

# INSTRUCTIONAL DESIGN (MEd, GRADUATE CERTIFICATE)

## INSTRUCTIONAL TECHNOLOGY DESIGN (GRADUATE CERTIFICATE)

### Faculty

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### The Program

The MEd in Instructional Design is an ideal master's degree for career professionals engaged in the education, training, and development of adult learners in the workplace. Students experience a dynamic learning process and curriculum that meets the current educational demands of the marketplace. This unique program is a comprehensive course of study which gives equal importance to both the design and delivery of adult instruction. Applications of this process appear in every kind of organization, including business and industry, educational institutions, government agencies, the military, health care, and professional societies.

This multidisciplinary academic program requires 36 credits for completion. Using the principles and practices of adult education, theoretical and applied courses concentrate in three areas:

1. building a foundation/conceptual framework for the instructional design process;
2. developing instructional strategies and skills to facilitate adult learning; and
3. the use of educational media and technology to enhance the learning process.

Students are given the opportunity to increase their knowledge and to develop the skills and techniques necessary for the effective design and presentation of instructional materials. Course study focuses on the instructional design process, adult learning theory, communication, media, technology, and organizational knowledge. Emphasis is placed on the students' application and evaluation of their learning. Faculty members holding part-time status in this program are career professionals—strongly committed to sharing their knowledge and skills with those entering the field.

The program offers evening classes which meet once each week to accommodate full-time and part-time students. Many courses are available online. Non-degree students are invited to select individual courses to meet their career-development or other specialized needs; their admittance to courses is on a space-available basis.

### Degree Requirements

The 36-credit program, flexibly designed to meet individual needs, combines a total of 12 required and elective courses (which may include a field experience), and submission of a final project or thesis.

#### Required and Elective Courses

The program curriculum includes courses in three areas:

##### Area I: Instructional Design Core Courses

The following five courses, required of all degree candidates, provide a foundation and a context for the instructional design process. The first two courses (INSDSG 601 and 602) form the basis of the program and should be completed first. The remaining three may be completed at any time during the program.

INSDSG 601 (Introduction to Instructional Design)

INSDSG 602 (The Adult as Learner)

INSDSG 604 (Communication Theory for Organizations)

INSDSG 618 (Assessment in the Instructional Design Process)

INSDSG 690 (Capstone Seminar)

##### Area II: Instructional Strategies and Skills

Students take two courses in this area. Current course offerings include:

INSDSG 603, 612, 614, 630, 632.

##### Area III: Educational Media and Technology

Students take two courses in this area.

Current course offerings include

INSDSG 608, 610, 616, 617, 640, 650, 655.

**Additional Electives:** In order to complete the 36-credit program, students may choose three additional electives from Area II, Area III, or (with permission of the program director) a wide range of graduate offerings throughout the University. They may also choose to complete some of their credits through Independent Study (this option is available with permission of the program faculty).

**The Capstone Project:** An instructional design capstone project is required of all degree candidates for the MEd. For additional information, please consult the program faculty.

### Advising

All students are expected to meet with an advisor each semester for prior approval of course selection.

### Admission Requirements

Please see the general statement of admission requirements for all graduate programs in the "Admissions" section of this publication.

The MEd Program in Instructional Design invites applications from individuals with a variety of academic and experiential backgrounds who hold baccalaureate degrees from accredited institutions. Admissions criteria include

1. A personal interview with the program faculty.
2. A statement of interests and intent.
3. Three letters of recommendation from former teachers familiar with the applicant's recent academic work, or from employers familiar with his or her professional ability.
4. A score on the Miller Analogies Test. Please note: A test score is not required if the applicant holds an advanced degree from a US university.
5. An updated résumé.

# Instructional Design

## The Certificate in Instructional Technology Design

The Graduate Program in Instructional Design also offers a certificate program in instructional technology design, to meet the increasing challenges created by the high technology training needs of academic, corporate, and public educators. Through a combination of classroom and hands-on laboratory work, this certificate program provides participants with the opportunity to design and produce computer-mediated learning activities and interactive multi-media materials and to make effective use of instructional technology in curriculum development.

