

GRADUATE PROGRAMS IN EDUCATIONAL TECHNOLOGY

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Program Courses

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Graduate Programs in Educational Technology

General University and Program Information

Since their establishment in 1969, the graduate programs in educational technology have attracted wide attention, nationally and internationally. As a result of our broad curriculum, our focus on research and development, and the strong research and publication records of our faculty and students, organizations across Canada and in the US, Europe and Asia seek out our students for internships and our graduates for permanent positions. Government, industry and educational institutions regularly call upon us to conduct applied projects.

EDUCATIONAL TECHNOLOGY

Educational technology is a rapidly growing field that generally refers to the application of processes and styles of thinking developed outside the field of education to solving educational problems. In practical terms, educational technology focuses on two issues: the design of instruction and curricula, and the use of technology to teach and manage work in educational institutions, corporate settings, governmental and NGO services.

Educational technologists work in all levels of education. In the K through 12 arena, our graduates work as producers in educational television, as curriculum experts and administrators for school boards, as technology specialists in schools and school boards, as course developers for private organizations, and as teachers. In universities, our graduates work in faculty development groups, as designers and administrators of distance education programs, as technology administrators and, for those with PhDs, as researchers and university faculty.

In corporate, government, and nonprofit environments, our graduates work as instructional designers, training managers, program administrators, change managers and learning executives. Some of the many organizations hiring our graduates include Air Canada, CANAC, CN, Humanitas, Hydro BC, Hydro Quebec, IBM, Invensys Engineering, Standard Life, TV Ontario, the United Nations, and the governments of Quebec and Canada. Its manifestations can range from textbook design through complex and expensive hardware to operational research studies of educational systems. It includes work in the psychology of education, computer-based multimedia systems design and development, educational broadcasting, educational planning and organization, development of learning systems, distance education, the allocation of resources and cost effectiveness studies.

Because it is an applied field that draws from a number of disciplines, educational technology studies touch on a number of issues, including communications theory, design science, educational psychology, human-computer interaction, management theory, organizational development and software engineering.

COURSES

The graduate programs include a 30-credit Diploma in Instructional Technology, a 60-credit MA in Educational Technology which offers options for an in-depth internship or a thesis and a short internship, and a 90-credit PhD program. The curriculum of all the programs provides students with an exposure to the core theories of learning, instructional design and human performance technology and an overview of educational technology. Master's and PhD students also receive a grounding in research methods. In addition, electives provide in-depth explorations/instruction in the design of digital media, various computing environments, evaluation, communications and human resource development.

The regular academic year of the university runs, in three semesters, September, January and Summer (there are normally 4-5 elective courses offered in the summer for MA and DIT students). Required courses are not normally offered during the summer term. Please consult the programs' Administrative Assistant for the exact beginning and ending dates of these sessions. The timetable for Summer courses is normally available in March and the schedule for Fall/Winter courses is normally available in July. All required courses are offered each year and in some cases several times per year. Some courses have lab times and some do not. This additional time, usually following directly after the regular course time, may be used in a variety of ways at the discretion of the instructor.

CRADING

Please see the Graduate Calendar for information on grading. *IPs (in progress) are a privilege, not a right.* Instructors may refuse to give them or specify the conditions under which they will be given. There is a re-read procedure that is initiated through the Registrars Office.

ACADEMIC ADVISING.

Upon admission to one of our programs, an academic advisor intended will be assigned. This person is intended to help with the initial selection of courses and provide advice during the course-work phase of the program. We schedule appointments for you to meet with your advisor, usually two weeks before classes begin in your first term. Students attending these advising sessions must have read all relevant documentation, and carefully considered their alternative course of study and prepare any questions for your advisor, who will assist you with course selection.

As a Ph.D. student, you will be assigned an initial supervisory committee (i.e., supervisor and two readers). The committee generally supervises the student through the comprehensive examinations phase of their program. After the comprehensive examination is completed the student may opt to maintain the same committee or choose another one. (If a student wishes to change the make-up of his/her supervisory committee prior to the comprehensives, then they should consult with the Program Coordinator for further details.)

For Master's students, student may opt to remain with their original academic advisor or may choose another faculty member to oversee their final project (i.e., thesis or internship). The student will also choose two other faculty members to serve on your final committee.

TEACHING AND RESEARCH ASSISTANTSHIPS

In general, students in our graduate programs are expected to secure their own funding.

