393H. Perspectives in 20th Century Arts: 1960-1920
Fall, 3(3-0) Juniors, approval of Honors College.
Reaction to Naturalism across the arts traced in Symbolism and Expressionism as interrelated phenomena in response to the crisis of confidence in European institutions.

394H. Perspectives in 20th Century Arts: 1920-1945
Winter, 3(3-0) Juniors, approval of Honors College.
Formalist analysis of art elements examined across the arts in Cubism, Surrealism and new musical structures as positive response to war, depression and dictatorship.

395H. Perspectives in Contemporary Arts: Postwar Period
Spring, 3(3-0) Juniors, approval of Honors College.
The function of avant-garde arts after World War II to the present studied in the new dimensions of art created by new technology and the mass media explosion.

IDC. Women's Studies Senior Seminar
For course description, see Interdisciplinary Courses.

450. Arts Management
Fall, Winter, Spring, 3 to 5 credits.
May reenroll for a maximum of 8 credits. Seniors or Graduate Students or approval of department.
Administration of arts organizations, management of facilities, understanding operational methods and procedures of performing companies, financial structure and funding of arts centers, study of audience development, contemporary trends in arts management field.

461. Aging and Human Values
Spring, 3(3-0) Juniors.
Development of personal and professional responses to value-laden questions concerning aging and the elderly through historical, literary, philosophical and related perspectives.

491H. Perspectives in the Social Sciences and Humanities
Fall, Winter, Spring, 2 to 6 credits.
May reenroll for a maximum of 12 credits if different topics taken. Juniors, approval of Honors College, or approval of instructor. Interdepartmental with the College of Social Science.
An integration of subject matter and methodologies of several disciplines as they are relevant to particular topical areas.

492. Integrative Topics in the Arts and Humanities
(U C 492.) Fall, Winter, Spring, 4(4-0)
May reenroll for a maximum of 8 credits. Juniors or approval of department.
In-depth study of topics in the arts and humanities. Integrative and interdisciplinary approach.

499. Arts and Letters Internship
Fall, Winter, Spring, Summer. 1 to 10 credits. May reenroll for a maximum of 10 credits. Juniors, 3.00 GPA, approval of instructor. Supervised pre-professional field experience for juniors, seniors, or graduate students.

999. Doctoral Dissertation Research
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 36 credits. Approval of college.

ASTRONOMY AND ASTROPHYSICS
See Physics and Astronomy.

AUDIOLOGY AND SPEECH SCIENCES ASC

College of Communication Arts and Sciences

105. Voice and Articulation
Fall, Winter, Spring, Summer, 3(4-0)
The study and development of the skills of voice and articulation.

201. Introduction to Communication Disorders
Fall, Winter, 3(3-0)
Speech, hearing and language disorders in adults and children.

222. Oral Language Development
Fall, Winter, Spring, 3(3-0)
Emergence and development of receptive and expressive aspects of oral language of the child.

227. Physics for Audiology and Speech Sciences
Fall, Spring, 4(4-0) MTH 108. Not open to students with credit in PHY 231. Interdepartmental with and administered by Physics.
Introductory physics for Audiology and Speech Sciences majors: kinematics, Newton's Law, conservation of energy and momentum, waves and vibrations, sound propagation, resonance, speech production.

274. Structures and Functions of Speech and Hearing Mechanisms
Fall, Winter, Spring, 5(4-2) ASC 108 or approval of department.
Peripheral and central auditory mechanisms and the respiratory, phonatory and articulatory mechanisms for speech.

276. Descriptive Phonetics
Winter, Spring, 3(3-0) ASC 274 or approval of department.
Detailed description of the principles that underlie the production of speech sounds.

277. Speech Science
Fall, Spring, 3(3-0) ASC 274, ASC 275.
Scientific bases of voice communication with special reference to the acoustic aspect of production.

373. Clinical Procedures in Speech Pathology and Audiology
Winter, Spring, 4(4-0). 2.00 grade-point average in ASC 201 and ASC 277 or approval of department.
Principles underlying the clinical interview and client relationships essential to diagnosis and therapy. Procedures in obtaining, recording, and evaluating test results and therapeutic methods.

444. Oral Language of Urban Areas
Winter, Summer, 3(3-0)
Concentration in the characteristics of language and human communication as these relate to studies and practices of those involved in urban affairs.

445. Communication Disorders: Social and Emotional Components
Spring, 3(3-0) Juniors.
Analysis and management of the social and emotional components of speech, language, and hearing problems.

