New Course Request

Check Appropriate Boxes: Undergraduate credit □ Graduate credit □ Professional credit □

1. School/Division ___________ Engineering and Technology ___________ 2. Academic Subject Code ___________ Mus ___________

3. Course Number ___________ x430 ___________ (must be cleared with University Enrollment Services) 4. Instructor ___________ Varies ___________

5. Course Title ___________ Electronic Music Ensemble ___________

Recommended Abbreviation (Optional) ___________

6. First time this course is to be offered (Semester/Year): ___________ Fall 2009 ___________

7. Credit Hours: Fixed at ___________ 1 ___________ or Variable from ___________ to ___________

8. Is this course to be graded S-F (only)? Yes ___________ No ___________ X ___________

9. Is variable title approval being requested? Yes ___________ No ___________ X ___________

10. Course description (not to exceed 50 words) for Bulletin publication:

11. Lecture Contact Hours: Fixed at ___________ 0 ___________ or Variable from ___________ to ___________

12. Non-Lecture Contact Hours: Fixed at ___________ 1 ___________ or Variable from ___________ to ___________

13. Estimated enrollment: ___________ 5-25 ___________ of which ___________ 0 ___________ percent are expected to be graduate students.

14. Frequency of scheduling: ___________ Fall, Spring ___________ Will this course be required for majors? Yes ___________

15. Justification for new course: ___________ New Bachelor Degree ___________

16. Are the necessary reading materials currently available in the appropriate library? Yes ___________

17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant. Does NOT overlap.

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by:

[Signature] ___________ Date 2/10/09 ___________

Department Chairman/Division Director ___________

[Signature] ___________ Date ___________

Dean of Graduate School (when required) ___________

Approved by:

[Signature] ___________ Date 2/10/09 ___________

Dean ___________

[Signature] ___________ Date 4/14/09 ___________

Chancellor/Vice-President ___________

University Enrollment Services ___________

Date ___________

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

University Enrollment Services Final-White; Chancellor/Vice-President-Blue; School/Division-Yellow; Department/Division-Pink; University Enrollment Services Advance - White
SYLLABUS
ELECTRONIC MUSIC ENSEMBLES
LAPTOP ORCHESTRA:
Computer Ensemble for Research

MUSIC X430
Section: TBA
Credit Hour: 1

Pre-Requisites
1. Basic understanding of MIDI.
3. Audition and permission of instructor.

Class Information
Location: [Building and room number]
Hours: [Date and Meeting Time]

Instructor Information for Mr. Jordan Munson

My Office: CE015       Music Office: IT 325
Office Hours: By Appointment       Music Office Hours: Mon.-Fri. 8-5
Phone: 317-278-3272       Music Office Phone: 317-274-4000
Email: jtmunson@iupui.edu       Music Office Fax: 317-278-2590

Required Materials
1. Personal Laptop
2. Max/MSP – Student license ($65 9-month authorization)
3. DAW software (i.e., Logic Pro, Pro-Tools)

Course Description
This course is a performance ensemble focused on the development of the computer in music performance practice, specifically in an ensemble setting. The course will focus on communication between computers on both a technical and expressive level. Programming environments such as Max/MSP will be used for their ability to process audio in real-time, and we will also be working with OSC (OpenSound Control) and MIDI protocol to network and transfer data between computers using a standard Internet connection. The course will cover external controllers such as simple MIDI devices, tablets, iPhones/iPod Touch, sensors, and others to provide an expressive interface for the computer. The culmination of the semester will
be a concert performance of new works written for the computer music ensemble during the semester.

**General Course Goals**

1. Show basic understanding of Max/MSP
2. Produce original music for a computer music ensemble
3. Show basic understanding of hardware development
4. Develop ensemble performance network over the Internet
5. Develop expressive computer music performance in an ensemble setting
6. Synthesize all objectives into a final concert.

