

BOARD OF HIGHER EDUCATION
REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Assessment and Accountability

NO.: AAC 06-02

COMMITTEE DATE: November 10, 2005

BOARD DATE: November 17, 2005

MOVED:

The Board of Higher Education hereby approves the expedited application of the **University of Massachusetts Amherst** to award the **Doctor of Audiology**.

One year after graduating the program's first class, the University shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty, resources, and program effectiveness.

Authority: Massachusetts General Laws Chapter 15A, Section 9(b)

Contact: Aundrea Kelley, Associate Vice Chancellor for Academic Policy

BOARD OF HIGHER EDUCATION

November 2005

University of Massachusetts Amherst

Doctor of Audiology

INTENT

The University of Massachusetts Amherst proposes to offer a Doctor of Audiology program for individuals who wish to pursue professional careers in clinical audiology. The proposed program has been developed to meet new national accreditation and certification requirements and will replace the existing Master of Arts in Communication Disorders concentration in audiology currently offered. The Doctor of Audiology (Au.D.) has been endorsed as the entry-level degree for the field by both of the major professional organizations for audiologists (the American Academy of Audiology and the American Speech-Language-Hearing Association).

According to the Letter of Intent distributed to public campuses on August 15, 2005, the program has the full support of the School of Public Health and Health Sciences, the Provost, and the Chancellor and has obtained all necessary governance approvals on the University of Massachusetts Amherst campus. The University's Board of Trustees approved the proposed program on August 24, 2005. Dr. Paul J. Fonteyn, Provost and Senior Vice Chancellor for Academic Affairs, University of Massachusetts Boston, submitted comments in strong support of the proposed program and possible future inter-campus collaboration.

MISSION, NEED and DEMAND

The proposed degree falls within the mission of the University of Massachusetts by seeking to provide a program where, through academic research and clinical work, graduates will be able serve the residents of the Commonwealth in the field of audiology.

In researching employment prospects in the field, the University found that the need for audiological services is expected to continue to increase in future years. Approximately 28 million individuals in the United States have a hearing impairment, and this number is expected to increase as the proportion of older individuals in the population continues to rise. The U.S. Bureau of Labor Statistics identified audiology as a profession that is growing "faster than average" through the next decade. Currently, there are approximately 12,000 certified audiologists in the United States, with the number of positions projected to climb by 45 percent between 2000 and 2010. During the same time frame, job growth for certified audiologists in Massachusetts is expected to increase by 36 percent or approximately 164 positions. Graduates of the current master's-level audiology program are in high demand; virtually all receive offers of employment in the profession before or soon after they graduate. In addition, new standards for educating individuals to become audiologists will go into effect January 1, 2007. After this deadline students will need to earn a doctoral degree in order to become certified.

Distinction from Existing Programs

At the time UMass Amherst submitted its petition, the University of Connecticut was the only institution in New England that is offering an Au.D. program, having enrolled its first class in fall 2004. In fall 2005, the University of Rhode Island enrolled its initial class of Au.D. students.

Northeastern University, the only other institution in Massachusetts that offers the master's degree in audiology, is similarly in the process of converting its master's degree into an Au.D. program. Boston University (BU) offers a clinical Doctor of Science (Sc.D.) in Audiology that attracts a very limited number of students and also plans to institute the Au.D. degree program.

The pursuit of an Au.D. is an expensive proposition for most individuals, as few programs are able to fund their students. The proposed program will offer prospective students from Massachusetts a more affordable alternative to programs at private universities or out-of-state public institutions of higher education.

ADMISSION AND ENROLLMENT

Admission

Admission to the Au.D. program will be based on four criteria: an overall undergraduate grade point average of at least 3.0, a combined analytic and quantitative Graduate Record Examination score of at least 1,000, strong letters of recommendation, and a well-written personal statement. Acceptable TOEFL scores (250 or higher on the computer-based test) must be submitted by international applicants who are not native English speakers. Prospective students will be encouraged (but not required) to complete a formal interview. Applicants are not required to have an undergraduate degree in communication sciences and disorders but must show evidence of having taken course work in math, science, social science, basic human communication processes and speech/language disorders.

Enrollment

Six to ten new, full-time students are expected to enter the program each year. This estimate is based on previous application statistics as well as on the number of students who recently turned down the opportunity to enroll in the Master's program, citing the desire to attend Au.D. programs. At full implementation enrollment will be at 24 to 40 students across the four-year program. All of these students will be new enrollments, with the exception of one or two individuals beginning the master's or M.A./Ph.D. program in fall 2004, who might choose to transition to the Au.D. program.