We do offer a limited number of funded opportunities for qualified students, but these opportunities are highly competitive and funding is not assured. Opportunities include:

- Teaching Assistantships (TA) which are available yearly to qualified students and are administered through the Education Office. Position announcements are posed in mid-summer and provide instructions for submitting applications.
- Research Assistantships (RA) Individual professors who have on-going funded research projects handle TA positions. Contact professors directly to inquire about employment opportunities and application procedures.
- A limited number of fellowships are awarded by the university on a yearly basis. Some fellowships are university-wide competitions while others are competitive within the Faculty of Arts and Science. The Faculty awards are not necessarily awarded annually. Information on the university-wide fellowship (and international fee remission) awards is available from the School of Graduate Studies (514) 848-2424 x 3809.

- In addition, there is also limited funding available to doctoral and master's students for the purposes of attending conferences where they are presenting papers, etc. The funding must be applied for in advance of the conference date.

M.A. in Educational Technology

Introduction

The M.A. Program in Educational Technology prepares students for careers at all level of education—K through 12 systems, universities, corporate, government and non-profit environments—as well as for further study in the field. We do so by providing students with a firm grounding in the theories of learning, human performance technology and instructional design,, research methods and the technology of education.

The 60-credit program consists of:

- 15 credits of required courses
- 24 credits of elective courses
- Plus, one of the following:
 - A thesis and a short internship (140 hours)
 - A long internship (675 hours) plus an internship report

TWO PROGRAM OPTIONS: THESIS AND INTERNSHIP

One of the key decisions facing an MA student is the choice between the thesis/thesis-equivalent or non-thesis (internship) option. Students may select either of these options to complete the 60-credit program of studies. This sections is intended to help you decide which option is best for you, in light of your own interests and career objectives, and to help you complete the option of your choice with a minimum of difficulties>\

REQUIREMENTS FOR BOTH OPTIONS—TWO COURSE PATTERNS: THESIS AND INTERNSHIP

Required Courses (15 credits) for Both Options

ETEC 613 Learning Theories (3 credits) (see p. 13)
EETC 648 Fundamental Methods of Inquiry for
Educational Technology (6 credits) (see p. 15)
EETC 712 Human Performance Technology (6 credits)
(see p. 12)

Elective Courses (24 credits) for Both Options

Consult pages 5 and 6 for information about program theme areas and electives

Non-Course Components Required in Each Option

Option A Thesis/Thesis Equivalent	Option B Non-Thesis Internship
ETEC 790 (Internship I) (3 credits)	ETEC 791 (Internship II) (15 credits)
ETEC 795 (Thesis Proposal) (3 credits)	ETEC 792 (Internship Report) (6 credits)
ETEC 796 (Thesis or Thesis-Equivalent) (15 credits)	

OPTION A THESIS/THESIS EQUIVALENT OPTION

A **thesis** is an extensive written development and discussion of a problem in the domain of educational technology that may take one of the following general forms:

- 1) an empirical research project (fusing quantitative or qualitative methods), in which the student describes the rationale and context for the project situates it in the body of the supporting literature, describes the methodology, presents the results and describes the conclusions and implications of the study
- 2) the thesis-equivalent or “design and build project” in which the student designs, develops and evaluates a prototype learning project which innovatively applies theory or technology to a practical situation. A Thesis-equivalent describes the need for, and rationale and context of, the project, situates it in a body of literature and describes the project methodology, presents the results and describes the conclusions and implications. Students would choose such an project when the scope is larger than is feasible for a one-term course project and provides them with an opportunity to experience needs assessment, evaluation and other instructional design skills in-depth.. This option is ideal for students who already have working experience in the field..
- 3) a theoretical or modeling study or an advanced review of the literature in some aspect of educational technology in which the student describes the rationale and context for the project, situates it in the body of literature, describes the methodology, presents the results or arguments and describes the conclusions and implications of the project.

In addition to completing the thesis, all students enrolled in the thesis option must also complete a short internship (140 hours). See description of the internship (ETEC 790) on page of this booklet for further details.

OPTION B NON-THESIS (INTERNSHIP OPTION)

An internship normally consists of an extensive and closely supervised work experience (minimum 675 hours) in the field. The experience varies with the interests of the student and the opportunities available. Some students work for employers in government, corporate and non-profit environments; others work in educational settings, including the university.