454. Introduction to Audiology
Fall, Spring, 5(4-2) ASC 275, ASC 277.
Fundamental aspects of normal hearing; hearing disorders, hearing tests.

460. Aural Rehabilitation
Winter, Summer, 5(5-0) ASC 454 or approval of instructor.
Fundamental aspects of hearing aids, auditory training, and speechreading for the hearing-impaired person.

470. Communication Disorders
Spring, Summer, 3(3-0) Juniors. Not open to Audiology and Speech Sciences majors.
An overview of communication disorders; the professions of speech and language pathology and audiology and their relationships to allied professions.

474. Clinical Practicum in Speech and Language Pathology
Fall, Winter, Spring, Summer, 3(3-0) ASC 474 or approval of department.
Test procedures and analysis; supervised clinical experience in language and speech evaluations and report writing.

477. Methods in Public School Speech and Hearing Therapy
Fall, Winter, Spring, Summer, 4(4-2) ASC 201, ASC 373. Must be taken prior to term of student teaching.
Administration and organization, procedures and materials in public school speech and hearing therapy.

480. Basic Laboratory in Experimental Audiology
Fall, Spring, 3(4-0) PHY 108, PHY 231, ASC 454. Juniors.
Contemporary experimental procedures in basic audiological research. Projects include systematic exercises in equipment use, calibration, psychophysical methods, and data analysis.

490. Independent Study
Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Approval of department.

801. Phonological Disorders
Winter, 4(4-0) Approval of department.
Advanced study of normal aspects and correlates of phonological development; traditional and contemporary intervention issues, and issues related to research in phonological disorders.
810. Audiologic Calibration Standards
Winter. 4(3-2) ASC 854 or ASC 833A,
ASC 833B.
Contemporary electro-acoustic and other
measurement standards for audiometers, sound level
meters, earphones, hearing aids, and related de­
vices; current issues in standards development;
labaratory in applied measurement.

833. Specialized Clinical Audiology.
A. Differential Audimetry
Fall. 4(3-3)
Pure tone audiometric tests as an aid to the otol­
gist in evaluating the pathology of hearing loss;
including the development of norms. Consider­
ation of nonorganic loss.
B. Speech Audimetry
Fall. 4(3-3)
Evaluation of speech and speech-like signals; detec­tion, discrimination and recognition.
C. Industrial Audiology
Spring. 4(4-0)
Evaluation of the role of the audiologist in indus­try emphasizing identification procedures, dam­
age risk criteria, measurement and control of noise,
conservation procedures, and medico-legal prob­lems.
D. Advanced Audiological Evaluation
Winter. 4(3-2)
Theory, administration and evaluation of select­ed tests of the peripheral and central audi­
tory system.
E. Pediatric Audiology
Fall. 4(4-0)
Evaluative procedures including play audiome­try, language assessment, and case studies as aids
to the differential diagnosis of auditory disorders in children; habitative procedures for the
acoustically handicapped child.
F. Geriatric Audiology
Summer. 4(4-0) ASC 460 or approval of depart­ment.
Causes and descriptions of hearing loss asso­ciated with aging; audiologic evaluation and
rehabilitation of older people with emphasis on
amplification needs.
G. Auditory Habilitation of the
Hearing Impaired
Spring. 4(4-0) ASC 460; ASC 833B or approval
of department.
Communication skills development, early iden­ification, differential diagnosis, personal and
classroom amplification systems, methodologi­cal
controversies and public laws affecting edu­cation of the hearing impaired.
H. Electrophysiological Methods of
Auditory and Vestibular
Assessment
Spring. 4(3-2) ASC 854 or approval of
department.
Electroencephalographic and brain stem audiome­try, electrocochlear audiome­try,
respiration audiometry, electrodermal audiome­try, impedance audiometry and electroneuro­graphy.
I. Amplification Systems for the
Hearing Impaired
Winter. 4(3-2) ASC 833B.
Form, function and clinical application of group
and personal amplification systems for the hear­ing impaired.
J. Tinnitus and Vestibular Disorders
Spring. 3(2-2) ASC 8331 or approval of
department.
Anatomy, physiology, evaluation, interpreta­tion and management of tinnitus.

840. Language Theories and Disorders
Spring. 4(4-0) Precious course work in
language development.
Advanced study of child language research em­phasizing an applied psycholinguistic approach
to child language disorders.

