictions in that branch of science.

Example(s) from syllabus:

see Syllabus: Appendix for examples

Brief Description:

Assignment: How loud is your world? (pg 9) provide a chance for students to use a measurement tool to gather data to begin to predict the results of a noisy environment.

Assignment: How do I design a room for good acoustics? (pg 11) This will require students to apply their knowlegde of acoustical principles as they design a sound system for a room.

Course activities that enable students to demonstrate their ability to discuss how at least one scientific discovery changed the way scientists understand the world.

Example(s) from syllabus:
see Syllabus: Appendix for examples

Brief Description:

Assignment: Musical Expectations (pg 10) - a discussion concerning the pentatonic scale and its use in cultures throughout the world.

Concert Attendance (pg 12) - a discussion concerning various acoustic aspects of the musical performance

Course activities that enable students to demonstrate their ability to discuss the interaction of science with society.

Example(s) from syllabus:
see Syllabus: Appendix for examples

Brief Description:

Discussion Questions 6, 10, 11 (pg 12): social roles of music, advantages of hearing, and emotive properties of music

A hands-on student project is required. This project enables students to demonstrate their ability to conduct a scientific project using scientific methods that include design, data collection, analysis, summary of the results, conclusions, alternative approaches, and future studies. Describe the required student product (paper/ laboratory report) based on the hands-on project.

see Syllabus: Appendix - Research Project (pg 11)

Students will design, execute, analyze, and create a written report for an experiment as a final project for the class.

Course activities that demonstrate the integration of information literacy into the course.

Example(s) from syllabus:
see Syllabus: Appendix for examples

Brief Description:

Assignment: How do I design a room for good acoustics? (pg 11) Students will be asked to use resources on the Internet to help them design the room. They will need to identify the legitimacy of the of the resources they found and describe the search scheme used to find the information.

Reviewer's Comments

MUS 140 – Overview

MUS 140, Acoustics of Music, has long been in the U.K. catalog and provided a means of satisfying University Studies Program credit. It has not been taught recently but is being reintroduced and redesigned so that it meets the criteria for a course in the Intellectual Inquiry – Natural/Mathematical/Physical Sciences portion of the new General Education Curriculum. As part of the updating the course will be renamed: *Sound of Music: Physics & Perception*. It is anticipated that this class would be taught in sections of 45 students in both a traditional and on-line format.

The core of this course is a study of the basic principles relating to the nature and production of musical sound, in the context of music performance, acoustical characteristics of performance areas, and digital recording. The course will begin with an introduction to the scientific research and how to scientifically review research results. Further study will involve the students in designing, implementing, and analyzing research studies looking at various issues in musical acoustics.

This course has been designed to achieve the **Student Learning Outcomes** in the following ways (the wording follows that in the syllabus, which parallels the outcomes in the course template):

- 1. Define and use various methods of inquiry that lead to an understanding of musical acoustics, and distinguish scientific fact from pseudoscience.**
Throughout the course, the student will use a variety of methods to answer questions about music and acoustics, including designing experiments, use of measurement equipment or applications, data collection, data analysis, and field measurements and observations. The student will use the results of your inquiries to evaluate scientific and pseudoscientific results, discuss their characteristics, strengths, and weaknesses, and describe changes that could be made to pseudoscientific inquiry to better follow scientific inquiry methods.
- 2. Explain fundamental principles of musical acoustics.**
This course incorporates basic principles in math, physics, psychology, social psychology, and human anatomy into an exploration of musical sound and perception.
- 3. Apply principles of acoustics to interpret and make predictions.**
The student will design and complete experiments to test hypotheses about various acoustical questions.
- 4. Discuss discoveries that changed our understanding of the musical world.**
Various discoveries throughout the centuries have made changes in how we

understand music, including the theories of Pythagoras up to the use of sampling to re-create instrumental sounds.

5. Explore and discuss uses of acoustics in society.

This course looks at acoustical advancements such as the use of speakers to allow for large indoor and outdoor performance venues, health problems resulting from excessive and constant noise, and advances in music distribution through digital recording and the Internet that introduces us to world music.

6. Conduct a hands-on experiment in the field of music and acoustics.

Throughout the course, various assignments will guide the student through the steps of the scientific method, including design of an experiment, data collection, analysis, summary of the results, conclusions, alternative approaches, and future studies. These assignments will culminate in a final project in which the student will design and perform an experiment chosen from a list of various possibilities, applying each step of the scientific method. In addition, throughout the course, the student will learn to distinguish between quantitative and qualitative research.

7. Recognize when information is needed and demonstrate the ability to find, evaluate, and use sources of acoustical information.

In many ways this learning outcome is the crux of scientific inquiry, particularly with all the information available on the Internet. The student be asked to analyze and describe the validity of information on the Internet and resources. The use of this skill is a necessary part of the hands-on project.

Individual students and groups will devote a considerable portion of this course to **Active Learning** involving research of issues in musical acoustics and the design and implementation of short experiments. This will culminate in a project that will engage the student actively in the process of intellectual inquiry through the use of the scientific method.

This final research project would be suitable for use in the **Gen Ed Assessment** process.

Comment: A question was raised concerning the addition of a second faculty contact for this course. The School of Music wanted to make sure that this class was fully part of one of the divisions in the school. Since I am part-time faculty, this meant that a full-time faculty member take some ownership of the class. A decision was made that the course would fall within Music Education and David Sogin agreed to be the full-time faculty contact.