**Specific Objectives**

Students will be able to do the following by the end of this semester:

1. Think, speak, and write clearly and effectively about music through Concert Reports. [1]
2. Hear, identify, and work conceptually with the elements of music—rhythm, melody, harmony, and structure. [8]
3. Understand compositional process, aesthetic properties of style, and the ways these shape and are shaped by artistic and cultural forces. [10]
4. Develop and defend musical judgments. [12]
5. Perform in areas appropriate to the student’s needs and interests. [13]
6. Sight-read. [8]
7. Develop improvisational skills in all areas of musicianship. [26]
8. Experience a broad range of repertory through attendance at events such as recitals, concerts, opera and music theatre productions, and other types of performances. [27]
9. Demonstrate capacity to create derivative or original music both extemporaneously and in written form. [16]
10. Understand how technology serves the field of music as a whole. [18]
11. Demonstrate a working knowledge of the technological developments applicable to their area of specialization. [19]

**Attendance Policy**

Learning to play in an ensemble is a cumulative process; each new rehearsal builds on previous rehearsals. Also, as a member of an ensemble, your fellow players are counting on you to do your part. Therefore, attendance at all class meetings is required. Understanding that emergencies do arise, students are permitted one absence. After that, student will forfeit the attendance points for any other missed class period. If a regular class meeting is missed, it is the student’s responsibility to obtain any assignments or instructions that were given by the instructor. Missing a class is NOT an excuse for not preparing for the next class meeting. **Note: If you decide to withdraw from class it is YOUR responsibility to withdraw. The university policy and calendar for withdrawal will be followed. Simply no longer attending class does not constitute withdrawal from class.**
Important Dates

February 20th: Project Lead the Way – Hands on event for High School Students. Create/run interactive multimedia installations.

April 16th: CEnSR Concert – Original works for Ensemble. 7:30 p.m. IT152

Grades

The grade you receive in this course is based on the following:

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<tr>
<td>15</td>
<td>Attendance</td>
<td>150 pts/ 15%</td>
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<tr>
<td>15</td>
<td>Preparation</td>
<td>300 pts/ 30%</td>
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<td>2</td>
<td>Concert Preparation</td>
<td>350 pt/ 35%</td>
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<tr>
<td>2</td>
<td>Concert Reports @ 100 points /10% each</td>
<td>200 pts/20%</td>
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<tr>
<td>TOTAL</td>
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<td>1000 pts/100%</td>
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Grading Scale

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<thead>
<tr>
<th>Grade</th>
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<tbody>
<tr>
<td>A+</td>
<td>1000-975</td>
<td>A</td>
<td>974-925</td>
<td>A-</td>
<td>924-900</td>
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<tr>
<td>B+</td>
<td>899-875</td>
<td>B</td>
<td>874-825</td>
<td>B-</td>
<td>824-800</td>
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<tr>
<td>C+</td>
<td>799-775</td>
<td>C</td>
<td>774-725</td>
<td>C-</td>
<td>724-700</td>
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<tr>
<td>D+</td>
<td>699-675</td>
<td>D</td>
<td>674-625</td>
<td>D-</td>
<td>624-600</td>
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<td>F</td>
<td>599 and below</td>
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Grades will not be curved. Late papers will not be accepted.

Assignments

Each student will be graded on aspects such as in-class participation, assignments relating to programming and hardware development, and performance in the culminating concert at the end of the semester as well as 2 concert reports. One concert is to be an IUPUI Sponsored event.

Late papers will not be accepted.

Concert Report Instructions
Reason: To allow students the opportunity to actively participate in live performance during the semester only. The experience of performing and listing to music live is much different from the
use of recordings, and being part of an audience can make the experience more memorable and the music more meaningful.

Verification: Remember to keep your programs and/or ticket stubs. Program and/or tickets must be included when you turn in your concert report. If no programs were handed out (which often occurs at jazz recitals and concerts), some sort of verification must be provided to prove that you actually went, such as a ticket stub or an autograph from one of the program participants with the date and location of the show also listed. If attendance verification is not turned in, a grade of 0 will be given for that essay.

