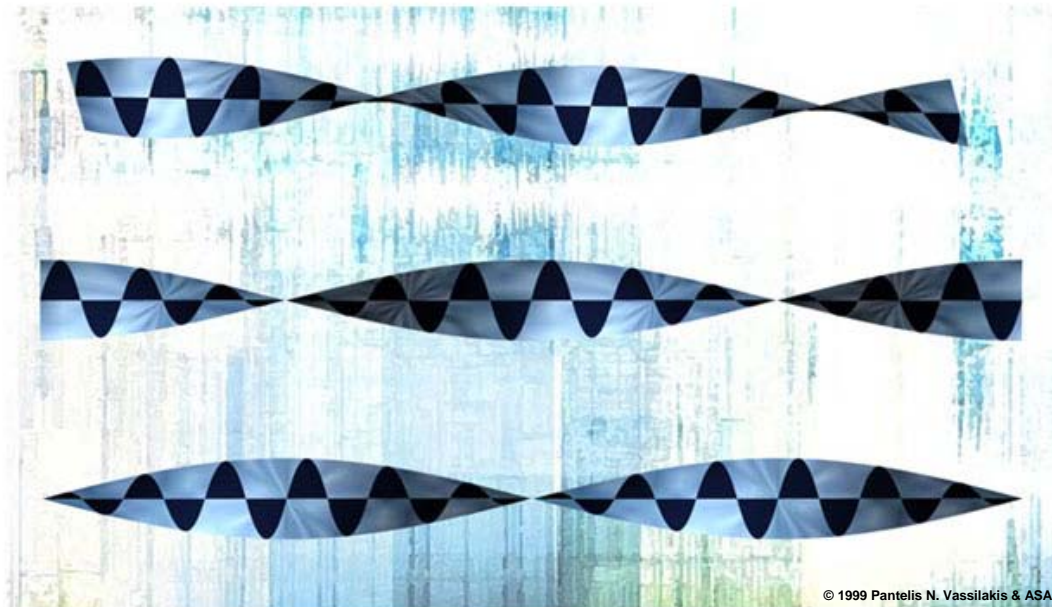


Department of
Audio Arts and Acoustics
School of Media Arts



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Student Handbook
2009-2010

create...
change

Columbia 
COLLEGE CHICAGO

TABLE OF CONTENTS

<u>Message from the Chairman</u>	2
Department Outline	
<u>Mission Statement</u>	3
<u>Expectations</u>	4
<u>Contact Information</u>	5
Degree Requirements	
<u>Bachelor of Arts (College and Major)</u>	7
Audio Arts and Acoustics Concentrations	
<u>Acoustics</u>	9
<u>Audio Design and Production</u>	12
<u>Audio for Visual Media</u>	14
<u>Live Sound Reinforcement</u>	16
<u>Sound Contracting</u>	18
Course Descriptions	
<u>Audio Arts and Acoustics</u>	19
<u>Other Departments</u>	29
Student Resources and Information	
<u>Student Professional and Academic Associations</u>	35
<u>Employment</u>	37
<u>Scholarships and Internships</u>	39
<u>Facilities and Equipment Policies</u>	42
<u>Instructional Resource Fees</u>	46

MESSAGE FROM THE CHAIRMAN

Dear Students,

I want to warmly welcome you to the Audio Arts and Acoustics Department and, whether you are new, as I am, or returning, confirm to you that this is a genuinely great place to be!

Beyond dealing with the most versatile and visceral of senses (hearing) and the most ubiquitous and evocative of sensations (sound), what makes us truly special is our faculty. By joining our department you enter a remarkable team of accomplished professionals, artists, and academics who are dedicated to your learning and growth. From live and recorded sound design and engineering for music, theater, broadcast, and multimedia, to vibration and noise measurement and control, architectural acoustics, hearing studies, and design and management of audiovisual installations, our department offers expertise of which we are proud. Add to this our experienced staff members and state-of-the-art facilities and it is easy to share my excitement.

No different from the rest of our team, my passion and curiosity for sound are longstanding. They have literally shaped my life as an artist, a scientist, and a professional and continue to do so. I trust it is a similar passion and curiosity that has brought you to us. We are committed to satisfying and further fueling your curiosity, nurturing your passions, and helping you become our colleagues. This will undoubtedly take commitment and hard work on your part as well, but we know you would not have it any other way. Your presence here requires a substantial investment and sacrifice from you and your families and entrusts your education and future in our hands. I assure you that we take your investment, sacrifices, and trust very seriously and guarantee that we will always strive to exceed your expectations.

This handbook introduces you to our Department, faculty, programs, and courses as well as to useful Departmental and College-wide information on scholarships, internships, campus employment, policies, student organizations, and more. Take time to scan through this resource and use it as a springboard for your eventual meetings with our faculty and staff. As a matter of fact, we invite you to visit regularly with us and sincerely hope you do so.

Again, welcome to our Department and best of luck with the new academic year!

Pantelis N. Vassilakis, Ph.D.
Chairman
Department of Audio Arts and Acoustics

DEPARTMENT OUTLINE

MISSION STATEMENT

As practitioners of sound arts and sciences, the faculty members of the Department of Audio Arts and Acoustics at Columbia College are committed to advancing the foundation, practice, and aesthetic criteria necessary to maintain a discipline that serves one of the principal mediums of communication and personal expression.

We are committed to offering our students the tools and the opportunities to build, reinforce, and maintain the fundamental knowledge and skills that are required for a successful career in a technologically intensive environment.

We believe that we must nurture a strong liberal arts component as an integral part of our program. We are dedicated to offering our students every reasonable opportunity to express their creativity in a fashion compatible with and complimentary to the academic standards of our department.

We are committed to our program's reputation among industry and other peer institutions; it is this commitment that drives our Department's growth. Hence, we encourage dialogue between our program and the industry, and we foster the growth of interaction between our students and their peers.

We pledge to actively promote the Mission of Columbia College Chicago by engendering an educational climate where the value of social and cultural diversity is recognized.

WE EXPECT OUR STUDENTS TO:

- Be willing to enhance their critical thinking abilities and sense of aesthetics
- Be willing to demonstrate their knowledge to us in a variety of ways
- Realize that academe and the “real world” enrich each other
- Recognize the value of foundation knowledge
- Realize that their education must constitute their first priority
- Respect our knowledge and our experience
- Respect our privacy

STUDENTS CAN EXPECT US TO:

- Be committed to high standards of academic excellence
- Outline and achieve clear objectives for each class
- Set forth and apply clear and objective testing guidelines
- Maintain and enhance our professional stature
- Enhance the quality and the recognition of our program
- Welcome their comments pertaining to teaching methods
- Be accessible to them for academic guidance and for advising
- Respect their thirst for knowledge and their enthusiasm
- Respect their privacy

**DEPARTMENT OF AUDIO ARTS AND ACOUSTICS
FACULTY AND ADMINISTRATIVE CONTACTS**

<http://www.colum.edu/aaa>

(All phone numbers – area code 312.)

Administrative Staff and Technical Support

Chair	Pantelis N. Vassilakis	pvassilakis@colum.edu	369-8821
Associate Chair	Benj Kanters	bkanters@colum.edu	369-8807
Assistant to the Chair	Elliott K. Scott	escott@colum.edu	369-8802
Secretary	Sonija Dewberry	sdewberry@colum.edu	369-8820
Chief Engineer	Brett Johnson	bjohnson@colum.edu	369-8275
Operations Manager	Ron Elling	relling@colum.edu	369-8803
AA&A Technician	Ray Morales	rmorales@colum.edu	369-8276
AA&A Assistant Technician	Ben Bridgewater	bbridgewater@colum.edu	369-8276
AA&A Studio Manager	Tony Miccolis	tmiccolis@colum.edu	369-8274
AA&A Assistant Studio Manager	Brad Stevison	bstevison@colum.edu	369-8274
AA&A Digital Systems Technician	Robert Zilligen	rzilligen@colum.edu	369-8280

Faculty and Academic Staff

Acoustics	Dominique Chéenne	dcheenne@colum.edu	369-8806
	Doug Jones	djones@colum.edu	369-8801
	Pantelis N. Vassilakis	pvassilakis@colum.edu	369-8821
Audio Design and Production	Peter Zhang	pzhang@colum.edu	369-8810
	Ron Gresham	rgresham@colum.edu	369-8811
	Benj Kanters	bkanters@colum.edu	369-8807
	Howard Sandroff	hsandroff@colum.edu	369-8805
	Jesse Seay	jeseay@colum.edu	369-8804
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	Benj Kanters	bkanters@colum.edu	369-8807
	Howard Sandroff	hsandroff@colum.edu	369-8805
Contracting	Pantelis N. Vassilakis	pvassilakis@colum.edu	369-8821
	Ted Uzzle	tuzzle@colum.edu	369-8809
	Jack Alexander	jalexander@colum.edu	369-8812

**COLUMBIA COLLEGE CHICAGO
USEFUL CONTACTS**

<http://www.colum.edu/students>

Dean, School of Media Arts	Doreen Bartoni	dbartoni@colum.edu	369-8222
Associate Dean	Alton Miller	amiller@colum.edu	369-8221
Assistant Dean	Charles Castle	ccastle@colum.edu	369-8220
Administrative Assistant	Jodi Adams	jadams@colum.edu	369-8837
Special Projects Coordinator	Elisa Green	emgreen@colum.edu	369-8893
Interactive Arts and Media Contact	Joe Cancellaro	icancellaro@colum.edu	369-7063
Advising Center			
Director of College Advising	Brian Marth	bmarth@colum.edu	369-7933
Office Manager	Jim Gingras	jgingras@colum.edu	369-7736
AA&A Advisor	J. Wayne Tukes	wtukes@colum.edu	369-7648
Dean of Students			369-7221
Bursar's Office (Cashier's Office)			369-7708
Financial Services and Aid			369-7140
Department of Exhibition and Performance Spaces			369-7696
Library (Circulation Desk)			369-7152
Records Office			369-7351
Residence Life			369-7803