The internship is primarily intended for students who are new to the field and have little or no work experience in the field. The internship experience allows the student to apply the skills acquired in their course work in the program.

Before a student may start their internship, it is highly recommended that they have completed at least 30 credits of courses, including all required courses. The Internship Handbook is available online at the Education website.

PROGRAM THEMES IN THE M.A. PROGRAM

Educational Technology draws on a number of disciplines. Our curriculum reflects the broad, multidisciplinary approach through our program themes. Each theme includes a set of courses that help you develop skills and knowledge in a particular area.

Note: Because not all courses are offered ever year, work closely with your academic advisor to plan appropriately.

REQUIRED COURSES

ETEC 613	Learning Theories (3 credits) (p. 15)
ETEC 648	Fundamental Methods of Inquiry for Educational Technology (6 credits) (p. 17)
ETEC 712	Human Performance Technology (6 credits) (p. 14)

GENERAL ELECTIVES

The following electives are relevant to all themes and provide either overviews or generally applicable perspectives, skills and knowledge.

Foundation

ETEC 604	Fundamentals of Educational Technology (3 credits) (p. 13)
ETEC 606	Educational Cybernetics (3 credits) (p. 14)
ETEC 607	Philosophical Aspects of Educational Technology (3 credits) (p. 23)
ETEC 614	Theory & Practice in Educational Communication (3 credits) (p. 15)
ETEC 616	Topics in Learning Theories (3 credits) (p. 16)
ETEC 653	Educational Systems Analysis (3 credits) (p. 23)
ETEC 660	Introduction to Educational Computing (3 credits) (p. 18)

Research and Evaluation

ETEC 636	Formative Evaluation of Educational Materials (3 credits) (p. 16)
ETEC 646	Introduction to Qualitative and Case Study Research (3 credits) (p. 17)
ETEC 649	Topics in Methods of Inquiry (3 credits) (p. 18)
ETEC 691/692	Advanced Readings & Research in Educational Technology (3 credits) (p. 24)
ETEC 693	Special Issues in Educational Technology (3 credits) (p. 24)

COMPUTER-AIDED LEARNING

Computers have the potential to improve education and training. This theme in educational computing provides background in learning and instructional theories relevant to the design of effective computer-aided learning materials. Practical skills are emphasized, including methods of using computers to coordinate multi-media tutoring systems and methods of using computers to solve problems confronting administrators, teachers, researchers and students. Additional topics of study include knowledge representation, artificial intelligence and expert systems.

Suggested Courses	
ETEC 637	Educational Simulation and Gaming (3 credits) (p. 16)
ETEC 660	Introduction to Educational Computing (3 credits) (p. 18)
ETEC 662	Social Computing and Computer-Supported Collaborative Learning and Working (CSCL/W) (3 credits) (p. 19)
ETEC 664	Computer Assisted Instruction (3 credits) (p. 19)
ETEC 666	Modeling and Simulation (3 credits) (p. 20)
ETEC 667	Knowledge Management (3 credits) (p. 20)
ETEC 669	Designing & Developing Web-Based Interactive Instruction (3 credits) (p. 20)

EDUCATIONAL MEDIA

Media have become increasingly important in education and training, especially in the computer-based and visual domains. In order for educational technologists to develop and implement instruction involving media, they must first acquire basic theory and production skills necessary to supervise the development of media-based content. The educational media theme offers familiarization in print-based systems, interactive video, computer assisted learning, sound, photography and television.

Suggested Courses	
ETEC 635	Principles of Educational Message Design (3 credits) (p. 16)
ETEC 665	Introduction to Digital Media (3 credits) (p. 19)
ETEC 669	Designing & Developing Web-Based Interactive Instruction (3 credits) (p. 20)
ETEC 683	Planning & Producing Print-Based Content (3 credits) (p. 21)
ETEC 684	Designing & Developing Print-Based Content (3 credits) (p. 21)
ETEC 685	Digital Media Studio (3 credits) (p. 22)

DISTANCE EDUCATION

This theme in distance education builds upon the M.A. program's strengths in instructional design, audio visual media, computer-assisted learning and empirical research. The courses in this pattern address specific issues in distance education related to analysis of various design models, materials production and delivery, administration of educational technology units and evaluation. The area is intended for both practitioners of distance education and those interested in pursuing a career in an internationally, rapidly growing area of education.