Requirements: Essay should be 1 full page double spaced. Your essay need not be limited to, but should include at a minimum the following information:

- Who was performing?
- Where was the performance?
- Was it a soloist or ensemble? If ensemble, what other instruments were included?
- Was the guitarist playing electric or acoustic guitar?
- What type of music was being performed?
- What techniques did you observe? (Playing melodies, strumming chords, playing with a pick or with fingers, etc.)
- General impressions of the guitarist.
- Did you enjoy the performance? Why or why not?
- Any other information you would like to share.

**Hardware Issues/Requirements**

There are many specific hardware and networking concerns that are present when developing an ensemble of this nature:

1. The development of hemispherical speakers for each player as well as a few subwoofers for the whole group. This will be essential for the proper sonic presence of each performer in the ensemble. The sounds must be linked to the individuals such as in an acoustic ensemble. (Hemispherical Speaker System already developed by the Department of Computer Science, Princeton University is a good reference).

2. Custom-made Digital Music Instruments that incorporate the use of sensors (pressure, motion, etc.) for express performance by the performer. These should interface with software created in the Max/MSP programming environments.

3. A reliable wireless LAN (possibly with the option to be wired for worse-case scenarios) to connect all players and to transmit OSC (OpenSound Control) and MIDI information as well as other messages throughout the ensemble with low latency.

**Indiana University Policy on Academic Honesty**

- **Cheating**
  "Dishonesty of any kind with respect to examinations, course assignments, alteration of records, or illegal possession of examinations shall be considered cheating. It is the responsibility of the student not only to abstain from cheating but, in addition, to avoid the appearance of cheating and to guard against making it possible for others to cheat. Any student who helps another student to cheat is as guilty of cheating as the student he or she assists." — *Academic Handbook*
Plagiarism

"Honesty requires that any ideas or materials taken from another source for either written or oral use must be fully acknowledged. Offering the work of someone else as one's own is plagiarism."
—Academic Handbook

Disciplinary Action

"Any student found engaged in cheating, aiding in cheating, plagiarism, or any other unfair practice, will be dealt with immediately and strictly according to University policies. Only severest possible penalties will be applied." —Academic Handbook
Criteria and Strategies for Course Assessment

Prefatory Note:

The following table is structured to offer insight on how program outcomes are aligned with the Principles of Undergraduate Learning and the standards of our peer review body, the National Association of Schools of Music (NASM).

