N355 – Intermediate Sound
Fall 2015
Section 24023, 3 Credit Hours
Room IT 270 Friday 12:00pm to 2:40pm
Indiana University School of Informatics and Computing, IUPUI

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Course Description
Pre-requisite: N255 or by instructor approval. This course covers the theory and practice of complex sound design in digital media, including how to navigate the issues and decisions facing the sound designer, as well as an understanding of DSP (digital signal processing) and sound effects techniques in designing audio for different types of new media applications. Topics will focus on digital sound techniques, recording original audio content, and arranging complex soundtracks. Other priorities include developing a fine-tuned ear for acoustic detail and implementing good habits regarding organization and documentation if audio resources. In addition, there will be advanced editing techniques discussed. Formats and conversion techniques for new media will also be covered.

In-class/Lab Projects
Students will work in the lab and in the studio (IT360) individually and in groups to learn the various roles in recording dialog, sound effects, Foley, music editing, and mixing.

External Assignments
Outside assignments will require access to computers with Pro Tools software and hardware installed. IT270 will be available by card access during normal building hours, anytime a class is not using the room. The IT building is open Monday-Thursday 7am-10pm, Friday 7am-6pm, Saturday 8am-6pm, and Sunday 11am-6pm. Students may also reserve the studio in IT360 for three-hour blocks Mon-Fri 8am-6pm. Room reservations are on the Informatics website under http://informatics.iupui.edu/technology/equipment/

Audio Equipment Checkout
Audio recording equipment is available for checkout in room IT259. The hours for checkout are limited, so make sure you plan ahead carefully. *Equipment is available on a first-come-first-served basis; all requests will be taken in the order received. Special hours for holidays and school breaks will be posted outside the door of IT 259.*
Equipment can be reserved using the form at http://informatics.iupui.edu/technology/equipment/

Course Objectives/outcomes
At the end of the semester, students should be able to:

- Define and make comprehensible the parameters related to digital signal processing
- Define hardware and software requirements used in digital signal processing
- Demonstrate and perform PC sound recording and editing

- Demonstrate successful implementation of digital signal processing for sound FX and synchronization of audio to video.
- Demonstrate successful implementation of multi-track recording with video, music and foley sound FX for new media applications
- Describe digital post-production and mastering techniques
- Discuss and demonstrate successful sound placement techniques

Principles of Undergraduate Learning (PUL) – each class should be able to assess learning outcomes in the following areas:

- Oral presentation
- Writing skills
- Critical thinking
- Application of knowledge
- Understanding of society and culture

Weekly Quizzes

There will be a quiz on the reading and/or video training assignments at the beginning of each class so you can check your comprehension of that material, before we move into discussing it in more depth. **If you miss a quiz, they cannot be made up**, so make sure you arrive to class on time!

Additional Online Material:

You will be assigned lessons from the free online course materials available from Lynda.com. You must access this material via the IU portal:

1. Visit: http://ittraining.iu.edu/lynda/
2. Click on "Go To Lynda.com"
3. Authenticate with your IU login
4. On the **Software** pull-down menu, choose "Avid"
5. Under "Pro Tools" we will use the "Pro Tools 10 Essential Training" and "Pro Tools Mixing and Mastering" courses.

More Valuable Resources:

Keep up on the latest news, trends, and technologies in audio. Two good (and free) resources are Post Magazine (a trade magazine for the post-production industry, which has a good audio section every month), and Tape Op Magazine (a recording magazine aimed at the independent market). To get your free subscriptions visit:

- Post Magazine: http://www.omeda.com/cgi-win/post.cgi?t=student
- Tape Op: http://www.tapeop.com/subscriptions/

Required Equipment and Supplies:

- Portable hard drive or USB thumb drive for storing projects (minimum 4-8 GB of free space).
- High-quality headphones with a full-ear **closed-back** circumaural design (goes **completely** around your ear). Make sure they have an 1/8" plug (or adapter). Suggested models are below, but equivalent or better headphones are fine.
    - **Acceptable models include:**
        - Yamaha RH2C ($30) or RH3C ($40)
        - AKG K77 ($50)
        - Audio Technica ATH-M20 ($40) or ATH-M40fs ($70)

        - Sennheiser HD202 ($30), HD203 ($50), HD 280 Pro ($100)
        - Shure SRH440 ($100)
        - Sony MDR 7506 (100)
    - What **NOT** to use:
        - In-ear MP3-player style headphones
        - Headphones with "enhanced bass response" or any active electronics, such as noise reduction. This includes anything from Bose, Beats by Dr. Dre, or anything that takes a battery (meaning it's got active electronics processing your audio). You want the cleanest and most accurate audio path to your ears as possible.
        - "Audiophile" headphones designed for music listening, rather than studio monitoring. These tend to be open-back design and often help music sound better, but you don't want any bias from your headphones at all.
        - Behringer makes budget headphones based almost directly on the designs of good audio equipment, but with cheap parts and poor quality.
        - Sony makes good sounding headphones, but they tend to fall apart faster than most other brands.

Samples and loops:

- \\in-info-store3.informatics.iupui.edu\classroom\music_and_sfx (Windows)
- smb://in-info-store3.informatics.iupui.edu/classroom/music_and_sfx (Mac)
- If you are off campus, you will first have to make a VPN connection to the IUPUI network. See http://uits.iu.edu/page/ajrq for details on making VPN connections.

Software Used: The primary recording platform used in this class is **Pro Tools version 12**. Pro Tools has been and continues to be the industry-standard recording platform which you will find in the vast majority of professional studios (well over 90%). Pro Tools is installed in the studio in IT360 and all of the computers in our classroom (IT270), but this classroom is in high demand during the week for other classes, and you may find it hard to use the software in the classroom at times that fit your schedule. I strongly suggest that you purchase your own copy if your schedule isn't flexible enough to find time to work in IT270. While Adobe Audition is a great entry-level tool for general audio tasks, it lacks the sophistication and functionality for professional-grade audio production. You will have a hard time achieving the level of quality and control you want in your projects for this class using entry-level tools.

Yes, software is expensive, but if you are taking advanced audio courses, you are serious enough about this sort of thing to justify making this investment. Pro Tools 10 is the most recently released version, and is fairly inexpensive at the academic price ($295 - see http://www.sweetwater.com/store/search.php?s=pro+tools+student). It works with almost any audio hardware, including whatever is built in to your computer. It requires an iLok dongle to store your software license (http://www.sweetwater.com/store/detail/iLok2). If you buy the software new, an iLok is included. One iLok can store authorizations for over 500 different pieces of software.

Class Schedule (may be updated at any time)

	DATE	IN-CLASS ACTIVITIES	ASSIGNED HOMEWORK
1	8/28	Syllabus and general overview of semester.	ProTools 101 BRING YOUR HEADPHONES EVERY WEEK
2	9/4	Audio Aesthetics - What is Sound?	SFX Editing Project
3	9/11	Workflow – Location Matters	
4	9/18	Microphones – Location Sound	
5	9/25	Hearing Sound – Making & Recording Sound	
6	10/2	Making Sound *Sound* Better	EQ and Dynamics & Mastering Project
7	10/9	Audio Post Workflow	
8	10/16	Voiceover	
9	10/23	ADR and Walla	ADR Project
	10/30	Editing Dialogue	
10	11/6	Sound Effects	
11	11/13	Foley and Backgrounds	Foley Project
12	11/20	Music/Mixing	
13	11/27	**NO CLASS – THANKSGIVING BREAK**	
14	12/4	Final Project	Final Project
15	12/11	Final Project Critiques	

Projects:

- Assignments will be uploaded to Canvas
- **Put your last name at the beginning of ALL file names (e.g. "Smith_Foley-Assignment.ptx" and "Smith_Production-Notes.docx")**
- Most projects require detailed production notes (see example at the end of the syllabus). Unless otherwise specified, all documentation must be included in electronic form.
- **Projects must be turned in on time! Assignments turned in after the deadline automatically lose one letter grade, and continue losing 1 letter grade every 24 hours it is late. No Exceptions**!