DEGREE REQUIREMENTS

BACHELOR OF ARTS DEGREE DEPARTMENT OF AUDIO ARTS AND ACOUSTICS

[120 credit hours]

General Studies Requirements for Students Entering Fall 2009

All BA students must complete 42 credit hours of Liberal Arts and Sciences [LAS] Core Curriculum. The list below is valid as of Fall 2009. For the most up-to-date version of the list see http://www.colum.edu/Academics/School_of_Liberal_Arts_and_Sciences/LAS_Core_Curriculum.php

- | | |
|---|------------------|
| • New Millennium Studies: First-year Seminar | [3 credit hours] |
| • English Composition (Writing and Rhetoric I & II) | [6 credit hours] |
| • Oral Communication | [3 credit hours] |
| • History | [6 credit hours] |
| • Social Science | [6 credit hours] |
| • Humanities HU | [6 credit hours] |
| • Humanities Literature | [3 credit hours] |
| • Mathematics | [3 credit hours] |
| • Science | [3 credit hours] |
| • Science with lab component | [3 credit hours] |

Notes

All BA students must satisfy requirements in “U.S., Pluralism, and Global Awareness” and can do so with any LAS Core course labeled as such.

All BA students must satisfy a “Writing Intensive” requirement and can do so with any course labeled as such.

24 credit hours of LAS Core courses must be completed by the attainment of 60 total credit hours.

English Composition (i.e. “Writing and Rhetoric”) I and II must be taken by the attainment of 45 total credit hours.

At least 6 credit hours of LAS courses must be taken at a level of 2000 or above.

Major Requirements for Students Entering Fall 2009

All AA&A BA Students must complete 11 credit hours of AA&A Core Curriculum
(there is an exception for the Acoustics concentration – see pages 9-11)

- Introduction to Audio [3 credit hours]
- Audio Production I [4 credit hours]
- Basic Audio Systems [4 credit hours]

Concentrations

- Acoustics
- Audio Design and Production
- Audio for Visual Media
- Live Sound Reinforcement
- Sound Contracting

All AA&A BA students should declare a Concentration by the attainment of 30 total credit hours. Students should meet with their Concentration Coordinator(s) before registration each semester to review requirements and suggested electives inside and outside of the department. Requirements and prerequisite structures for each Concentration can be found on the following pages.

Notes

All AA&A BA students must complete all AA&A Core Curriculum courses with a grade of C or better to continue in the Department of Audio Arts and Acoustics.

All AA&A BA students must complete Algebra I or demonstrate an equivalent proficiency before entering Basic Audio Systems.

Science of Electronics and Science of Acoustics are highly recommended Science courses and fulfill the LAS Science requirement.

Acoustics: Description

The Acoustics Concentration of the Audio Arts and Acoustics Department at Columbia College Chicago prepares students for a wide range of careers in the field of acoustics, with an emphasis on employment with consulting firms specializing in architectural acoustics and environmental noise issues. Many of our graduates are also found in companies that deal with vibration problems, mechanical systems design, transportation systems, and loudspeaker manufacturing, while others have opted to continue their education in graduate school.

To meet these various educational and career goals, we have developed a set of courses that provide both the fundamental elements that any practitioner in acoustics should be intimately familiar with, as well as a series of elective classes that the student can select from in order to match her/his specific career goals. Students are also encouraged to become better practitioners in the field of acoustics by considering elective courses that truly reflect the foundation of an enlightened liberal education.

Students advance through the program in a cohort fashion with a typical class of 12-15 students graduating in the spring semester. The cohort is expected to develop study groups, bring forth to the attention of the faculty common issues of interest to the students, and plan and schedule research activities suitable for participation in refereed conferences.

Although the Acoustics program aims at fostering a climate that develops team work, it also emphasizes individual attention being given to the students during all phases of their academic careers. Registration for most courses requires the instructor's permission, leading to regular one-on-one advising sessions between student and faculty members. In addition, office hours are held after every class and a wide range of individual tutoring options are available.

Dominique J. Chéenne, Ph.D.
Director, Acoustics

Acoustics: Requirements

Acoustics Majors must select 6-7 credit hours from the following CORE classes. The courses must be completed by the end of the student's second semester.

- Introduction to Audio [3 credit hours]
- The Science of Acoustics [3 credit hours]
- Basic Audio Systems [4 credit hours]

Acoustics Majors must take ALL of the following PREPARATION AND FOUNDATION courses offered by the school OR have similar courses transferred from other institutions, for a total of 13 credit hours.

- Calculus I [3 credit hours]
Students must complete this course before they have completed 9 hours of the concentration courses
- Calculus II [4 credit hours]
Students must complete this course before they have completed 15 hours of the concentration courses
- Object-Oriented Programming [3 credit hours]
Any other programming course that will allow the student to develop custom applications prior to taking Acoustical Modeling will also be accepted
- Business and Technical Writing [3 credit hours]
Students must complete this course by the time they reach senior standing

Acoustics Majors must take ALL of the following CONCENTRATION courses for a total of 21 credit hours.

- Studies in Hearing [3 credit hours]
- Introduction to Psychoacoustics and Sound Perception [3 credit hours]
- Architectural Acoustics [3 credit hours]
- Environmental Acoustics (Instructor permission required) [3 credit hours]
- Acoustical Testing I (Open to acoustics majors only) [3 credit hours]
- Acoustical Testing II (Open to acoustics majors only; instructor permission required) [3 credit hours]
- Acoustical Modeling (Open to acoustics majors only; instructor permission required) [3 credit hours]

Acoustics Majors must select 18 credit hours from the following group of ACOUSTICS ELECTIVE courses.

- Acoustics of Performance Spaces [3 credit hours]
- Introduction to Vibration (Open to acoustics majors only) [3 credit hours]
- Perception and Cognition of Sound [3 credit hours]
- Engineered Acoustics (Open to acoustics majors only) [3 credit hours]
- Studies in Applied Acoustics [3 credit hours]
- Studies in Transducer Theory [3 credit hours]
- Audio Production I [4 credit hours]
- Topics System Contracting I [4 credit hours]

Acoustics Majors should consider taking 12 credit hours from the following group of SUGGESTED COLLEGE-WIDE ELECTIVE (General Studies) courses or they should have similar college-level courses transferred. The list is not exhaustive and more classes are added on a regular basis.

- Accounting I (Arts Entertainment & Media Management Department)
- Introduction to Management (Arts Entertainment & Media Management Department)
- Introduction to Statistical Methods (Science & Mathematics Department)
- Linear Algebra (Science & Mathematics Department)
- Numerical & Mathematical Modeling (Science & Mathematics Department)
- Tai-Chi Chuan. Beginning (Dance Department)
- History of Architecture (Arts & Design Department)
- Fundamental of 2D-Design (Arts & Design Department)

Acoustics Majors must also select 7 additional credit hours of COLLEGE-WIDE ELECTIVE courses of their choice (only up to 12 College-Wide Electives total can be transferred). Refer to the College's catalog for a detailed listing of the required classes.

Students must select or transfer 42 credit hours of GENERAL EDUCATION courses. Refer to the College's Admissions Office for a detailed listing of the required classes.

Requirements Summary

• CORE	6-7 credit hours
• PREPARATION & FOUNDATION	13 credit hours
• CONCENTRATION	21 credit hours
• ACOUSTICS ELECTIVE	18 credit hours
• COLLEGE-WIDE ELECTIVE	12 credit hours (suggested)
• COLLEGE-WIDE ELECTIVE	7 credit hours (student's choice)
• GENERAL STUDY REQUIREMENTS	42 credit hours
• TOTAL	120

Audio Design and Production: Description

The aim of the Audio Design and Production Concentration is to prepare students for careers in music recording, audio post-production, audio for multi-media communications, and sound design.

Students graduating in this concentration will be versed in the theory, aesthetics, and practices of recording, multi-track audio production, and post-production. They will be fully prepared to work in a variety of formats and environments from large-format recording studios to those smaller “desk-top” environments.

We make sure that students recognize the ever-changing and increasingly diverse nature of our technologically sensitive industries. To this end we increasingly focus on new media forms, in which audio production is an integral part. These would include web design and authoring, real-time web media, CD ROM publishing, sound design for games, theater, broadcast, and multi-media, and Audio Art as a stand-alone, independent means of expression.

As part of a liberal arts program, students also develop communication skills in, and an aesthetic understanding of the different industries they may serve, which prepare them to interact more effectively with peers and clients.

Benjamin Kanters
Director, Audio Design and Production

Audio Design and Production: Requirements

Requirements and Suggested Electives

Core Requirements: 11 credit hours

Introduction to Audio	[3 credit hours]
Audio Production I	[4 credit hours]
Basic Audio Systems	[4 credit hours]
(Prerequisites: Intro to Audio, Audio Production I, and a minimum proficiency of Algebra I)	

Intermediate-Level Requirements: 15 credit hours

Audio Production II	[4 credit hours]
Live Sound Recording	[3 credit hours]
Recording I	[4 credit hours]
Recording II	[4 credit hours]

Senior-Level Requirements: 6-8 credit hours

A minimum of **two** of the following:

Master Class in Studio Recording*	[4 credit hours]
Master Class in Music Design*	[3 credit hours]
Master Class in Classic Studio Techniques*	[3 credit hours]
Master Class in Live Sound Recording	[3 credit hours]
Master Class in Sound Design	[3 credit hours]
Principles of Digital Synthesis and Signal Proc.	[3 credit hours]
Internship (minimum 3 credits at senior-level)	[variable credit hours 1-6]

Audio Arts and Acoustics Electives: 9-12 credit hours

A minimum of three 3- or 4-hour electives must be taken at the 2000 or 3000 level.