Suggested Courses	
ETEC 655	Global Perspectives in E-Learning (3 credits) (p. 18)
ETEC 662	Social Computing and Computer-Supported Collaborative Learning and Working (CSCL/W) (3 credits) (p. 19)
ETEC 702	Fundamentals of Distance Education (3 credits) (p. 22)
ETEC 703	Developing Multi-Media Courseware for Distance Education (3 credits). (p. 13)

HUMAN PERFORMANCE TECHNOLOGY

Human performance technology is a set of methods for identifying and solving problems or realizing opportunities, related to the performance of people. It may be applied to individuals, small groups, or large organizations. This program theme provides students with the knowledge and skills necessary to understand performance problems and opportunities in order to prescribe appropriate interventions. These interventions could be instructional or non-instructional in nature, depending on the problem identified.

Suggested Courses	
ETEC 676	Human Resource Development (3 credits) (p. 21)
ETEC 701	Administration of Educational Technology Units for Education and Training Systems (3 credits) (p. 22)
ETEC 704	Project Management (3 credits) (p. 23)
ETEC 715	Topics in Human Performance Technology (3 credits) (p. 15)

PhD (Educational Technology)

Introduction

The Doctor of Philosophy degree is designed to provide opportunities for advanced study and research both in the theoretical foundations of educational technology and in the application of such knowledge in organizations devoted to education and training. Research in the program falls into five main categories:

- 1) human performance technology
- 2) human resources development
- 3) educational cybernetics, systems analysis and design
- 4) media research and development
- 5) distance education

Students will choose two of these as their specialty areas.

PREREQUISITES

Prerequisites: These or their equivalent are required

Students who lack the necessary background in educational technology may be required to take prerequisite courses. In particular, the following (or their equivalents) are prerequisites to the doctoral program. These courses are the same as courses that are required in the M.A. program. Beyond their function as prerequisites to the Ph.D., they are not associated with the M.A. program.

ETEC 613	Learning Theories (3 credits) (p.15)
ETEC 648	Fundamental Methods of Inquiry for Educational Technology (6 credits) (p.15)
ETEC 712	Human Performance Technology (6 credits) (p.17)

REQUIRED COURSES

In this 90-credit program there are four core courses (12 credits)

ETEC 800	ET Research Seminar I (3 credits) (p.26)
ETEC 801	ET Research Seminar II (3 credits) (p.26)

Students register for ETEC 800 in their first year and ETEC 801 in their second year. In succeeding years, students are expected to attend and participate in these seminars on a non-credit basis.

ETEC 802	Advanced Research Design and Quantitative Methods in Educational Technology (3 credits) (p.26)
ETEC 805	Research Reports (3 credits) (p.26)

TUTORIALS

There are 18 elective credits that revolve around the student's research interests. These tutorials are from the five main research areas described above and are chosen in consultation with a faculty supervisor and the student's supervisory committee. Tutorials are individualized courses and are designed personally between the student and the faculty member concerned. **Written permission from a full-time faculty member must be obtained prior to registration in a tutorial.**

NON-COURSE COMPONENTS

ETEC 891	Comprehensive Examination (p. 28)
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Students must also take an oral and written comprehensive examination before being "admitted to candidacy" for the degree. The exam will cover the general foundations of educational technology and two of the student's chosen research areas.

ETEC 890	Doctoral Research Proposal (6 credits) (p.28)
ETEC 895	Doctoral Dissertation (45 credits) (p.29)

After being "admitted to candidacy" students must also prepare a written dissertation proposal. The proposal should be developed in consultation with the students' supervisor and is expected to make an original contribution to knowledge in the field of educational technology, and must be presented in acceptable literary form and in APA style.

RESIDENCY

The minimum period of registration is two calendar years (six terms) of full-time graduate study beyond the MA degree (or the equivalent in terms of part-time study). A student will be expected, under normal circumstances, to pursue at least one year of full-time studies on campus. It should be understood that this is a minimum requirement and that a longer period of time may be necessary in order to complete all of the work that is required for the degree.