The main projects are described below. Depending on the needs or interests of the class, these may be revised, combined, or broken into smaller sub-projects.

Content Analysis Paper:
Students will then analyze and report all sounds from a supplied video clip in terms of listening modes, meaning, Gestalt principles, and space.

SFX Editing Project:
Students are introduced to Pro Tools through a series of exercises to edit and transform original music and voiceover recordings to sound like they are coming from an old skipping record or rickety film projector.

EQ, Compression, and Mastering:
Students will complete a series of focused exercises designed to train the ear to discern different frequencies, hear the way the different parameters of a compressor alter the dynamics of a sound, and learn to make subtle adjustments to both EQ and compression to balance out differences between multiple songs.

ADR Project:
Students will arrange and mix a loop-based song to support the action and storyline of a one-minute TV commercial.

Foley Project:
Students will work in groups to record complex foley actions and ADR for an animated movie clip. Each student will edit and mix a finished version individually.

Final Surround Project:
Students will recreate surround sound design for one of a selection of video clips. Detailed foley recording for all scenes will be planned and recorded. The sounds recorded will then be synchronized to the video, mixed and mastered. Students will work in groups on the recording phase of the project, but will mix and master their projects individually. The final CD will include all of the student's projects completed during the semester, mastered to fit together in terms of overall volume and acoustic character.

Grading and Assessment
Your grades on these projects include (but are not limited to) the following factors: following the project instructions, creative use of audio elements, quality of audio engineering, acceptable and consistent levels, and documentation. The specific grading criteria will be provided in the instructions for each assignment.

Activities	Percentage
SFX Editing Project	10%
Content Analysis Paper	10%
ADR Project	10%
Foley Project	10%
EQ, Compression and Mastering	10%
Quizzes	10%
Final Audio Project	25%
Attendance and participation	15%

Grades are based on points as indicated below:			
93-100 Pts.	A	73-76 Pts.	C
90-92 Pts.	A-	70-72 Pts.	C-
87-89 Pts.	B+	67-69 Pts.	D+
83-86 Pts.	B	63-66 Pts.	D
80-82 Pts.	B-	60-62 Pts.	D-
77-79 Pts.	C+	59 and below	F

EXPECTATIONS, GUIDELINES, AND POLICIES

Attendance:

Class attendance is required for classroom-based courses. It entails being present and attentive for the entire class period. Attendance shall be taken in every class. If you do not provide evidence of attendance while in class, you shall be marked absent. Signing or providing evidence for another student is prohibited. The instructor is required to submit to the Registrar a record of student attendance, and action shall be taken if the record conveys a trend of absenteeism. Illness or a death in the immediate family is usually the only acceptable excuse for absence from class. Absences must be explained to the satisfaction of the instructor, who will decide whether omitted work may be made up. To protect your privacy, doctor's excuses should exclude the nature of the condition and focus instead on how the condition effects on your coursework.

Attendance: Attendance for N355 is required. Since our class meets only one time per week, it is imperative that you make every attempt to attend each class. You will receive 10 points toward your final grade for each class you attend. You are allowed (1) unexcused or excused absence.

Incomplete:

The instructor may assign an Incomplete (I) grade only if at least 75% of the required coursework has been completed at passing quality and holding you to previously established time limits would result in unjust hardship to you. All unfinished work must be completed by the date set by the instructor. Left unchanged, an Incomplete automatically becomes an F after one year.
http://registrar.iupui.edu/incomp.html

CODE OF CONDUCT

All students should aspire to the highest standards of academic integrity. Using another student's work on an assignment, cheating on a test, not quoting or citing references correctly, or any other form of dishonesty or plagiarism shall result in a grade of zero on the item and possibly an F in the course. Incidences of academic misconduct shall be referred to the Department Chair and repeated violations shall result in dismissal from the program.