841. Evaluation and Treatment of
Speech and Language Disorders
A. Aphasia
(F81A) Fall. 4(4-0)
Neuropathology, symptomatology, and speech
and language habilitation and rehabilitation of
individuals with aphasia.
B. Apraxia and Dysarthria
(832 B) Spring. 4(4-0)
Neuropathology, symptomatology, and speech
and language habilitation and rehabilitation of
individuals with apraxia and dysarthria, includ­ing those with cerebral palsy.
C. Voice Disorders
(831B) Winter. 4(4-0)
Etiology, symptomatology, diagnosis, and treat­ment of voice disorders including the specific
communication problems of the laryngelec­tomized.
D. Stuttering
(832E) Fall. 4(4-0)
History, symptomatology, development, evalua­tion, and theories of stuttering. Focus is to fa­cil­i­tate clinical involvement with stutterers.
E. Orofacial Anomalies
(832F) Spring. 4(4-0)
Etymology, symptomatology, diagnosis, and treat­ment of various orofacial anomalies including
lip and/or palatal cleft, glossectomy, jaw resec­tion, dental anomalies, and tongue thrust.
F. Delayed Language Assessment
(832C) Fall. 4(4-0)
Evaluative techniques including audiometry,
psychometry, and case history as aids to the
differential evaluation of delayed language devel­opment.
G. Language Intervention: Early
Stages
Winter. 4(4-0) Approval of depart­ment.
Language intervention for those children func­tioning at or below a four-year-old level in their
language behavior; mental retardation, autism,
and other developmental delays associated with
severe language impairments.
H. Language Intervention: Later
Stages
Summer. 4(4-0) Approval of depart­ment.
Treatment of developmental language delays and
disorders with emphasis upon children func­tioning at or above the four-year-old level in lan­
guage behavior; preschool and adolescent lan­guage disorders are included.

842. Augmentative and Alternative
Communication Systems
Summer. 4(4-0) Approval of depart­ment.
Historical perspective and philosophy of augmentative/alternative communication sys­tems. Aided and unaided nonspeech communi­cation systems. Assessment, selection, and
intervention procedures.

843. Transfer and Maintenance of
Speech Behaviors
Spring. 4(4-0)
Various clinical procedures; assisting others in
transferring and maintaining these behaviors out­side the clinical environment.

853. Speech Perception: Theory and
Measurement
Summer. 4(4-0) Approval of depart­ment.
Evaluation and analysis of various theories of
speech perception and their implications for
speech and language pathologists, audiologists,
and speech and hearing scientists.

854. Psychophysics and Theories of
Audition
Fall. 4(4-0) Approval of instructor.
Nature of auditory stimuli and the results of psy­chophysical experimentation in audition.

875A. Clinical Practicum in Speech and
Language Pathology
Fall, Winter, Spring. Summer. 1 credit.
May remroll for a maximum of 6 credits.
ASC 474 and satisfactory completion of a
speech, language, and hearing screening/evalua­tion at the MSU Speech and Hearing Clinic.
Directed diagnostic, therapeutic, and prognostic
experience in speech and language pathology.

875B. Clinical Practicum in Audiology
Fall, Winter, Spring, Summer. 1 credit.
May remroll for a maximum of 8 credits.
ASC 454 and satisfactory completion of a
speech, language, and hearing screening/evalua­tion at the MSU Speech and Hearing Clinic.
Directed diagnostic, therapeutic and prognostic
experience in audiology in various clinical set­tings.

876. Communication Disorders:
Neuroanatomy-Neurophysiology
Fall. 4(3-2) Approval of depart­ment.
Neuroanatomical and neuropathological correla­tions of speech, language, and hearing.

880A. Algorithms for Speech and Hearing
Sciences
Fall. 4(4-0)
A discussion of useful algorithms applicable to
quantification of phenomena related to
audiology and speech sciences.

880B. Acoustic Phonetics
Winter. 4(4-0) ASC 880A or approval
of department.
An analytic study of the acoustics of speech.

880C. Instruments and Electronics for
Audiology and Speech Sciences
Spring. 4(3-2) ASC 880B or approval
of department.
A discussion of the electronic principles and in­struments necessary to measure parameters re­lated to hearing and speech processes.

899. Master’s Thesis Research
Fall, Winter, Spring. Summer. Variable
credit. Approval of department.

940. Seminar in Audiology and Speech
Sciences
Fall, Winter, Spring. Summer. 4(4-0)
May remroll for a maximum of 16 credits.

990. Special Problems in Audiology and
Speech Sciences
Fall, Winter, Spring. Summer. 1 to 6
credits.
Special projects in audiology and speech sciences.

999. Doctoral Dissertation Research
Fall, Winter, Spring. Summer. Variable
credit. Approval of department.