Admission requirements are the same as for the MEd program. In addition, applicants to the certificate program must have completed INSDSG 601 (Introduction to Instructional Design) or its equivalent, as determined by the faculty, and must demonstrate basic competency in computer use by satisfactorily completing a proficiency test. It is recommended that interested persons consult with the program faculty before applying for admission to the certificate program.

The program is also open to students currently matriculated in any UMass Boston graduate program. They may enroll in the program after consulting with academic advisors in their own programs and should submit a statement of purpose to the program faculty. These students must also complete INSDSG 601 or its equivalent and take a computer proficiency test before enrolling in the program.

Participants seeking the certificate take a total of five courses (15 credits) which offer them experience with the kinds of software commonly used for educational computer materials, as well as studies relating to the place of educational technologies in instructional strategies, to techniques of project management, and to the proposal and design phases of technology-based instructional development. Students are required to maintain a 3.0 GPA throughout the program.

Certificate courses are updated as necessary, to keep pace with the rapidly changing nature of technology. For complete information on the availability of this certificate program, please contact the graduate program director.

## Online Courses

To better meet the working schedules of our students, many of our courses are offered in an online format as well as in a traditional on-campus format. As presently constructed, these courses are accessible from a home computer via the Internet.

Our online courses are designed to have thirteen class sessions. Students have a week to access the material for each class and to complete the assignments. Also built into course expectations are two face-to-face or electronic meetings. Currently, we are using Centra audio/video conferencing for these electronic meetings. Students can sit at home in front of their computers as they talk and share documents.

Our online technology allows for the utilization of such features as video chat sessions and seminars, case studies using threaded discussion, resource-rich websites, and guest lecturers. Strategies used to promote learning may include:

- Formation of student teams for projects and other activities
- Peer-to-peer learning through e-mail communication
- Clear information from instructor about expected quality and expected timeliness of e-mail exchanges, expectations for online participation, etc.
- Stimulating material such as audio or video lecture, PowerPoint presentation, streaming video segments
- Comprehensive and detailed online syllabus
- Clear student assessment and grading policy.

Students pursuing the MEd in Instructional Design must take the first four courses of the program on campus, after which they may take courses online as desired.

Currently, online course selections will include one of the five required courses, the five courses in the certificate program, and four other courses that are suitable for online delivery. In total, students will have 10 online courses available to complete the 36-credit MEd program in Instructional Design. While taking the first four courses on campus, students will be given an orientation to the campus learning management system, online learner expectations, and UMass Boston resources.

Currently, the following courses are offered online:

- INSDSG 601
- INSDSG 616
- INSDSG 617
- INSDSG 640
- INSDSG 650
- INSDSG 655
- INSDSG 690

Additional online courses are being added each semester.

## Courses

### INSDSG 601 Introduction to Instructional Design

This course provides an introduction to the cognitive and experiential content of the program. The course emphasizes the components of the instructional design model. Various models are analyzed, and students are expected to complete, as a final project, a learning module micro-design.

3 Lect Hrs, 3 Credits

### INSDSG 602 The Adult as Learner

Students are introduced to the body of knowledge concerning adults as learners. This course focuses on the principles of adult education, learning styles, variables that affect adult learning, motivation techniques, appropriate training methodologies, reinforcement of learning, skill transfer, and measurement procedures for identifying learner characteristics.

3 Lect Hrs, 3 Credits

### INSDSG 603 Selection and Evaluation of Instructional Materials

This course analyzes the factors that determine the selection, evaluation, and utilization of materials used in instructional design. It studies the comparative instructional value of a wide range of print and non-print materials. At the end of the course, students will be able to choose materials on the basis of cost effectiveness, technical quality, teaching-learning mode, physical facilities, and availability of equipment.