ACADEMIC AND RELATED MATTERS

Curriculum (Attachment A)

The proposed Au.D. will be a four-year, post-baccalaureate program, specifically designed to educate future audiology clinicians. The proposed program includes 63 credits of course work, a 6-credit research project, and a minimum of 18 credits of clinical practicum. The academic and clinical components of the proposed program were devised to meet the new standards for preparation of audiologists developed and adopted by the Standards Council of the American Speech-Language-Hearing Association.

The proposed Au.D. degree, although not designed to prepare future researchers, will require more extensive research training than do most Au.D. programs, and graduates will be capable of evaluating and conducting research. Research requirements include three graduate-level statistics/research design courses and a 6-credit capstone research project.

Clinical training will be infused into the curriculum throughout the proposed Au.D. program. Students initially will be placed in the on-campus hearing clinic within the Center for Language, Speech and Hearing. Once their clinical skills have developed sufficiently (as demonstrated by passing a Level One practical/oral examination), they will complete a sequence of off-campus clinical rotations. As mandated in the new standards for the education of audiologists, the final clinical experience of the proposed Au.D. program will consist of a full-time off-campus residency.

Administration and Governance

The proposed program will be offered through the Department of Communication Disorders and, if approved, will be one of four degrees offered by the department. The other degrees include the Bachelor of Science, the Master of Arts with a concentration in speech-language pathology, and the Doctor of Philosophy. Governance of the Au.D. will be provided by the faculty within the Department of Communication Disorders and the School of Public Health and Health Sciences.

PROGRAM GOALS AND ASSESSMENT

Primary goals for the proposed program for its first five years include the following:

- (1) Secure national accreditation through the American Speech-Language-Hearing Association's Council of Academic Accreditation, following final approval of the program by the Board of Higher Education. (The University anticipates no roadblocks to obtaining accreditation. The master's degree program has been accredited since 1979 and was most recently reaccredited in 2004.)
- (2) Enroll a full complement of students (maximum total enrollment of 40 students at steady state).
- (3) Graduate the first class of Au.D. students.
- (4) Become well-respected. Improve ranking in the "U.S. News and World Report" ratings of graduate programs in audiology, as the program is no longer ranked as one of the top 25 programs.
- (5) Attract students from both within and outside of the Commonwealth of Massachusetts.
- (6) Provide high-quality education for students that will prepare them to enter the complex and rapidly-changing field of audiology. To that end the University will:
 - increase clinical offerings both on and off-campus through
 - a major marketing campaign for the on-campus hearing clinic that will expand the number and type of patients served, thus enlarging the scope and types of cases seen by students in their initial clinical experiences.
 - additional collaboration with area agencies that provide audiological services to expand the number of off-campus placement sites for students.
 - conduct summative and formative assessment to identify potential areas of weakness in the program through
 - course and supervisor evaluations completed by students each semester.

- exit surveys of students who are about to graduate from the program.
- survey alumni and employers periodically to determine aspects of the curriculum and program that are working well and those that need improvement.
- measure key outcomes including:
 - the proportion of students who successfully complete the national Praxis Examination in Audiology, which individuals must pass in order to become certified in the field. Goal is an exam passage rate of 90 percent.
 - the percentage of our graduates employed within the field will provide another metric of the quality of our program. Goal is an employment rate of 90 percent.

RESOURCES and BUDGET (Attachment B)

Faculty and Staff

The Department of Communication Disorders currently has 11 full-time faculty, a full-time clinic director, two full-time clinical instructors, a number of part-time clinical instructors, and support staff (secretarial, office managers, etc.). Although the new degree has an expanded curriculum, the current faculty and staff plan to provide the necessary instruction and supervision with current staffing levels. The expanded program (from 2 years to 4 years) permits the offering of many of the required courses on an every-other-year basis rather than on an annual basis.

Fiscal and Other Resources

The Center for Language, Speech and Hearing is the Department of Communication Disorder's clinical facility. The Center's hearing clinic provides diagnostic and rehabilitative audiological services to the University community as well as to residents of the Pioneer Valley and beyond. The hearing clinic also provides hearing screening services to school systems throughout Western Massachusetts and is one of the few facilities in the region to perform comprehensive auditory processing evaluations.

Currently, all of the full-time faculty members' and half of the clinical instructors' salaries are supported by state allocations. The remainder of clinical instructor salaries is covered by funds generated through the clinical service program. Half of the clinical secretary's salary is supported by a state allocation and the other half by clinic revenues. Clinical supplies, materials, and equipment are covered by clinic revenues and trust funds that the department generates.