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>NASM Standards</th>
<th>PUL</th>
<th>Assessment Methods</th>
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<tbody>
<tr>
<td>Upon completion of the BSMT degree, students will be able to:</td>
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<tr>
<td>1. Think, speak, and write clearly and effectively.</td>
<td>1.</td>
<td>1a</td>
<td>Through specified class tasks that require critical thought, homework assignments, written essays and reports, and class presentations, students will be rated by peers, self-review, and instructor assessment throughout the course of study.</td>
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<td>2. Demonstrate acquaintance with mathematical and experimental methods of the physical and biological sciences; including analysis and historical and quantitative techniques</td>
<td>2.</td>
<td>1d</td>
<td>Studies for all majors will include courses in acoustics and related sciences. However, these will be determined by degree major and minor interests. Learning assessment will be related to disciplines, and departments involved with this program.</td>
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<tr>
<td>3. Address culture and history from a variety of perspectives.</td>
<td>3.</td>
<td>5a</td>
<td>Students will compose or arrange and perform according to specific parameters of delegated assignments or projects. Besides instructor evaluations, students will offer self-assessments and receive peer feedback from fellow students in class on their work.</td>
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<td>4. Understand and experience thinking about moral and ethical problems.</td>
<td>4.</td>
<td>2a</td>
<td>This is a qualitative rather than a quantitative assessment concern and will not be formally assessed. However, it is an exceptionally important issue that requires mutual understanding of many factors that do not have ready answers. In music, as in other arts, there is recognition of poignant moments that transcend words. It is called authentic performance. This will remain as one mainstay of this program and will be an integral priority of its efforts through the genuine productivity of its students – that they, as peers, will also recognize, as a basis for conveying their messages. There will also be ongoing discussions in class of general integrity related to profession of music, including business initiatives that students may undertake.</td>
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<td>5. Respect, understand, and evaluate work in a variety of disciplines.</td>
<td>5.</td>
<td>3a</td>
<td>Students will discuss, in classes, their individual areas of interest in other disciplines to enlighten peers and to uncover</td>
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<td>6. Explain and defend one's views effectively and rationally.</td>
<td>6.</td>
<td>1c 4c 5b Students will complete two capstone projects independently, including one for the music major and one for the minor. These will receive peer evaluations as well as instructor evaluations. Capstone completions will include a written self-report on lessons learned during project involvement.</td>
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<td>7. Understand and have experience with art forms other than music.</td>
<td>7.</td>
<td>4b 6b Students will discuss, in classes, their individual areas of interest in other disciplines to enlighten peers and to uncover relationships between non-music fields that impinge upon music.</td>
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<td>8. Hear, identify, and work conceptually with the elements of music - rhythm, melody, harmony, and structure.</td>
<td>8.</td>
<td>4a Students will complete two capstone projects independently, including one for the music major and one for the minor. These will receive peer evaluations as well as instructor evaluations. Capstone completions will include a written self-report on lessons learned during project involvement.</td>
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<td>9. Understand compositional process, aesthetic properties of style, and the ways these shape and are shaped by artistic and cultural forces.</td>
<td>9.</td>
<td>4a Students will be composing and arranging music throughout their undergraduate study. These will be performed and directed by each student in classes, and will receive feedback from peers, self-reflection, and instructor responses.</td>
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<td>10. Demonstrate acquaintance with a wide selection of musical literature - the principal eras, genres, and cultural sources.</td>
<td>10.</td>
<td>4a Students will compose music and perform in class in numerous genres and musical styles, ranging from those grounded in music history to those associated with today's popular idioms. They will receive peer feedback from peers, self-reflection, and instructor responses.</td>
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<td>11. Develop and defend musical judgments.</td>
<td>11.</td>
<td>2a 2b 2e Students will demonstrate their understanding of musical judgments by being required to justify their opinions in class and in written assignments through citation of the literature or logical argument.</td>
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<td>12. Perform in areas appropriate to the student's needs and interests.</td>
<td>12.</td>
<td>4a All students will demonstrate music keyboard and instrumental performance proficiency through end-of-semester juries and proficiency examinations.</td>
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<td>13. Sight read.</td>
<td>13.</td>
<td>4a All students will demonstrate sight-reading proficiency in every music class. These will be evaluated by peers and instructors. Students will construct their own exercises for weaknesses that surface in their sight-reading abilities and perform them in class.</td>
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<tr>
<td>14. Understand procedures for realizing a variety of musical styles.</td>
<td>14.</td>
<td>4a All students will demonstrate music keyboard and instrumental performance proficiency through end-of-semester juries and proficiency examinations.</td>
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<td>15. Demonstrate capacity to create derivative or original music both</td>
<td>15.</td>
<td>4a Students will be composing and arranging music throughout their undergraduate study.</td>