Diploma in Instructional Technology (DIT)

Program Information

REQUIRED COURSES (15 CREDITS)	
ETEC 504	Fundamentals of Educational Technology (3 credits) (p.13)
ETEC 512	Human Performance Technology (6 credits) (p.14)
ETEC 513	Learning Theories (3 credits) (p.15)
ETEC 591	Administration of Educational Technology Units For Education and Training Systems (3 credits) (p.22)

ELECTIVES (15 CREDITS)

Any course with a "500" level number.

Programs in Educational Technology

Information about the Course Descriptions

The remainder of this Program Handbook is devoted to descriptions of individual courses that are offered once yearly, twice yearly or every other year. (Please consult the yearly timetable for times and availability of course offered.) Courses are listed by name and by course numbers.

Example: ETEC 560/660
Introduction to Educational Computing

The 560 indicates that the course is offered for DIT students and the 660 indicates that it is also an M.A. level course (some MA courses may also have a “700” level number), “800” level courses are reserved for doctoral (PHD) students.

In some cases, the description will contain the phrase “(Description is subject to change)”. This means that a current description was not available at the time of publication, and that the course will be similar to the description, but is subject to modification before the beginning of term.

Courses are listed by course number in the following order:

- DIT courses
- DIT/MA cross-listed courses. (These courses are listed in order according to the DIT course number.)
- MA courses
- MA Non-Course Components(Internships and Thesis/Thesis-Equivalent)
- PhD courses
- PhD Non-Course Components (Comprehensive Exams, Dissertation Proposal and Dissertation)

Developing Multi-Media Courseware for Distance Education (3 credits)

ETEC 503/703

This course will consider the theoretical and practical aspects involved in producing mixed-media courseware for distance education (DE). Among the theoretical aspects, students will be exposed to a variety of topics including:

- instructional design principles applied to distance education;
- adapting conventional materials into DE formats;
- effects of delivery systems on selection of DE materials;
- choosing lead medium and supporting it with a variety of mixed-media resources;
- methods of providing access to interpersonal support
- cost-effectiveness of production and delivery of DE courseware;
- provision for formative and summative evaluation of courseware effectiveness

From a practical perspective, each class member will develop and present a project proposal for a mixed-media DE course. Details of the proposal should include items such as market study and needs assessment; target learning groups(s); course objectives; suggested content, delivery strategy, description and rationale for mixed-media components; local tutorial and inter-personal support and provision for formative and summative evaluation. Four member teams will be formed to work on projects selected from the list of individual presentations. Each team is expected to have a variety of media production backgrounds (e.g., desktop publishing, audio/video production, computer networking), and experience in instructional design and formative evaluation. The end-product of each team will be a prototype mixed-media unit or module, and description of how it will be implemented, for either a formal course or training exercise.

Prerequisites:

ETEC 512/712--Human Performance Technology (6 credits)

ETEC 513/613 --Learning Theories (3 credits)

Fundamentals of Educational Technology (3 credits)

ETEC 504/604

This course provides an overview of salient advances in theory, research and practice of educational technology. The goal of the lectures is to provide students with a theoretical basis for various decision-makings in the use and evaluation of educational technologies. The discussions are organized to increase the interactions between students and the instructor, and to enable every student to raise issues in which they are interested. In addition, various computer technologies will be demonstrated to illustrate the different types of technologies available and the way in which they can be used to support teaching and learning.

Outline of Topics

- The evolution of the field
- The potential contributions of technology for teaching and training
- The characteristics and selection of instructional media
- The integration of educational technology into the classroom
- Innovations and trends in educational technology (e.g., multimedia technologies, virtual reality, telecommunications)
- Theoretical foundations of educational technology (e.g. models of instructional design, pedagogical basis for the design of diverse instructional scenarios)
- The evaluation of instructional technologies

Explanation:- Education is enabling people to be more eco-socially responsible and to have greater abstract knowledge and complex skill powers. Cybernetics is the science of communicontrol systems. Educational cybernetics is how to understand the systems we are in and are in us better to improve our education and human performance.

AIM:- To enable students to learn to use the basic cybersystemic principles to analyze and develop socio-technical systems to improve their research and professional practise.