The following are **suggested** for AD&P majors:

- Audio Production III
- Audio for Visual Media I
- Aesthetics of Live Sound Reinforcement
- Sound System Design
- Studies in Hearing
- Introduction to Psychoacoustics and Sound Perception
- Architectural Acoustics

College-Wide Electives (General Studies) 33-37 credit hours
(in addition to the 42 required College Wide Curriculum credit hours)

* *Due to high demand, students cannot take two of these Master Classes in the same semester.*

Audio for Visual Media: Description

The aim of the Audio for Visual Media Concentration is to prepare students for audio careers in film, video, and related visual industries. Students in this concentration will be versed in the theory and practices of soundtrack design, as well as recording, editing, and mixing in relationship to story structure. As members of a liberal arts program, students will develop an understanding of aesthetic principles as well as communication and professional skills that will allow them to effectively pursue their future goals.

Audio for Visual Media represents a collaboration between the Film and Video and the Audio Arts and Acoustics Departments. Students who select this concentration are required to complete courses from both Departments. This concentration is continually evolving to incorporate additional forms of visual media, and we encourage students to consult with faculty members and advisors in order to tailor their studies to best meet their interests and career objectives.

Audio for Visual Media: Requirements

AUDIO ARTS and ACOUSTICS CORE (11 credit hours)

Introduction to Audio	43-1110	[3 credit hours]
or Visual Audio	43-1100	[3 credit hours]
Audio Production I	43-1115	[4 credit hours]
Basic Audio Systems	43-2110	[4 credit hours]

FILM AND VIDEO DEPARTMENT FOUNDATION (16 credit hours)

Moving Image Art	24-1030	[4 credit hours]
Moving Image Production I	24-1031	[4 credit hours]
Moving Image Production II	24-2031	[4 credit hours]
Project Development, Pre-Production, and Preparation	24-2030	[4 credit hours]

OTHER REQUIRED COURSES (24-29 credit hours)

Audio Production II	43-2215	[4 credit hours]
Audio for Visual Media I	43-2420	[4 credit hours]
Audio for Visual Media II	24-2102	[4 credit hours]
Editing I	24-2401	[4 credit hours]
Audio for Visual Media III	24-3122	[4 credit hours]
Master Class in Sound Design	43-3290	[3 credit hours]
F&V Internship	24-3089	<i>or</i>
F&V Independent Project	24-3198	<i>or</i> 24-3199
AAA Internship	43-3288	<i>or</i>
AAA Independent Project	43-3291	

[variable credit hours 1-6]

REQUIRED GENERAL STUDIES COURSES

(13 credit hours, 9 of which may count against the 42 hours of the General Studies Requirements)

Writing and Rhetoric I (EN)	52-1151	[3 credit hours]
Algebra (MA)	56-2710	[3 credit hours]
Science of Acoustics (SC)	56-2820	[3 credit hours]
Science of Electronics (SL)	56-1820	[4 credit hours]

TOTAL REQUIRED CREDITS	55-60 CREDIT HOURS
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OTHER GENERAL STUDIES ELECTIVES (18-23 credit hours)

Recommended Electives for Audio for Visual Media Majors

History of Cinema	24-1500	[3 credit hours]
Aesthetics of Cinema	24-1510	[3 credit hours]
Location Sound Recording	24-2103	[4 credit hours]
Advanced Location Sound Recording	24-3101	[4 credit hours]
Music for Film and Video	24-2104	[3 credit hours]
Aesthetics of Motion Picture Soundtrack	43-2410	[3 credit hours]
The Art and Craft of Foley and of ADR (2 J-term courses)	24-2106 & 24-2107	[1 credit hour each]

Live Sound Reinforcement: Description

The Live Sound Reinforcement Concentration, through equal parts theory, aesthetics, and hands-on operations, prepares students for careers in live sound. Our alumni are employed by major artists, venues, and sound companies throughout North America and beyond, as system engineers, front-of-house mixers and monitor engineers. Early in the program the classes are directed toward theory and aesthetics, with hands-on experience becoming increasingly the focus of small-group projects as the course sequence progresses.

Cooperative effort is encouraged at all levels of the program, reflecting the professional expectations of the live sound idiom. Opportunity is also provided for students to expand their individual capabilities in lab and in external production contexts.

As live sound production often incorporates other media arts, live sound students are encouraged to take classes in contracting, acoustics, and audio production as a means of expanding their personal viability in the professional world. The course material is driven by the realities of that world and the less volatile requirements of a classic liberal arts education.

The success of our graduates can be traced to a view from the ivory tower tempered by the creative chaos of real-world live sound production.

Jack Alexander
Director, Live Sound Reinforcement

Live Sound Reinforcement: Requirements

Required Courses for All Live Sound Reinforcement Majors

<i>Audio Arts and Acoustics Core:</i>	<i>11 credit hours</i>
Introduction to Audio	[3 credit hours]
Audio Production I	[4 credit hours]
Basic Audio Systems	[4 credit hours]
<i>Live Sound Reinforcement Curriculum:</i>	<i>18 credit hours</i>
Live Sound Reinforcement	[3 credit hours]
Advanced Live Sound Reinforcement	[3 credit hours]
Aesthetics of Live Sound I	[3 credit hours]
Aesthetics of Live Sound II	[3 credit hours]
Live Sound Engineering Practicum	[3 credit hours]
Monitor Mixing	[3 credit hours]
<i>Additional Requirements:</i>	<i>1 credit hour minimum</i>
Internship: Sound or	[variable credit hours]
Independent Project	[variable credit hours]

Live Sound Reinforcement Electives and Additional College-Wide General Studies Requirements (40-50 credit hours)

Recommended:

Live Sound Recording	[3 credit hours]
Introduction to Psychoacoustics	[3 credit hours]
History of Audio	[3 credit hours]
Studies in Transducer Theory	[4 credit hours]
The Art of Troubleshooting	[3 credit hours]
Advanced Loudspeaker Management	[3 credit hours]
Loudspeaker Analysis	[3 credit hours]
Level, Intelligibility, and Feedback	[3 credit hours]
Sound for Theatre	[4 credit hours]

Related Courses: (Please consult the Concentration Coordinator)

Studies in Hearing	[3 credit hours]
Location Sound Recording	[4 credit hours]
Advanced Location Sound Recording	[4 credit hours]

Sound Contracting: Description

Sound Contracting prepares its students to join the architectural and engineering teams as experts in sound, communications, and audiovisual technologies for renovation, new construction, project management, and installation supervision. Graduates of the concentration design and/or manage the installation of electronic sound, communications, signaling, and audiovisual systems for entertainment, information, and life safety. Coursework emphasizes critical thinking, problem solving, and aesthetics in ways that can be applied across and beyond audio and acoustics. While virtually all Sound Contracting graduates are employed by American installation companies, they design systems and manage installation projects from Tokyo to Riyadh.

Sound Contracting: Requirements

Department of Audio Arts and Acoustics Core (11 credit hours)

Introduction to Audio	[3 credit hours]
Audio Production I	[4 credit hours]
Basic Audio Systems	[4 credit hours]

Additional Core

(6 credit hours – part of the 42 credit hours of the General Studies Requirements)

Science of Acoustics	[3 credit hours]
College Algebra (or higher)	[3 credit hours]

Sound Contracting Curriculum (25 credit hours)

Sound System Design	[4 credit hours]
The Art of Troubleshooting	[3 credit hours]
Studies in Transducer Theory	[4 credit hours]
Studies in Hearing	[3 credit hours]
Introduction to Psychoacoustics	[3 credit hours]
Audio Measurement Techniques	[3 credit hours]
Topics Systems Contracting I	[3 credit hours]
CSI Practices for Graphical Documentation	[2 credit hours]

Recommended Electives and Additional College-Wide General Studies Requirements (42 credit hours)

AA&A Curriculum Suggestions:	
History of Audio	[3 credit hours]
Science of Electronics	[4 credit hours]
Accounting I	[4 credit hours]
Aesthetics of Live Sound I	[3 credit hours]
Aesthetics of Live Sound II	[3 credit hours]
Sound for Theater	[4 credit hours]
Architectural Acoustics	[3 credit hours]
Level, Intelligibility, and Feedback	[3 credit hours]

COURSE DESCRIPTIONS

COURSES IN THE AUDIO ARTS AND ACOUSTICS DEPARTMENT

43-3320 Acoustical Modeling

Modeling is rapidly becoming an essential component of the acoustical design process. Course reviews modeling options currently available to acoustical designers and presents strengths and limitations of various methods. Students perform modeling exercises of actual buildings using the most effective programs currently available. Results of models are used to simulate various acoustical environments using auralization techniques.

Prerequisites: Engineered Acoustics, Acoustics of Performance Spaces Credit: 3 hours

43-3310 Acoustics of Performing Spaces

A continuation of Architectural Acoustics, course is dedicated to the design of performance spaces and recording aural environments. Course covers issues pertaining to architectural design and to sound reinforcement in various indoor contexts such as movie theaters, performance halls, control rooms, recording studios, and houses of worship. Course combines case studies spanning many centuries with current foundation material to provide students with a critical understanding of acoustical design issues and a reinforcement of their aesthetic sense for music and voice performances.

Prerequisites: Architectural Acoustics, Psychoacoustics, Studies in Hearing Credit: 3 hours

43-3325 Acoustical Testing I *

The testing of an acoustical space represents the “proof of performance” of the design phase. This course will introduce students to a variety of testing tools and techniques to be used in a wide range of situations. The course makes extensive use of “real world” situations to present the need for accurate testing and reinforce the methodology introduced during the lectures.