The program does not anticipate needing to request additional funds for the Au.D. through the University's budget process. Since the proposed program will replace an existing program, the University anticipates minimal implementation costs (\$300 for the substantive change accreditation fee and \$2,000 for printing new recruitment materials). These costs will be assumed by the program. Increased clinic revenues associated with expanded service delivery will support costs for additional clinical staff, maintenance of existing equipment (calibration, repair), and purchase of new clinical equipment.

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

Review

An external evaluation team composed of Ron D. Chambers, Ph.D. (chair), and Jackson Roush, Ph.D., visited the University of Massachusetts Amherst campus on May 16 and 17, 2005, to evaluate the proposed Doctor of Audiology (Au.D.) program. Dr. Chambers is Associate Professor and Head of the Department of Speech and Hearing Science at the University of Illinois at Urbana-Champaign. Dr. Roush is Professor and Director of the Division of Speech and Hearing Sciences, University of North Carolina School of Medicine, Chapel Hill, North Carolina. He also serves as Section Head for Audiology at University of North Carolina's Center for the Study of Development and Learning.

The evaluation team reported their overall support for the proposal and noted that the proposed program should produce graduates who are highly trained and competitive audiologists. The team stated that the current audiology faculty and staff will be sufficient to initiate the program, but as student enrollments grow in years three and four, additional personnel will be needed. Similarly, the team noted that the department is adequately equipped to initiate the program but that upgrades will be needed in the coming years for instrumentation to teach diagnostic audiology, electrophysiologic recording, electroacoustic analysis of hearing instruments, and real-ear analysis of hearing aids.

The team complimented the research project requirement in the curriculum but suggested that the projects be scaled appropriately so as not to overburden faculty and student workload. The team was in favor of the move by the academic and clinical portions of the Department of Communication Disorders to the building that was recently vacated by the continuing education unit on campus. The team did not review specific library holdings and services; however, they were assured by faculty that the University maintains outstanding library resources and that the proposed Au.D. program should require no additional funding for library acquisitions.

Response

In response to the evaluation team's report, the University of Massachusetts Amherst stated that increased student enrollments will result in a higher number of clients at the on-campus, fee-for-service clinic, because there will be a greater number of students available to provide clinical services. Consequently, revenue will be generated to cover costs of additional staff hiring and equipment and technology upgrades in the future. The University noted that to avoid overburdening faculty or students, student research projects will be carefully considered; moreover, the choice by many students to conduct clinical investigations during their rotations will serve to ease the workload of the program's academic faculty. The University has signed with the Office for Facilities and Campus Planning a Memorandum of Understanding to move the department into a newly renovated building during the summer of 2006. Finally, the University explained that although the visiting team did not review specific library holdings during their visit, the team did obtain information from faculty, staff, and students about library resources and about a recent accreditation visit by the American Speech-Language-Hearing Association's Council of Academic Accreditation, which found that library holdings met or exceeded the Association's standards.

STAFF ANALYSIS and RECOMMENDATION

Board staff thoroughly reviewed all documentation submitted by the Amherst campus, the external reviewers, and the President's Office of the University. The proposal demonstrates the University's commitment to offer a professional preparation program in audiology that will be state-of-the-art, accredited, and well-respected. Recommendation is for approval of the Doctor of Audiology at University of Massachusetts Amherst. Upon graduating the first class for this program, the University shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty resources, and program effectiveness.

Appendix A: Curriculum for Proposed Au.D. Program

Sample curriculum for the proposed Au.D. degree. Classes marked with asterisks are newly required courses. The name of each course instructor is in parentheses. Several courses will be offered on an every-other-year basis, so the precise sequence of coursework for individual students will vary. All courses are 3 credits with the exception of clinical coursework (for which credit is variable ranging from 1 to 3 credits per semester).

Year 1: Fall

COMM-DIS 530: Neurological Bases in Speech, Language, Hearing (Andrianopoulos)
COMM-DIS 630: Research in Communication Disorders (Velleman)
COMM-DIS 640: Advanced Diagnostic Audiology (Baran)
COMM-DIS 697A: Instrumentation in Communication Disorders (Whitmal)**
On-campus clinic

Year 1: Spring

COMM-DIS 642: Hearing Aids and Amplification Systems (Whitmal)
COMM-DIS 645: Theories of Hearing (Freyman)
COMM-DIS 650: Pediatric Audiology (Poissant)
COMM-DIS 651: Electrophysiological Procedures in Audiology (Baran)
On-campus clinic