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<td><strong>extemporaneously and in written form.</strong></td>
<td><strong>These will be performed and directed by each student in classes, and will receive feedback from peers, self-reflection, and instructor responses.</strong></td>
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<td><strong>16. Compose and improvise at a basic level in one or more musical languages</strong></td>
<td><strong>16. 4a</strong></td>
<td><strong>All students will demonstrate music keyboard and instrumental performance proficiency through end-of-semester juries and proficiency examinations.</strong></td>
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<td><strong>17. Understand how technology serves the field of music as a whole.</strong></td>
<td><strong>17. 1e</strong></td>
<td><strong>Music technology will be imbedded through the curriculum. Students will demonstrate their knowledge of this field through assignments and performances that they undertake. They will also be able to demonstrate conceptual understanding of techniques and nomenclature related to music technology in class discussions and peer reviews of their performances.</strong></td>
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<td><strong>18. Demonstrate a working knowledge of the technological developments applicable to their area of specialization.</strong></td>
<td><strong>18. 1e</strong></td>
<td><strong>Technology will be imbedded throughout the curriculum. Students will demonstrate their knowledge of this field through assignments and performances that they undertake. They will also be able to demonstrate conceptual understanding of techniques and nomenclature related to music technology in class discussions and peer reviews of their performances.</strong></td>
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<td><strong>19. Work independently on a variety of musical problems by combining their capabilities in performance; aural, verbal and visual analysis; composition and improvisation; and history and repertory.</strong></td>
<td><strong>19. 25. 2d 4a 4b</strong></td>
<td><strong>Students will complete two capstone projects independently, including one for the music major and one for the minor. These will receive peer evaluations as well as instructor evaluations. Capstone completions will include a written self-report on lessons learned during project involvement.</strong></td>
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<td><strong>20. Form and defend judgments about music.</strong></td>
<td><strong>20. 2a 2b 2d 2e</strong></td>
<td><strong>Students will demonstrate their understanding of musical judgments by being required to justify their opinions in class and in written assignments through citation of the literature or logical argument.</strong></td>
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<td><strong>21. Acquire the tools of work with a comprehensive repertory, including music from various cultures of the world and music of their own time.</strong></td>
<td><strong>21. 5a</strong></td>
<td><strong>Students will study and compose music related to world music throughout their undergraduate musicianship sequence. These compositions will be performed in class and will be evaluated through peer response, self-reflection, and instructor evaluation.</strong></td>
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<td><strong>22. Understand basic interrelationships and interdependencies among the various professions and activities that constitute the musical enterprise.</strong></td>
<td><strong>22. 3a 3b 5b 5c</strong></td>
<td><strong>All musicianship courses will include career building skills and knowledge. Students will demonstrate their understanding of these factors through class discussion, performance of course assignments, and construction of their e-portfolios.</strong></td>
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<td><strong>23. Acquire the skills necessary to assist in the development and advancement of their careers.</strong></td>
<td><strong>23. 2a 2d 3b</strong></td>
<td><strong>All musicianship courses will include career building skills and knowledge. Students will demonstrate their understanding of these factors through class discussion, performance of course assignments, and construction of</strong></td>
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<td>24. There are teaching skills, particularly as related to their major area of study.</td>
<td>24. 4a</td>
<td>Students will teach peers in class on a regular basis through course assignments, and will receive feedback from peers and course instructors.</td>
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<td>25. Develop improvisational skills in all areas of musicianship</td>
<td>25. 4a</td>
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<tr>
<td>26. Experience a broad range of repertory through attendance at events such as recitals, concerts, opera and music theater productions, and other types of performances.</td>
<td>26. 4a</td>
<td>Students will complete concert reports and discuss in class musical events that they have attended for the purpose of sharing their experiences with others so they might be encouraged to attend similar performances.</td>
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<td>27. Explore areas of individual interest related to music in general or to the major.</td>
<td>27. 4b 5a 5b</td>
<td>Students will discuss, in classes, their individual areas of interest in other disciplines to enlighten peers and to uncover relationships between non-music fields that impinge upon music.</td>
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<tr>
<td>28. Explore multidisciplinary issues that include music.</td>
<td>28. 4b 5a 5b 5c</td>
<td>Students will discuss, in classes, their individual areas of interest in other disciplines to enlighten peers and to uncover relationships between non-music fields that impinge upon music.</td>
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<td>29. Practice synthesis of a broad range of musical knowledge and skills, particularly through independent study that involves a minimum of faculty guidance, where the emphasis is on evaluation at completion.</td>
<td>29. 2b 3b</td>
<td>Students will complete two capstone projects independently, including one for the music major and one for the minor. These will receive peer evaluations as well as instructor evaluations. Capstone completions will include a written self-report on lessons learned during project involvement.</td>
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