Prerequisites: Engineered Acoustics, Acoustics of Performance Spaces Credit: 3 hours

43-3326 Acoustical Testing II *

This course is a continuation of Acoustical Testing I. The class will focus on practical applications of the theory learned in Acoustical Testing I.

Prerequisites: Acoustical Testing I Credit: 3 hours

43-3510 Advanced Live Sound Reinforcement

Design of systems for large concerts is a growing and complex field. Course introduces students to various types of sound systems appropriate for large concert systems and deals with some non-audio aspects, such as rigging and power distribution. Each semester class is taken behind the scenes of a major event. There are also opportunities for hands-on experience with smaller systems.

Prerequisites: Live Sound Reinforcement Credit: 3 hours

43-2315 Architectural Acoustics

This course reviews the fundamentals of acoustics covered in previous classes and presents all of the materials within the context of the behavior of sound in a bounded space. The practical aspects of the class are emphasized by dedicating a large portion of the semester to case studies. Demonstrations are provided throughout the semester to emphasize both theoretical and practical concepts.

Prerequisites: Psychoacoustics, Studies in Hearing *Co-requisite:* Psychoacoustics. Credit: 3 hours

43-3621 Art of Troubleshooting

Complex, interactive systems fail in complex, interactive ways. This course builds six essential competencies to assist system designers and system operators to cope with failure and limit immediate damage, to collect symptoms and understand systems rapidly, to apply inferential logic and avoid logical fallacies, to identify, trap, and limit failures, and to patch around them. This is not a course in equipment repair..

Prerequisites: Basic Audio Systems Credit: 3 hours

43-2710 Audio Equipment Overview

Course is an orientation to major lines and manufacturers of professional audio equipment. Content focuses on understanding, interpreting, and evaluating manufacturers' specifications in light of subjective performance. Course includes presentations and demonstrations by manufacturers' representatives and field trips when possible.

Prerequisites: Basic Audio Systems Credit: 3 hours

43-2715 Audio Measurement Techniques *

This class is about audio measurements and specifications. Students will gain a firm understanding of the specifications currently used to characterize audio equipment and why they are important. After a review of the measurement systems available, the student will measure and evaluate various types of audio gear.

Prerequisites: Basic Audio Systems Credit: 3 hours

*** Course not currently offered – under revision**

43-2420 Audio for Visual Media I

The technology and techniques used in creating sound tracks for TV, film, and multi-media are presented in this studio class. Students learn the technology and techniques of synchronizing video with all audio platforms, including analog and both linear and non-linear digital recording and editing systems.

Prerequisites: Audio Production II Credit: 4 hours

43-1115 Audio Production I

Course introduces student to basic theories and techniques of recording, editing, and mixing. Instruction covers fundamentals of microphone usage, mixing console operation, and both linear analog and non-linear digital recording and editing. Course is taught in a classroom laboratory where lectures and labs focus on the production of radio-style commercials of voice with music to develop and improve engineering and production skills.

Prerequisites: Introduction to Audio or permission of department Credit: 4 hours

43-2215 Audio Production II

The purpose of this course is to provide students with a solid foundation in working with digital audio workstations, the role of which is expanding rapidly in the field of sound and music production. Through lectures, demonstrations and production assignments, students will gain valuable knowledge of the theory and practices of; digital audio recording, wave form editing, digital multi-track post production, automated mixing and other computer based production techniques commonly used in music and broadcast production. In addition to classroom activities, students complete assigned work in the Advanced Digital Audio Production Laboratory.

Prerequisites: Audio Production I *Corequisite:* Basic Audio Systems

Credit: 4 hours

43-3115 Audio Production III

Course provides students with an advanced creative practice in audio art using digital audio workstations, basic tool in the field of sound and music production. Through lectures, demonstrations, and production assignments, students gain valuable knowledge of the theory and practices of audio art as a recognized form of artistic expression using advanced techniques of audio manipulation on digital audio workstations. In addition to classroom activities, students complete assigned work in the Digital Audio Production Laboratory.

Prerequisites: Audio Production II

Credit: 3 hours

43-2110 Basic Audio Systems

Course is the last of a series of core curriculum courses that emphasize fundamental technologies of audio systems and components. Students are introduced to equipment used in professional audio systems from a technical and functional point of view. Course is held in a classroom/lab with occasional lectures held in the studios. Students must pass this course with a grade of C or better to continue in the Sound program.

Prerequisites: Audio Production I , Agebra I, Science of Acoustics

Credit: 4 hours

43-2115 Careers in Audio

Course provides an overview of career opportunities in the field of audio. Recognized experts from a variety of fields discuss employment options for sound majors in this lecture class. Students also begin the process of developing resumes and portfolios as they explore the possibilities of their own futures in professional audio.

Prerequisites: Basic Audio Systems

Credit: 1 hour

43-3292 College Studio Operations

Practicum/lab course explores theories, techniques, and procedures employed in complex audio and media productions. Content includes studying the manner in which individual skills of audio engineering are applied in the context of real-world environments. Students engineer for classes from Music, Television, and Film/Video Departments, producing four to six finished pieces by the end of the semester.

Prerequisites: Permission of faculty supervisor

Credit: 3 hours

43-3619 CSI Practices for Graphical Documentation

This course gives students familiarity with the graphical standards of the Construction Specifications Institute. Students will acquire skill at navigating architectural drawings at a workstation, and ability to generate audio system drawings.

Prerequisites: Sound System Design

Credit: 2 hours

43-3330 Engineered Acoustics

Course investigates acoustical issues pertaining to engineered systems in a wide range of environmental settings. Topics covered include heating, ventilation, air conditioning (HVAC) noise issues and design; noise, vibration, and harshness (NVH) assessment; fundamentals of active noise control; and a primer on sound quality. A substantial amount of the course is dedicated to modeling various physical systems with computer tools in order to assess their behavior relating to noise or vibration excitation.

Prerequisites: Acoustical Modeling, Acoustical Testing I

Credit: 3 hours

43-3315 Environmental Acoustics

Course aims at providing a comprehensive understanding of issues pertaining to noise pollution and noise control in a wide range of environments such as urban, industrial, airport, entertainment venues, and so forth. Comprehensive course equally covers both theory and practice with field measurements performed by students and teacher. Data are used to reinforce theoretical models. Course emphasizes noise studies in the workplace and reviews current regulatory issues pertaining to noise pollution.

Prerequisites: Psychoacoustics, Studies in Hearing *Co-requisite:* Psychoacoustics.

Credit: 3 hours

43-2720 History of Audio

The history of technology is a new and exciting branch of historiography, not only because it reveals human and social struggles to create and to adapt, but also because it has practical effects on the business aspects of today's audio and acoustics industries. Today's profits and livelihoods depend on novelty and exclusivity, and the history of audio is in play every time something is offered as new and better. This course offers a way to evaluate historical claims.

Prerequisites: Basic Audio Systems, English Composition II

Credit: 3 hours

43-3288 Internships in Audio Arts and Acoustics

This course is designed specifically for the intermediate and advanced student to help bridge the skills taught in the classroom with those demonstrated in the marketplace. Typical internships are 10 to 20 hours per week, with a ratio of one credit for every five hours spent onsite. Internships are offered in each of the concentrations in Audio Arts and Acoustics.

Prerequisites: Core Curriculum, 3.0 GPA, and approval of Internship Director

Credit: Variable

43-1110 Introduction to Audio

Lecture course familiarizes first-semester students with the language and concepts common to all fields where audio is used. Classes make use of a wide assortment of audio synthesis and analysis. Topics include an introduction to sound and hearing, electronics, and audio systems theory.

Prerequisites: None

Credit: 3 hours

43-2310 Introduction to Psychoacoustics and Sound Perception *

Course offers students an understanding of the broad physical, physiological, and cognitive issues related to sound production and listening. This is a multidisciplinary course, examining sound from within acoustics, physiological science, and psychoacoustics, and the main approach is that of empirical science. The scientific study of music and of our responses to it provides a unifying theme throughout the course and demonstrations accompany the presentation of most theoretical materials and concepts. An understanding of psychoacoustics and cognitive psychology is essential to anyone wishing to pursue a career in acoustics, recording, sound design, sound contracting, multimedia authoring, music, or any other field that involves sound.

Prerequisites: Basic Audio Systems

Credit: 3 hours

* **Updated description**

43-3340 Introduction to Vibration

The purpose of this class is to provide students with a comprehensive understanding of vibration theory, experimental analysis and vibration control. The class focuses on free and forced vibration of mechanical systems with an emphasis on practical applications in the areas of rotating machinery, isolation, and noise reduction. Excessive vibration is often the cause of unwanted sound or noise. Understanding the effects of vibration enhances the understanding of noise related issues in buildings and the environment addressed in Engineered Acoustics and Environmental Acoustics. This class also provides the necessary background to understand the complex vibration of musical instruments [guitars, pianos, harps, drums, etc.] to be introduced in Vibration II: Musical Instruments.

Prerequisites: Calculus I, Architectural Acoustics

Credit: 3 hours

43-3611 Level, Intelligibility, and Feedback

There are three key issues in sound-system work: level, the distribution of loudspeaker sound in a room; intelligibility, the characteristics of sound that permit speech phonemes to be apprehended accurately; and feedback, runaway regeneration that can damage sound equipment or human hearing. This course studies all three from theoretical, predictive, and practical points of view.

Prerequisites: Basic Audio Systems

Credit: 3 hours

43-3525 Live Sound Engineering Practicum

Course presents extremely advanced live sound operational theory in a production context. Instructor presents a theory as it applies to a specific problem, followed by the application of that theory to an actual live performance. Students then apply this knowledge by operating the same systems themselves.