All students are responsible for reading, understanding, and applying the *Code of Student Rights, Responsibilities and Conduct* and in particular the section on academic misconduct. Refer to *The Code* > *Responsibilities* > *Academic Misconduct* at http://www.indiana.edu/~code/. All students must also successfully complete the Indiana University Department of Education "How to Recognize Plagiarism" Tutorial and Test. https://www.indiana.edu/~istd You must document the difference between your writing and that of others. Use quotation marks in addition to a citation, page number, and reference whenever writing someone else's words (e.g., following the *Publication Manual of the American Psychological Association*). To detect plagiarism instructors apply a range of methods, including Turnitin.com. http://www.ulib.iupui.edu/libinfo/turnitin

Academic Misconduct:

1. **Cheating:** Cheating is considered to be an attempt to use or provide unauthorized assistance, materials, information, or study aids in any form and in any academic exercise or environment.
   a. A student must not use external assistance on any "in-class" or "take-home" examination, unless the instructor specifically has authorized external assistance. This prohibition includes, but is not limited to, the use of tutors, books, notes, calculators, computers, and wireless communication devices.
   b. A student must not use another person as a substitute in the taking of an examination or quiz, nor allow other persons to conduct research or to prepare work, without advanced authorization from the instructor to whom the work is being submitted.
   c. A student must not use materials from a commercial term paper company, files of papers prepared by other persons, or submit documents found on the Internet.

d. A student must not collaborate with other persons on a particular project and submit a copy of a written report that is represented explicitly or implicitly as the student's individual work.
e. A student must not use any unauthorized assistance in a laboratory, at a computer terminal, or on fieldwork.
f. A student must not steal examinations or other course materials, including but not limited to, physical copies and photographic or electronic images.
g. A student must not submit substantial portions of the same academic work for credit or honors more than once without permission of the instructor or program to whom the work is being submitted.
h. A student must not, without authorization, alter a grade or score in any way, nor alter answers on a returned exam or assignment for credit.

2. **Fabrication:** A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citation to the sources of information.
3. **Plagiarism:** Plagiarism is defined as presenting someone else's work, including the work of other students, as one's own. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged, unless the information is common knowledge. What is considered "common knowledge" may differ from course to course.
   a. A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.
   b. A student must give credit to the originality of others and acknowledge indebtedness whenever:
      1. directly quoting another person's actual words, whether oral or written;
      2. using another person's ideas, opinions, or theories;
      3. paraphrasing the words, ideas, opinions, or theories of others, whether oral or written;
      4. borrowing facts, statistics, or illustrative material; or
      5. offering materials assembled or collected by others in the form of projects or collections without acknowledgment
4. **Interference:** Students must not steal, change, destroy, or impede another student's work, nor should the student unjustly attempt, through a bribe, a promise of favors or threats, to affect any student's grade or the evaluation of academic performance. Impeding another student's work includes, but is not limited to, the theft, defacement, or mutilation of resources so as to deprive others of the information they contain.
5. **Violation of Course Rules:** A student must not violate course rules established by a department, the course syllabus, verbal or written instructions, or the course materials that are rationally related to the content of the course or to the enhancement of the learning process in the course.
6. **Facilitating Academic Dishonesty:** A student must not intentionally or knowingly help or attempt to help another student to commit an act of academic misconduct, nor allow another student to use his or her work or resources to commit an act of misconduct.