*Prerequisites: INSDSG 601 and 602.*

3 Lect Hrs, 3 Credits

# Instructional Design

## **INSDSG 604**

### **Communication Theory for Organizations**

This course focuses on the study of communication as applied to instructional technology and on theories of media communication. It covers audience variables, systems of media analysis, message structure, environmental factors, and the integration of these elements into an efficient communication model.

*Prerequisites: INSDSG 601 and 602.*  
3 Lect Hrs, 3 Credits

## **INSDSG 608**

### **Information Design and Visual Literacy**

In this course, students explore the principles of visual literacy and apply them to a variety of instances in instructional design, instructional technology, and information presentation. Topics include the theoretical foundations of visual learning, the role of perception in communication and learning, verbal and visual communications, visual and information design, and the use of visuals in various industries.

*Prerequisites: INSDSG 601 and 602*  
3 Lect Hrs, 3 Credits

## **INSDSG 610**

### **Television Principles for Instructional Design**

This course provides a comprehensive introduction to television production theory and technique, including the study of principles for analyzing and synthesizing information and of some basic video instructional formats. The goal is to equip those responsible for developing instructional materials with the skills they need in order to work with video professionals in creating, designing, and producing instructional video programs.

*Prerequisites: INSDSG 604.*  
3 Lect Hrs, 2 Lab Hrs, 3 Credits

## **INSDSG 612**

### **Instructional Strategies and the Adult Learner**

This course is designed to assist participants in making classroom training more effective. Emphasis is on instructor roles and tasks, determining learning styles, and selecting appropriate techniques.

Techniques focus on stand-up teaching skills, including lecture, question-and-answer, discussion and facilitation, as well as common media formats, role-playing, games and simulations, and case studies.

*Prerequisites: INSDSG 604.*

3 Lect Hrs, 3 Credits

## **INSDSG 614**

### **Writing for the Business Professional**

This course is designed to help participants develop effective writing. It provides both analysis of written documents and a theoretical review of professional writing techniques. Assignments emphasize the writing tasks typically required of training and development specialists in any organization. They include the design, assessment, marketing, and evaluation of instruction. Participants develop the skills for effective communication with those outside the organization, and those at all levels within it.

*Prerequisites: INSDSG 601 and 602.*  
3 Lect Hrs, 3 Credits

## **INSDSG 616**

### **Production of Computer-Based Training**

A basic course in developing computer-based presentation programs. Through such programs as Hypercard and Powerpoint, students are introduced to state-of-the-art CBT development software. The course addresses user interface design; the execution of common instructional strategies employed in training products; techniques of graphics production (scanners, clip art, and paint programs) and sound production techniques (Macrecorder and Macintalk); and introductory scripting in HyperTalk. The course is project-based: students work in teams to design, make prototypes, and produce simple CBT or multimedia programs.

*Prerequisite: INSDSG 618.*  
3 Lect Hrs, 3 Credits

## **INSDSG 617**

### **Advanced Computer-Based Training**

This course builds on the students' basic knowledge of creating courseware and multimedia. They learn techniques of advanced scripting (HyperTalk) and multimedia presentation; ways to integrate text, graphics, animation, sound and motion video into CBT and multimedia products; and methods of developing student tests and student tracking systems. The course is project-based: students work in teams to design, make prototypes, and produce simple CBT or multimedia programs.

*Prerequisite: INSDSG 616.*  
3 Lect Hrs, 3 Credits

## **INSDSG 618**

### **Assessment in the Instructional Design Process**

This course examines assessment in all phases of the instructional design process, including needs analysis and the various stages of formative and summative evaluation. Topics include various types of data, techniques for data gathering, the construction of questionnaires, a hands-on review of computer programs, and characteristic issues in the analysis and interpretation of assessment. The course also offers practical experience in the use of representative measures and applications.