Prerequisites: Advanced Live Sound Reinforcement and Permission of instructor

Credit: 3 hours

43-2220 Live Sound Recording

Hands-on course explores minimal microphone location recording. These techniques are fundamental to those employed in multi-track studio recording. Course highlights understanding, selection, and placement of microphones through a wide variety of acoustical environments and instruments. Emphasis is placed on classical and acoustic music, ambient sound recording, and sound effects recording. Students check out location recording equipment and record a number of events during the semester.

Prerequisites: Basic Audio Systems

Credit: 3 hours

43-2515 Live Sound Reinforcement

Course is designed to teach techniques and tools of sound reinforcement. Content combines product awareness with ear training and hands-on practice. Students complete lab assignments in the Audio Technology Center Live Sound Lab and spend two lab sessions at local music clubs.

Prerequisites: Basic Audio Systems

Credit: 3 hours

43-3527 Loudspeaker Analysis

This course combines measurement and subjective analytical tools with a complete teardown and rebuild of a state of the art reinforcement system.

Prerequisites: Live Sound Engineering Practicum

Credit: 3 hours

43-3240 Master Class in Live Sound Recording

This course introduces students to advanced concepts and techniques of acoustic live sound recording and the relationship of acoustic recording with critical listening and high-definition playback systems. These techniques will help students gain essential knowledge of recording without the use of processing such as equalization and compression, and to further understand how to properly assess such recordings through the assembly of high quality playback systems.

Prerequisites: Live Sound Recording, Recording II, and consent of Program Coordinator

Credit: 3 hours

43-3230 Master Class in Music Design [DAW]

Course introduces students to advanced concepts of musical design using tools of random access audio on a digital workstation. Each week, a component of musical design (for postproduction, editing, processing, and mixing) is introduced and illustrated by the instructor, who supervises the creation of a class project. This project serves as a model for techniques and aesthetics of DAW production. Students bring the weeks' instruction to their own team projects, which they complete in a time frame that parallels the class project.

Prerequisites: Recording II, consent of Program Coordinator

Credit: 3 hours

43-3290 Master Class in Sound Design

This course explores the aesthetics and techniques of sound design as an art. A major component of the course will be in the ongoing analysis and critique of the student's work in progress. In addition to lecture, discussion and analytical listening, students will have the opportunity to work one on one with the instructor. Students will be expected to work independently using the facilities of the AA&A Department on a project developed with the consent of the instructor.

Prerequisites: Permission of instructor

Credit: 3 hours

43-3250 Master Class in Classic Studio Techniques

In this course, the focus is on the craft of studio recording as it developed in the first era of the audio industry, prior to the advantages afforded us by digital technologies. This lecture/lab course is designed to teach the technologies, theories and creative processes engineers embraced in that era, such as live-to-stereo recording, linear-analog recording and editing, producing reverb using the analog plate and natural reverb chambers, analog delay techniques, and hybrid processing (daisy-chains) using discrete signal processors.

Prerequisites: Permission of instructor

Credit: 3 hours

43-3220 Master Class in Studio Recording

Course gives an overview of studio recording techniques, covering such topics as microphone usage, signal routing, synchronization, as well as session set-up and psychology. Course is taught by leading Chicago recording engineers and is geared toward advanced students who desire a career in music engineering.

Prerequisites: Recording II, consent of Program Coordinator

Credit: 4 hours

43-3528 Monitor Mixing

Total immersion stage monitor class for advanced live sound reinforcement students, with in depth exploration of feedback suppression, mix aesthetic, systems design and signal flow.

Prerequisites: Live Sound Engineering Practicum

Credit: 3 hours

43-3120 Perception and Cognition of Sound *

This class provides the necessary basis for understanding the cognitive processes involved in our auditory perception of both speech and music. It will examine the basic cognitive theories of memory and attention, the underlying concepts of information processing, and how humans process auditory information to create meaningful events and elicit emotion. The course is multidisciplinary, with contributions from music, biology, physics, psychology, philosophy, and computer science. Numerous demonstrations are used to reinforce the theoretical material presented in the lectures.

Prerequisites: Basic Audio Systems, Psychoacoustics, Junior/Senior standing or consent of instructor

*** Course not currently offered – under revision**

Credit: 3 hours

43-3720 Principles of Digital Synthesis and Signal Processing

This course will demystify the principles of sound and music synthesis techniques currently used by Sound Designers, Synthesizer Programmers, Recording and Post Production Engineers, Audio Artists and Composers. Learning these techniques from the ground up on a Max/MSP computing platform will give you the opportunity to master the fundamentals and principles of sound synthesis and audio processing. You will then be able to apply these principles to designing your own plug-ins as well as mastering commercial hardware and software packages for digital synthesis and signal processing . *Prerequisites:* Audio Production II, permission of instructor

Credit: 3 hours

43-2210 Recording I

This course is one of the first to be taken by students who select the Audio Design & Production concentration. Classes focus on the fundamentals of recording and mixing on both analog and digital systems, building upon the fundamentals of console design and signal processing systems as presented in Production I Audio, Basic Audio Systems, and Audio Production II. The class includes lecture-demonstrations, in-class group tracking and mixing exercises, and additional lab assignments, which are completed in the studios of the Audio Technology Center. Students may also maintain journals that will take the form of critical listening reports or other topics as assigned by the instructor each week.

Prerequisites: Basic Audio Systems, Audio Production II

Credit: 4 hours

43-3210 Recording II

Hands-on studio. This course builds upon the concepts introduced in Recording I. Classes continue to focus on recording and mixing with the students taking a more active role in session operations. Course material will cover finer points of recording and mixing, such as microphone and signal processing techniques applied to specific instrument groups, detailed work with both natural and artificial reverberation, and use of automation and advanced processing techniques for mixing. Students will work in teams to complete recording projects in the department studios.

Prerequisites: Recording I

Credit: 4 hours

43-3610 Sound System Design

Course offers an in-depth look at what goes into designing and installing permanent sound systems. Students learn to design systems for coverage, intelligibility, and cost effectiveness. Emphasis is placed on understanding specifications of system component and predicting system performance.

Prerequisites: Basic Audio Systems

Credit: 4 hours

43-3520 Sound for the Theater

Course covers many aspects of sound engineering for the theater from first production meeting to final tech dress rehearsal. Subjects covered include sound effects, sound tracks, live pit orchestras, special miking techniques such as body miking, and ways engineers interact with other facets of theatrical productions.

Prerequisites: Basic Audio Systems

Credit: 4 hours

43-2325 Studies in Applied Acoustics

This course is dedicated to the study of applied acoustics, specifically relating to musical instruments. Students will learn topics such as vibrating strings, bars, reeds, and membranes and how these simple mechanisms couple with air to make distinctly different sounds. Students will also learn measurement techniques to analyze the vibration and sound of the instruments and correlate the measurements with what we hear. The class will include lecture/demonstrations, guest speakers, and in-class lab work.

Prerequisites: Basic Audio Systems

Credit: 3 hours

43-2725 Studies in Hearing

This course introduces students to the fundamentals of human hearing physiology as well as issues relating to hearing loss and conservation. It is important for any audio professional to understand how complex and delicate the human hearing system is. We must also realize the significance of the fact that society is, only now, beginning to address the problem of environmentally induced hearing loss. The first part of the course will address hearing physiology. The course will focus on the mechanical systems of hearing; starting with the reception of acoustic energy and ending with the delivery of neural signals to the brain. This will give students the necessary foundation knowledge to engage in presentations and discussions covering the topics of hearing loss and conservation.

Prerequisites: Basic Audio Systems

Credit: 4 hours

ENGLISH**52-2802 Business and Technical Writing**

This course is a workshop and seminar in which students practice forms of writing that are common in professional contexts. Examples include business correspondence, job application materials, proposals, and reports. Other communication and collaboration practices that occur in the workplace may also be covered, such as group work and oral presentation. The course will teach students to consider audience, purpose, document design, and language use in all the texts they produce. Credit: 3 hours

52-1151 Writing and Rhetoric I

Writing and Rhetoric I helps students understand and refine their own writing processes. Designed to assist students in making connections between their knowledge, cultures, worlds, and the multiple-literacies and discourses of academic, communicative and performing life, the course encourages students to develop their distinctive voices as they learn to make conscious rhetorical decisions. Writing and Rhetoric I connects personal reflection with critical analysis, providing plentiful and varied opportunities for writing, strengthening reading skills, and becoming a member of a writer-reader community. Credit: 3 hours

52-1152 Writing and Rhetoric II

Writing and Rhetoric II helps students use writing to develop and sustain an in-depth personal and intellectual inquiry into a subject of their choosing. The course unfolds in a series of assignments designed to lead students through a continually deepening creative research process that ripens into a written project of considerable length and complexity. Focusing on methodology, rather than specific course theme, students learn to generate worthwhile questions, collect primary data, locate secondary resources, and form original research insights. Credit: 3 hours

52-2801 Writing for the Workplace

This course provides student writers with practical approach to communicating technical information to non-specialists in film, photography, and science fields. Course focuses on addressing questions of primary consideration in any piece of technical writing: Who reads the material? What does intended audience want or need to know? How should writing be structured to meet those needs? Credit: 3 hours

FILM & VIDEO**24-3101 Advanced Location Sound Recording**

Course applies principles of synchronous motion picture recording to advanced production. Students work on advanced projects on location with faculty supervision. Class sessions provide for discussions, exchange of experiences, and problem solving. Credit: 4 hours

24-1510 Aesthetics of Cinema

Course covers basic concepts and terminology of film and video as forms of art and mass culture. It provides the foundation for film analysis and appreciation through a discussion of film elements and their functions. The course is divided into units of study, with each unit accompanied by films and material. All undergraduates are encouraged to enroll in this course, especially those beginning the Film Production sequence. Credit: 3 hours

24-2102 Audio for Visual Media II

Course explores the post-production techniques used in creating effective audio for visual media. Students develop aesthetic judgment by analyzing the sound design of a variety of soundtracks. They develop technical skills, including track building, ADR, Foley, and mixing, by employing these techniques in creating their own projects.