Summer I: On-campus clinic

Year 2: Fall

COMM-DIS 641: Advanced Hearing Rehabilitation (Helfer)
COMM-DIS 691: Advanced Clinical Seminar (Staff)**

COMM-DIS 692: Medical Audiology (Baran)
Statistics/Research Design Course
On-campus clinic
Level one examination

Year 2: Spring

COMM-DIS 520: Counseling in Communication Disorders (Mercaitis)
COMM-DIS 646: Assessment/Rehabilitation of Vestibular Disorders and Tinnitus (Helfer)**
COMM-DIS 647: Implantable Auditory Prostheses (Poissant)**
Statistics/Research Design Course
Off-campus clinical rotations

Summer II: Off-campus rotations

Year 3: Fall

COMM-DIS 648: Auditory Processing Disorders (Baran)**
COMM-DIS 691: Advanced Clinical Seminar (Staff)**
Non-departmental Elective
Off-campus clinical rotations

Year 3: Spring

COMM-DIS 643: Hearing Conservation and Industrial Audiology (Freyman)
Non-departmental Elective
Off-campus clinical rotations
Capstone research project (3 credits)

Summer III: Capstone research project (3 credits); Off-campus rotations; Comprehensive Examination

Year 4: Fall

Off-campus residency

Year 4: Spring

Off-campus residence

Statistics/Research Design Course Requirements: Students will be allowed to select courses to meet these requirements (i.e., two courses in Statistics/Research Design during Year 2) from among the following options (Students can elect to take two alternative courses from among the University's graduate level course offerings in the Statistics/Research Design area with prior approval of the student's advisor and the Graduate Program Director)

Educ 555 Intro. to Statistics and Computational Analysis I
Educ 656 Intro. to Statistics and Computational Analysis II

or

Psych 640 Statistical Inference in Psychology I
Psych 641 Statistical Inference in Psychology II

or

Stats 501 Methods in Applied Statistics
Stats 506 Design of Experiments.

Prerequisites: Applicants with an undergraduate degree in a major other than communication sciences and disorders must have the required prerequisite course work listed below. Applicants with deficiencies in this prerequisite course work will be required to complete the necessary classes early in their graduate program, which will likely extend the program for these individuals.

Basic Science Course Work:

- a. Life sciences (e.g., biology)
- b. Physical sciences (e.g., physics, chemistry)
- c. Mathematics (non-remedial, e.g., statistics, calculus)
- d. Behavioral and/or social science (e.g., psychology)

Basic Human Communication Processes Course Work:

- a. Anatomy and physiology of the speech and hearing mechanisms
- b. Physical and psychophysical aspects of speech, hearing and language production and perception
- c. Normal development of speech, hearing, and language
- d. Applied phonetics or speech science

Speech/Language Disorders Course Work:

Phonologic, morphologic, syntactic, and pragmatic aspects of human communication associated with hearing loss

Appendix B: Budget for Proposed Au.D. Program

Personnel*			FY07	FY08	FY09
Academic Faculty			\$ 339,556.06	\$ 352,119.63	\$ 365,148.06
Dept. Administrative Support			\$ 20,175.39	\$ 20,921.88	\$ 21,695.99
Professional Staff			\$ 84,707.90	\$ 87,842.09	\$ 151,092.25
Clinic Administrative Support			\$ 13,471.02	\$ 13,969.45	\$ 14,486.32
Total Personnel			\$ 457,910.37	\$ 474,853.05	\$ 552,422.62
Other Expenses**					
Publications & Materials			\$ 2,000.00	\$ 1,000.00	\$ 1,000.00
Faculty Conference Travel			\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
Equipment			\$ 4,000.00	\$ 4,000.00	\$ 4,000.00
Total Other Expenses			\$ 11,000.00	\$ 10,000.00	\$ 10,000.00
Total Proposed Program Expenses			\$ 468,910.37	\$ 484,853.05	\$ 562,422.62

* Budget information is provided for Audiology faculty and one-half of the salary for the administrative assistant who works for the department, which included two program areas (Speech-Language Pathology and Audiology). All of these individuals are supported on state funds. In addition, budget information is provided for a full-time clinical supervisor in audiology as well as one-half of the salary for the clinic director, who oversees both the speech-language pathology and audiology clinical programs, and one-half of the administrative support staff for the clinical program who also works with both programs. These positions are currently split-funded between state funds (25%) and clinic/department revenues (75%). In FY09, the salary for a full-time clinical instructor/supervisor is included. It is anticipated that this position will be fully funded by revenues generated in the clinical program.

** Other expenses are currently funded through clinic and departmental revenues, including funds from grant overheads.