OTHER POLICIES

1. **IUPUI course policies:** A number of campus policies governing IUPUI courses may be found at the following link: http://registrar.iupui.edu/course_policies.html
2. **Classroom civility**: To maintain an effective and inclusive learning environment, it is important to be an attentive and respectful participant in lectures, discussions, group work, and other classroom exercises. Thus, unnecessary disruptions should be avoided, such as ringing cell phones engagement in private conversations and other unrelated activities. Cell phones, media players, or any noisy devices should be turned off during a class. Texting, surfing the Internet, and posting to Facebook or Twitter during class are generally not permitted. Laptop use may be permitted if it is used for taking notes or conducting class activities. Students should check with the instructor about permissible devices in class. IUPUI nurtures and promotes "a campus climate that seeks, values,

and cultivates diversity in all of its forms and that provides conditions necessary for all campus community members to feel welcomed, supported, included, and valued" (IUPUI Strategic Initiative 9). IUPUI prohibits "discrimination against anyone for reasons of race, color, religion, national origin, sex, sexual orientation, marital status, age, disability, or [veteran] status" (Office of Equal Opportunity). Profanity or derogatory comments about the instructor, fellow students, invited speakers or other classroom visitors, or any members of the campus community shall not be tolerated. A violation of this rule shall result in a warning and, if the offense continues, possible disciplinary action.

3. **Right to revise:** The instructor reserves the right to make changes to this syllabus as necessary and, in such an event, will notify students of the changes immediately.

4. **Bringing children to class:** To ensure an effective learning environment, children are not permitted to attend class with their parents, guardians, or childcare providers.

5. **Disabilities Policy:** In compliance with the Americans with Disabilities Act (ADA), all qualified students enrolled in this course are entitled to reasonable accommodations. Please notify the instructor during the first week of class of accommodations needed for the course. Students requiring accommodations because of a disability must register with Adaptive Educational Services (AES) and complete the appropriate AES-issued before receiving accommodations. The AES office is located at UC 100, Taylor Hall (Email: aes@iupui.edu, Tel. 317 274-3241). Visit http://aes.iupui.edu for more information.

6. **Administrative Withdrawal:** A basic requirement of this course is that students participate in all class discussions and conscientiously complete all required course activities and/or assignments. If a student is unable to attend, participate in, or complete an assignment on time, it is the student's responsibility to inform the instructor. If a student misses more than half of the required activities within the first 25% of the course without contacting the instructor, the student may be administratively withdrawn from this course. Administrative withdrawal may have academic, financial, and financial aid implications. Administrative withdrawal will take place after the full refund period, and a student who has been administratively withdrawn from a course is ineligible for a tuition refund. Contact the instructor with questions concerning administrative withdrawal.

7. **Emergency Preparedness:** Safety on campus is everyone's responsibility. Know what to do in an emergency so that you can protect yourself and others. For specific information, visit the emergency management website. http://protect.iu.edu/emergency

MISSION STATEMENT

The Mission of IUPUI is to provide for its constituents excellence in

- Teaching and Learning;
- Research, Scholarship, and Creative Activity; and
- Civic Engagement.

With each of these core activities characterized by

- Collaboration within and across disciplines and with the community;
- A commitment to ensuring diversity; and
- Pursuit of best practices.

IUPUI's mission is derived from and aligned with the principal components—Communities of Learning, Responsibilities of Excellence, Accountability and Best Practices—of Indiana University's Strategic Directions Charter.

STATEMENT OF VALUES

IUPUI values the commitment of students to learning; of faculty to the highest standards of teaching, scholarship, and service; and of staff to the highest standards of service. IUPUI recognizes students as partners in learning. IUPUI values the opportunities afforded by its

location in Indiana's capital city and is committed to serving the needs of its community. Thus, IUPUI students, faculty, and staff are involved in the community, both to provide educational programs and patient care and to apply learning to community needs through service. As a leader in fostering collaborative relationships, IUPUI values collegiality, cooperation, creativity, innovation, and entrepreneurship as well as honesty, integrity, and support for open inquiry and dissemination of findings. IUPUI is committed to the personal and professional development of its students, faculty, and staff and to continuous improvement of its programs and services.