Credit: 4 hours

24-3122 Audio for Visual Media III

Course is intended for advanced students who wish to gain more insight and experience in preparing and mixing sound tracks for film. Students work in teams to complete class projects during additional weekly lab times.

Credit: 4 hours

24-2401 Editing I

Students develop basic non-linear editing skills needed to tell stories in an effective manner through screenings, practical hands-on assignments, using NLE editing software, readings, and lectures. Organizational skills needed to handle NLE offline digital video and audio materials are covered. Editing exercises consist of various editing genres, using scenes from longer works. Students receive ongoing critiques of their work to determine their proficiency of craft and creativity.

Credit: 3 hours

24-1500 History of Cinema

Course explores the development of world cinema from its beginnings in the late 19th century to the present. Emphasis is placed on major directors, films, and movements that contributed to the development of cinema.

Credit: 3 hours

24-2103 Location Sound Recording

Students are introduced to synchronous film and video and professional audio technologies. Areas covered include microphones, analog and digital audio recorders, SMPTE time code, film and video formats, and film and video data tracks. Students become proficient in the use of professional location sound packages, Nagra recorders, hard and wireless microphones, mic mixers, and booms.

Credit: 4 hours

24-1030 Moving Image Art

This course provides a foundation in the history and aesthetics of moving image arts. Through individual films, clips, lectures, and discussion, students analyze major film movements that contributed to the development of narrative cinema. Organized thematically, course explores aesthetic, historical, technological and ideological moving image elements and their impact on the evolution of narrative construction in film & video. Students apply principles and concepts of film language as well as notions of story premise and theme to their creative production projects.

Credit: 4 hours

24-1031 Moving Image Production I

Using observational writing, as well as visual and aural sketching techniques, students conceptualize and develop creative projects that are adapted to the short film format emphasizing how facts are woven into narrative forms. Preproduction and preparation for production include writing treatments, scripting, storyboarding, and developing a workflow appropriate to the project. Short film stories are acquired using digital audio, video and 16mm formats. Students learn basic producing, directing, camera operation, lighting, composition, and editing. Students crew for advanced projects in the department.

Credit: 4 hours

24-2031 Moving Image Production II

No description available

Credit: 4 hours

24-2104 Music for Film and Video

Students are introduced to elements of music and ways in which these elements may be used to create a musical style that enhances the visual statement. Course emphasizes understanding the function of the score and how it relates to texture, color, and drama in music. Students explore their creativity using the tools available, work on projects of increasing complexity, and complete a score for their own film or video as a final project. Listening skills, music vocabulary, and business and legal aspects of the profession are also studied.

Credit: 3 hours

24-2030 Project Development, Pre-Production, and Preparation

This course explores and practices above-the-line roles and functions for project development, preproduction and preparation. Projects conceptualized, written and developed are produced in the companion, co-requisite course Moving Image Production II (24-2031). Students will draft scripts, schedule and budget projects, prepare visual and aural treatments, keep director/producer journals, conduct casting sessions and critique edits in a team-based approach. Emphasis is on collaboration and team building.

Credit: 4 hours

24-2700 Script Analysis

Course provides students with an opportunity to learn more about various concentrations by examining the methods by which professionals approach, breakdown, or prepare a script for filming. Students analyze various drafts of scripts from several feature length and shorter films. Beginning with story analysis, class analyzes scripts in relationship to producing, directing, acting, production design, cinematography, editing, and sound design. Scripts' strengths and weaknesses are discussed in relation to each of the production areas. Course material links with material from each of the major concentration areas in the Department of Film and Video.

Credit: 3 hours

INTERACTIVE ARTS AND MEDIA**36-2550 C++ Programming**

The course introduces the student to programming using the C++ language. Students learn basic programming of graphic and business applications in C++. Instruction emphasizes good programming practice, programming structure, and object-oriented programming.

Credit: 3 hours

36-1400 Sound for Interaction

This course provides the foundation for understanding sound in the visual and non-visual media. The first half of the course examines the power of creating images with sound and music without using visuals. Sound sculptures and landscapes, as well as classical impressionistic examples are reviewed and critiqued. The second half of the course investigates the impact of sound on both moving and still image. Film, Web site, game, and animation audio is analyzed for impact, technique, structure, and effectiveness. The terminology used in the field is underscored with reading and writing examples. The roles of all the people involved with film, game, and Web sound are covered.

Credit: 3 hours

36-2402 Linear and Nonlinear Sound Design for Games

The media, television, film, print, have a pervasive influence upon how we view the world. This course enables us to analyze subtle and subliminal messages about culture, race ethnicity, gender, religion, class and ability as presented to us through the media. Through open discussions of difference, research, and stimulating readings, we will learn who we are and why we view things the way we do. Expected outcomes include new insights into media influence and our responsibility as media makers, a research project, and self-examination of personal cultural and racial identity.

Credit: 3 hours

36-2610 Sound and Music for Interactive Visual Media

This course will offer students a chance to study the psychological and technical aspects of applying sound and music to interactive visual media. Students will be given projects to complete which will include creating their own sound effects and music tracks as well as creating sounds for use in interactive projects such as Web-based programming and sound design software.(ACID, SOUND FORGE,VEGA VIDEO, and/or other similar software).

Credit: 3 hours

SCIENCE & MATHEMATICS**56-2720 Calculus I**

Course introduces higher mathematics by examining the fundamental principles of calculus—functions, graphs, limits, applications of the derivative, anti-derivatives, area, and the integral. Course presents additional mathematical applications in business, the arts, and the social sciences.

Credit: 3 hours

56-2721 Calculus II

This course includes application of the derivative, the integral, differential equations, and the functions of two variables. Students discover the historical and logical developments of calculus. Applications in management as well as in the social, behavioral, medical, physical, and natural sciences are emphasized.

Credit: 4 hours

56-2713 College Algebra and Trigonometry

This course examines linear and quadratic equations, word problems, polynomials, graphing and straight lines, systems of equations, rational expressions, radicals, and quadratic equations. Relevance to everyday mathematical usage is emphasized.

Credit: 3 hours

56-1820 Science of Electronics

Course provides an introduction to electronics. Students acquire knowledge in the fundamentals of electric circuit theory. Course teaches the operation and use of electronic components and instruments such as multimeters and oscilloscopes. Regular laboratories provide opportunities for hands-on activities. During the final weeks of the course students construct an electronic project.

Credit: 4 hours

56-2820 The Science of Acoustics

Course introduces the physics of sound and considers how it is perceived by the ear. The concepts and applications of acoustics include sound wave theory, sound in music and musical instruments, recognition of musical sound qualities, auditorium acoustics, and electronic reproduction of sound.

Credit: 3 hours

LIBERAL EDUCATION**51-2103 Critical Vocabulary for the Arts**

Course probes ideas and terminology that help students enjoy and appraise achievements in the arts. Students experience performing and visual arts and explore how art is created and perceived.

Credit: 3 hours

MARKETING COMMUNICATION**54-1601 Cultural and Psychological Aspects in Advertising Communication**

Course explores the relationship of conscious and unconscious factors and examines the need, structure, and interaction with planned advertising messages. Survey course gives students insights into the reasons why advertising works using basic readings in the psychology of perception and attitude formation.

Credit: 3 hours

MUSIC**32-1900 Music Theory for Recording Engineers (Introduction)**

This course is for sound engineers who wish to have a working knowledge of music so that they can function in a recording environment with musicians. Students will gain an understanding of different musical terms related to recording; learn to recognize different musical idioms; learn to visually and aurally distinguish orchestral instruments; learn basic music theory, and by the end of the course, be able to follow a lead sheet, jazz score, or classical score.

Credit: 3 hours

TELEVISION**40-2803 Culture, Race, and Media**

The media, television, film, print, have a pervasive influence upon how we view the world. This course enables us to analyze subtle and subliminal messages about culture, race ethnicity, gender, religion, class and ability as presented to us through the media. Through open discussions of difference, research, and stimulating readings, we will learn who we are and why we view things the way we do. Expected outcomes include new insights into media influence and our responsibility as media makers, a research project, and self-examination of personal cultural and racial identity.

Credit: 3 hours

40-1302 Television Arts: Production

This introductory class in the art of television production provides an overview, and basic, practical, hands-on experience in all aspects of today's trends in the television industry. Although taught in a studio environment, this course will cover camera operation, sound, lighting, video transitions, and graphics as they relate to all forms of production. The final project for the class is the completion of three full productions created by students in the class.

Credit: 3 hours

STUDENT RESOURCES AND INFORMATION

STUDENT PROFESSIONAL AND ACADEMIC ASSOCIATIONS

COLUMBIA COLLEGE CHICAGO STUDENT CHAPTER OF THE **ACOUSTICAL SOCIETY OF AMERICA (ASA)**

<http://asa.aip.org>

The Acoustical Society of America is a national organization dedicated to increasing the knowledge of acoustics, facilitate its dissemination, and promote its practical application. The AA&A student chapter of ASA is committed to helping students network, exchange information and ideas, and learn more about the world of acoustics at the local level. The chapter members are involved in activities like academic enrichment, professional development, resume building, technical presentations, and industry tours. Meetings are held once a month, generally on a Thursday evening. Anyone interested in acoustics is welcome!