*Prerequisites: INSDSG 601 and 602.*  
3 Lect Hrs, 3 Credits

## **INSDSG 620**

### **Interpersonal Skills and Group Dynamics**

This course introduces the students to the body of knowledge governing interpersonal, intrapersonal, and public communication. Through readings and the laboratory method, students learn human relations skills for effectiveness in personal and career situations. Topics include perception, listening, conflict resolution, and group dynamics.

*Prerequisite: INSDSG 604 or permission of program director.*  
3 Lect Hrs, 3 Credits

## **INSDSG 630**

### **Managing The Training Function**

This course focuses on the requirements for successfully managing an organization's training function. Areas of concentration include building a training department; managing change and stress; delegating; communicating performance expectations; winning management support; and long-range planning. Classes include small and large group instruction, video, participatory exercises, and case studies.

*Prerequisite: INSDSG 618.*  
3 Lect Hrs, 3 Credits

## **INSDSG 632**

### **Workplace Education: Theory and Practice**

This course introduces workplace education through the study of organizational and human resource development. Emphasis is on managing productive change by using tested theory in actual workplace situations.

*Prerequisites: INSDSG 604 and 618.*

3 Lect Hrs, 3 Credits

# Instructional Design

## **INSDSG 640**

### **Planning and Design of Educational Multimedia Programs**

This course helps students become familiar with the current uses of the video disk and other multimedia, as well as with such delivery platforms for multimedia as SonyViewSystem, IBM M-motion, IBM's DVI, Philips CDI, and with the planning, budgeting, and logistics of video production. Participants learn the range of authoring tools that exist for these systems and their relative advantages. They apply principles of instructional and courseware design and study the practical considerations involved in the production of visual media, as well as writing a design proposal and a multimedia project budget. Using this general design document, students produce specifications for the video, computer program flow, graphic screens, video disk layout, and other effects that translate the original instructional design into a usable program. They also achieve basic proficiency in the use of a popular project management software program.

3 Lect Hrs, 3 Credits

## **INSDSG 650**

### **Assessment of Educational Technologies**

This course on formative and summative evaluation brings the students' practical experience in computers and multimedia together with the study of the ways these technologies get used in the classroom. Students examine the formative evaluation process for technology-based programs in corporate training programs and school curricula. By obtaining feedback from representatives of the target audience in the early stages of a product's development, the developer can assure that it meets goals while staying within its budget. Formative evaluation plans are now required by most funding sources and corporations. Summative evaluation—the evaluation of an educational product at the end of its development process—is a way to determine whether the project has met its goals. Students learn to apply these assessment procedures in a project based on a real-world application.

3 Lect Hrs, 3 Credits

## **INSDSG 655**

### **Project in Multimedia**

Students work with UMass Boston faculty, teachers in cooperating schools, or sponsoring corporations to make a prototype multimedia application or to produce a planning document for multimedia implementation in the client organization. Students may participate in projects pre-arranged by the instructional technology staff or may generate their own, working individually or in a team.

Hrs to be arranged, 3 Credits

## **INSDSG 690**

### **Capstone Seminar**

The course provides guidance and a structured environment in which students develop advanced instructional design skill in the context of their capstone project. Based on the nature and complexity of the students' projects, the course deals with such topics as: component display analysis; needs assessment data, analysis and reporting techniques; cognitive flexibility theory; competencies modeling; and self-directed/learner-centered strategies. Students who have completed eight or more requirements for the Instructional Design MEd should enroll in this course.

3 Lect Hrs, 3 Credits

## **INSDSG 696**

### **Independent Study**

The comprehensive study of a particular topic or area in instructional design, as determined by the needs of the individual student. The student works under the guidance and supervision of the instructor. *Prerequisite: Permission of graduate program director.*

3 Lect Hrs, 3-6 Credits

## **INSDSG 697**

### **Special Topics in Instructional Design**

An advanced course offering intensive study of selected topics in instructional design. Course content varies according to the topic and will be announced prior to registration.

3 Lect Hrs, 3 Credits