Past activities have included:

- Trip to Northwestern University's anechoic chamber
- Promotion of student participation in and presentations at the biannual ASA Conventions
- Invited speakers from industry

Officers:

Jessica Borowski, *Chair*; Benjamin Yano, *Vice Chair*; Robby Deem, *Secretary*;

E-mail: columbiaASACchapter@gmail.com

COLUMBIA COLLEGE CHICAGO STUDENT SECTION OF THE **AUDIO ENGINEERING SOCIETY (AES)**

<http://www.aes.org>

The Audio Engineering Society is the major professional society dedicated specifically to the audio profession. Members receive the monthly Journal of the Audio Engineering Society, where many scientific audio-related research and innovations are introduced, as well as advance notification of conventions, conferences, and local chapter meetings. AES members include professionals from all areas of audio including acoustics, sound contracting, recording, live sound reinforcement, research, design, film and video sound, multi-media, marketing of audio-related products, education, and more.

The Columbia College student section of the AES is committed to bringing together students with a mutual interest in audio technology. Through monthly meetings, students have the opportunity to meet with other audio students at all levels of study, thereby networking with future audio professionals. Any student enrolled at Columbia College with an interest in audio may attend the AES meetings, which often include guest speakers such as local professionals, industry leaders, and renowned innovators. Other possible monthly activities include critical listening sessions, student project presentations, equipment evaluations and comparisons, and facility tours.

The AES Student Section at our Department is currently under re-organization. Please contact the chair's office if you are interested getting involved.

COLUMBIA GENERAL AUDIO GROUP (CGAG)

CGAG is formed for students by students. In addition to meeting your fellow majors, you can get involved in the audio community, help plan educational tours and sponsor events for the Department. CGAG meetings are scheduled as needed, depending on the group's current projects. Watch your email for meeting announcements!

Note: Until the Columbia College student section of the AES has been reorganized, CGAG also functions as the AA&A student liaison for AES.

Past activities have included:

- Road trips to attend the annual Central Region Audio Engineering Society (AES) Student Summit in St. Louis
- Organization and promotion of a presentation by George Blood, President of Safe Sound Archive, that discussed a) best practices in the handling of analog magnetic recordings and b) findings on the actual accuracy of the data we get from analog-to-digital converters
- Planning and hosting of the Audio Arts & Acoustics Gallery as part of Manifest 2009 Urban Arts Festival
- Assistance with student portfolio showcases
- Promotion of student participation in the annual AES conference, last held in San Francisco (10/2008)

Officers:

Jessica Borowski, *President*; John Collett, *Vice President*

E-mail: cgag@colum.edu

EMPLOYMENT OPPORTUNITIES AT COLUMBIA COLLEGE CHICAGO

Teaching Assistants in the Department of Audio Arts and Acoustics

A number of courses in the Department of Audio Arts and Acoustics involve lab or demonstration components which require the additional help of teaching assistants (TAs). A TA's responsibilities typically include: maintaining attendance records in large classes, assisting in the set-up of demonstration systems and/or lab stations, providing additional one-on-one help to students, and assisting in the grading and/or evaluation of student work.

Anyone who has performed well in any course would be considered eligible for a TA position in that course.

In all, there are four courses (totaling 18 sections) which offer TA positions. Very often, students will elect to assist the same instructor in instances where the instructor teaches back-to-back sections of a course. This is an easy way to increase the hours worked and pay earned each week. In addition, working with an instructor for that many hours gives the TA the opportunity to develop a more professional relationship with the instructor. This sort of "networking" experience can prove invaluable in the long run.

Contact: Tony Miccolis 369-8274

Work-Aids in the Department of Audio Arts and Acoustics

The job of the studio work-aid is to assist students and faculty in the day-to-day use of the studios, classrooms, and audio equipment. Work-aids assist faculty with room set-up, strike, and occasionally help with in-class demonstrations. Work-aids also assist students with equipment and studio check-out; including technical assistance in the general operation of audio equipment and facilities.

With the range of duties and depth of knowledge expected of work-aids, these positions generally go to students who have completed at least one semester of post-BAS studio/lab courses. The most significant "perk" for the work-aid is the opportunity to take advantage of studio and equipment "down time". If a room is not booked and all general duties have been covered, work-aids are authorized to take advantage of that time to do work or projects to increase their knowledge and proficiency in the use of audio equipment and facilities.

Work-aids generally work an average of 20 hours per week. Work schedules are adjusted from semester to semester to accommodate each student's class schedule.

Contact: Tony Miccolis 369-8274

Academic Technology and Facilities Staff

The College maintains an A/V service department, which provides such equipment as audio, video, slide, film, and multi-media systems to classrooms and lecture halls throughout the college. Positions include working in the A/V office handling check-out and set-up, or set-up and operation of systems in lecture halls such as the Ferguson Auditorium and Hokin Hall.

Contact: Tim Bodzioney 369-7127

These positions require a good base of knowledge and experience in audio-visual media. As noted in the job description, students with "good mechanical and technical aptitude" are sought out for these positions.

Music Department Audio-Visual Staff

The Music Department also maintains an extensive inventory of audio and visual equipment for use in music classes, presentations, and concerts. Relevant positions require a good base of knowledge and experience in audio-visual media.

Contact: Steve Hadley 369-6244

Department of Exhibition and Performance Spaces

The Department of Exhibition and Performance Spaces maintains sound systems in the Hokin Center and the Hokin Gallery. These systems are used for various College and student activities such as lecture presentations, gallery installations, and student-organized parties and dances. The Hokin also programs a wide variety of music concerts featuring local, national and international performers.

This position is officially part-time, but can involve as many as 30 hours of work in a single week, depending on the schedule of events. Duties include operation and maintenance of the Gallery and Center sound systems, purchasing or renting of additional equipment, technical coordination with event producers, student organizations, and bands, and other general organizational duties as needed.

This position usually awarded to a junior or senior in the Live Sound Reinforcement Program. The Hokin directors generally look for someone who has a minimum 3.0 grade-point-average and is ready to commit to the position for at least one year.

Contact: Ted Cho 369-8572

SCHOLARSHIPS AND INTERNSHIPS

Columbia College Chicago offers many scholarships and awards to help you offset the cost of your education. We have listed a few that may be of interest to you as part of the Audio Arts and Acoustics program.

For a complete and up-to-date list of scholarships visit

<http://www.colum.edu/scholarships>

**(make sure to explore the "Other Scholarship Opportunities" area)
and speak with your advisor.**

SAMPLE SCHOLARSHIP OPPORTUNITIES

COLUMBIA COLLEGE CHICAGO AWARDS

The Academic Excellence Award

The President and Board of Trustees have established the Academic Excellence Award of Columbia College. These scholarships are designed to provide financial assistance for worthy and talented continuing students. Each award recipient will receive a \$3,000 scholarship. The availability of these scholarships varies. Application deadline is early spring. Applications may be obtained from the Financial Aid Office.

The Hermann Conaway Scholarship

The Hermann Conaway Scholarship is awarded to one student at the junior or senior level who has demonstrated a leadership role at Columbia College or in the outside community. Awards are based on financial need, academic achievement and demonstrated leadership. The total amount of the award is \$2,000 for one academic year; \$1,000 awarded in the Fall, and \$1,000 awarded in Spring. The Hermann Conaway Scholarship is awarded in the spring for the following academic year. Students must be enrolled full-time. The deadline is April 1; a separate application, available through the Financial Aid Office or the Associate Provost's office, is required.

The Hillary R. Kalish Scholarship

The Hillary R. Kalish Scholarship assists students who are medically and financially challenged complete an undergraduate degree at Columbia College. Multiple awards are made each year with a maximum award of \$2,500. A separate application, available through the Associate Provost's Office, is required. The deadline is May 1.

DEPARTMENT OF AUDIO ARTS AND ACOUSTICS AWARDS

The Jeremy Jefferis Hill Memorial Scholarship

The Jeremy Jefferis Hill Memorial Scholarship is awarded to...

The Hammerman Scholarship

The Hammerman Scholarship offers one or more \$1,000 awards to AA&A students who have demonstrated exceptional achievement. The award is given upon the recommendation of the Audio Arts and Acoustics faculty.

OTHER SCHOLARSHIP OPPORTUNITIES

Illinois Sheriffs' Association Scholarship Program

This scholarship is for full-time undergraduates who are permanent residents in an Illinois county and is awarded on the basis of ability, merit, character, financial need, and sincerity of purpose in reaching his/her goal. Application deadline: March 1st.

David R. Ruben Scholarship

The David R. Ruben Scholarship Program was established to assist outstanding full-time students at Columbia College defray tuition costs. Scholarship awards are based on academic achievement and demonstration of financial need. The total amount of the award is \$2,000 for one academic year, spread over two semesters. In some cases, awards may be considered for renewal provided that the student submits a new application each year and continues to meet all current eligibility criteria. However, because the number of awards is limited, student applications are evaluated by considering the number and strength of all applications received in a given year, regardless of whether or not a student has received the award in the past. The application process includes submission of a five-page essay describing the applicant's goals and accomplishments.

INTERNSHIPS

An internship can be one of a student's most exciting, challenging, and rewarding "capstone" experiences. The internship gives the student first-hand experience in his/her chosen field and an opportunity to see how things learned in the classroom apply in the real world. One of the many tangible benefits of internships is that critical first "professional experience" entry on a student's resume. For some, the internship supervisor also becomes one of the student's professional references. In recent years, we have found that most students who successfully complete internships are employed in their chosen field shortly after graduation.

Currently, the Department of Audio Arts and Acoustics has ongoing relationships with leading companies in Chicago representing all of the sound concentrations. Ask Elliott Scott (312 369-8802) for an updated list of companies and organizations that accept internship applications.

Internships usually run within the time-frame of an academic semester but some may spill over into adjacent weeks and semesters. Most internships require the student to be "on site" anywhere from ten to twenty hours per week. There is a five-to-one ratio of hours worked per week to credit hours earned. For example, a ten-hours-per-week internship corresponds to two credits, a fifteen-hours-per-week internship corresponds to three credits, and so on. Some students elect to take two internships. The first would occur one or two semesters after completing the Department's Core Curriculum and the second would occur during the summer before or the fall of the senior year.

The only requirement to be eligible for an internship is that a student must have a **minimum 3.0 GPA**. Internship credits count as sound electives and are not a requirement in any concentration. No more than twelve internship credit-hours can be counted toward graduation.

Preparation is the key to a successful internship. It is best to begin meeting with the internship advisor a semester in advance of the internship. This is an important time for the student and advisor to review transcripts and begin the process of making the best "match" between a student and a potential internship site.

For a sample list of possible AA&A internships, visit www.colum.edu/Academics/Audio_Arts_and_Acoustics/AA%26A_Internships.php

POLICIES FOR SCHEDULING AND USE OF AUDIO ARTS AND ACOUSTICS FACILITIES AND EQUIPMENT

The educational facilities of the Audio Arts and Acoustics Department, located at 33 East Congress Parkway, are designed to serve the students enrolled in AA&A curriculum and provide recording, reinforcement, and other audio services to the Columbia College community.

Our facilities include the following types of classrooms, studios, and labs:

- Digital audio production classrooms and labs for introductory and intermediate-level audio and audio-for-video production classes
- Classrooms/labs for audio theory, sound contracting, and acoustics classes
- A live sound reinforcement lab
- Computer labs for audio production and acoustical modeling and measurement
- Advanced digital audio production "mini-suites"
- Three control rooms tied to two studio spaces for recording classes and labs

Studio hours of operation:

Monday- Friday	10:00 AM to 10:00 PM
Saturday	10:00 AM to 6:00 PM
Sunday	Hours may vary – see Scheduling Office

Trouble Reports

It is the responsibility of all students, faculty, and staff to report trouble encountered with equipment in the AA&A facilities at 33 East Congress Parkway. Accurate and timely reports of trouble insure that repairs are executed quickly and, in the mean time, no one experiences any surprises with a piece of equipment that would otherwise be expected to be in working order.

In other words, **if you encounter a problem, please report it!**

Every classroom, lab and studio has a supply of easy-to-use "heads up" forms for reporting problems with equipment. When reporting a problem, enter your name and the date, and identify the room and piece of equipment with the problem. A short description of the problem encountered goes in the box in the middle of the form. Obviously, the more detail in the report, the easier it will be for the technical staff to correct the problem.

We have tried to simplify this part of the reporting process to make it easy to complete the form, even when in the "heat of battle" teaching a class or completing a lab assignment.

Trouble Report forms must be submitted to the studio manager on duty. The manager or a designated work-aid must then check and "verify" the problem and enter any additional information as needed.

Once verified and signed, the manager or designated work-aid enters the information into the technical database.

We hope that this system will help speed repair time and prevent unnecessary surprises in the meantime!

Regulations

The use of the facility is a privilege. Failure to observe the following regulations of the Department will result in the suspension of studio privileges.

- Smoking, eating or drinking is strictly prohibited in the studios, control rooms, and classroom-labs
- Students are expected to operate speaker systems at reasonable and safe levels
- Sessions and labs must start on time and end within the booked time
- Session and lab attendance is limited to students directly involved in a class project and those, if any, "hired on" as talent.
- No "guests" will be allowed.
- Columbia College is not responsible for personal belongings brought into its facilities.
- Misuse or abuse of the studios and labs cannot be tolerated - let's respect and take care of this great facility for the benefit of all!

Approved Activities

In accordance with the policies on facilities usage of Columbia College Chicago and the Department of Audio Arts and Acoustics, the following are approved activities for studios and labs:

- Class meetings where a studio is a regular part of the teaching environment
- Assigned lab work for production or practicum classes
- Occasional class meetings where a studio will provide valuable illustration to a lecture topic
- Preparation of materials for class demonstration
- Studio time booked by an authorized student engineer (College Studio Operations) on behalf of a film, video, radio, music, or other College department class project.
- Department-approved activities that have the sponsorship of a faculty member and an authorized engineer in charge of the session
- Other uses by students who have completed coursework appropriate to the studio or lab activity, as approved by the Studio Manager.

General Booking Policies and Procedures

Within the following guidelines, classes have particular time limits and structures for lab bookings. Instructors provide that information at the beginning of each semester:

Scheduling Office and Equipment Center Hours:

Monday through Friday	10:30 AM to 9:30 PM
Saturday	10:30 AM to 5:30 PM
Sunday	(As posted)

- In the best of circumstances, equal priority will be given to all studio bookings. However, when demand for studio time is high, priority will be given to course-related sessions and labs.
- Students can book, up to a week in advance, a minimum of one to a maximum of three hours per session or lab.
- Other than class meetings, no student or group may have more than one lab or session on the books at any one time. As soon as a session is completed, the student or group may book another session.
- Additional time can be booked on a "space-available" basis the day of the session, or one hour before closing on the previous day.
- If a student needs to cancel, or is more than 15 minutes late, and does not notify the scheduling office in advance, the time is forfeited and the student will be denied studio privileges for one week.
- Scheduling may be done with the scheduling office in person or by phone (312-369-8267).
- The scheduling office is just inside the suite of the lower level facility.
- At the time of the booking, the student will give his or her name, phone number, lab group or organization, studio, date and times for the lab, and type of lab (i.e. tracking, overdub, voice-over, mix).
- Additional equipment (e.g. microphones, outboard, etc.) needed for labs is available for checkout on a first-come, first-served basis.
- For recording-studio bookings, there will typically be a half-hour cushion between sessions to accommodate strike and set-up. Students should plan to arrive at least 1/2 hour before their lab to take advantage of this time.

Studio and Lab Use Procedure

- The student's ID card must be scanned for any equipment or facilities checkout. Equipment is available for scheduled time only.
- Any additional equipment needed can be checked out on a first-come, first-served basis.
- The student in charge of the session is responsible for cleanup; leaving the studio in the same condition it was found (pristine, of course!).
- The student's ID will be also be scanned when all equipment and/or rooms have been checked back in.
- Students are encouraged to report to the studio manager any problems they encounter and to share any ideas that would contribute to a better operation.

INSTRUCTIONAL RESOURCE FEES

In an effort to provide greater transparency and predictability for student costs, Columbia College has restructured mandatory course fees to better reflect resources and materials used, based on a survey of course requirements across the college's arts, media and academic disciplines. The new Instructional Resource Fees (IRF) are in place for the Fall 2009 term.

Prompted by student concerns – voiced by the Student Government Association – about the basis for the course fees, IRF are the result of an exhaustive and comprehensive analysis of Columbia's historic course fee structure and are designed to better reflect the varying levels of resources required for teaching various disciplines. While fees will still be assessed on a course-by-course basis, all courses in a given department will carry the same fee.

Academic departments have been divided into four tiers based on their relative levels of resource requirements. Courses in departments that use the fewest instructional resources (English; History, Humanities, Social Sciences; New Millennium Studies and Marketing Communications) will now have no instructional resources fees. Courses in the other three tiers—those that use increasingly greater levels of resources – will have \$40, \$70, and \$115 fees respectively. Materials that contribute to the assessment of fees include such items as guest lectures, consumable materials (e.g., photo paper, chemicals), musical accompaniment, etc. There will be no instructional resources fee assessed for courses carrying one credit regardless of department. Courses carrying five or more credits will have fees double those of other courses in that department.

While the restructuring reflects a zero-based total (i.e., no additional revenue to the college from fees), there will now be no fee for approximately 35% of all courses. In addition, the maximum fee is now \$230, as contrasted with the previous maximum of \$415. The new structure reflects a more equitable distribution of fees across students and disciplines.

The college intends to hold the instructional resource fees at the current levels for the next three years. After that time, instructional expenditures will again be analyzed and fees may be reset. This should further help students predict upcoming costs.

The new fee amounts will be included in the course catalog and on the Student Financial Services website and are listed in the table below.

**Columbia College Chicago
Instructional Resource Fees
Academic Year 2009/10**

	Fee Per 1 Credit Course	Fee Per 2-4 Credit Course	Fee Per 5-6 Credit Course
Humanities, Hist, & S.S.	\$0.00	\$0.00	\$0.00
Marketing Commun.	\$0.00	\$0.00	\$0.00
English	\$0.00	\$0.00	\$0.00
New Millennium Studies	\$0.00	\$0.00	\$0.00
Science and Math	\$0.00	\$40.00	\$80.00
A.E.M.M.	\$0.00	\$40.00	\$80.00
Journalism	\$0.00	\$40.00	\$80.00
Art and Design	\$0.00	\$40.00	\$80.00
Fiction Writing	\$0.00	\$40.00	\$80.00
Theater	\$0.00	\$40.00	\$80.00
Interactive Arts	\$0.00	\$70.00	\$140.00
Radio	\$0.00	\$70.00	\$140.00
Early Childhood Educ.	\$0.00	\$70.00	\$140.00
Television	\$0.00	\$70.00	\$140.00
Audio Arts & Acoustics	\$0.00	\$70.00	\$140.00
Music*	\$0.00	\$115.00	\$230.00
Film & Video	\$0.00	\$115.00	\$230.00
ASL English Interpret.	\$0.00	\$115.00	\$230.00
Dance	\$0.00	\$115.00	\$230.00
Photography	\$0.00	\$115.00	\$230.00
* Music excludes lessons			
<i>Music Private Lessons</i>		\$300.00	
<i>Music Secondary Lessons</i>	\$200.00		

www.colum.edu/AAA

312-369-8820

312-369-8427 (fax)