TOPICS:-

1. Personal Scientist perspectives
2. Physical systems: massenergy, `natural boundaries`, direct coupling, dissipation, time's arrow, Available and un-available energy. Order out of Chaos.
3. Simplest automata & their duals the simplest games.
4. Learning automata and forms of uncertainty (vagueness, ambiguity etc.).
5. Information is what reduces a learning receiver's uncertainty, signals, noise.
6. Viability "Control" and the law of requisite variety/ requisite diversity.
7. Feedback:- reinforcing loops and balancing loops.
8. Evolutionarily historically emergent systemic levels.
9. Theories of learning conversations,(p-individuals = subviduals or transviduals).
10. Qualitative, logical and quantitative Modelling and Simulation

Prerequisites

Must have completed 12 Educational Technology graduate credits.

Human performance technology is a set of methods for identifying and solving problems, or realizing opportunities, related to the performance of people. It may be applied to individuals, small groups, or large organizations. The goal of this course is to provide students with the knowledge and skills necessary to understand performance problems and opportunities in order to prescribe appropriate interventions. The first part of the course will concentrate on the diagnostician's role of performance technologists. This includes the application of performance assessment tools and techniques used in business and industry, education, and other organizations to define problems and to select appropriate interventions. These interventions could be instructional or non-instructional in nature, depending on the problem identified. The second part of the course will focus on performance enhancement interventions with special emphasis on the design of instructional systems.

Upon successful completion of the course, students will be able to:

- define an organization in terms of systems components
 - plan and conduct a performance assessment that identifies problems and/or opportunities and describes alternative methods for enhancing human performance
 - design instructional interventions for a variety of media and instructional settings
 - identify and describe a variety of non-instructional interventions such as organizational design, culture change, personnel selection, motivational feedback, incentive systems, and performance support systems
-
- evaluate interventions, and

- apply consulting models and interpersonal skills important for interacting effectively with clients

Learning Theories (3 credits)

ETEC 513/613

Overall Goals of the Course

The primary goal of the course is for students to develop a critical understanding of classic and contemporary theories of learning. Secondary course goals include enhancing students' abilities to: a) read and evaluate the primary literature in the area; b) present and write within the discipline; c) evaluate applications of theory to practice; and d) collaborate professionally including via computer conferencing.

Course Structure

This is not primarily a lecture course. You will learn through reading the textbook as well as primary sources, through discussion and debate and through student presentations.

The course will follow the textbook. Primary sources will be used to supplement the readings in the textbook. During the first weeks of the semester, I will present the key information and facilitate the class; afterwards, you will take over and student teams will be responsible for teaching each class. The presentations and discussion will strive to elaborate upon and apply learning principles to the design and delivery of effective learning environments.

Theory and Practice in Educational Communication (3 credits)

ETEC 514/614

This course covers the basics of developing content for various types of educational programs in a broad range of educational settings, primarily in higher education and adult education classrooms. Applying principles of effective textual, visual and oral communication, the student will develop teaching materials for a variety of instructional contexts, including classroom lessons, instructor and student manuals, online sessions, and podcasts. The course also introduces methods for facilitating and supporting teaching, such as class management techniques, presentation technologies, and course management systems.

Topics in Human Performance Technology (3 credits)

ETEC 515/715

There have been (and will be) various topics offered under this heading. Topics are subject to change.

This course has been designed to further develop the skills and knowledge students acquired in ETEC 512/712.

Some of the topics that have been covered in the past include:

- Communication and interpersonal skills for consultants
- Creating self-instructional packages
- Motivational design techniques
- Instructional design models
- The identification, design and implementation of non-instructional interventions

Prerequisite

ETEC 512/712--Human Performance Technology (6 credits)

Topics in Learning Theories (3 credits)**ETEC 516/616**

There have been (and will be) various topics offered under this heading. Topics are subject to change.

Examples of possible topics:

- design for learning
- advanced learning theories
- learning applied in a corporate setting

Prerequisite:

ETEC 513/613—Learning Theories

Principles of Educational Message Design (3 credits)**ETEC 535/635**

This course covers the theory-based practice of designing messages in educational and performance improvement media. An instructional intervention might have an appropriate instructional strategy, but how can we ensure that the message really gets through to the intended learners? This course explores ways to create messages within instructional programs that are written and illustrated using effective information design techniques. The course emphasizes the importance of tailoring messages to convey the technical aspects of the content in a way that interests, engages and even surprises learners. This course also deals with how to assess whether messages have the intended impact. It draws on relevant theory, research and practice in the fields of learning and design, as well as the emerging disciplines of information design, human-computer interface, interactivity and media theory.

Evaluation of Educational Materials (3 credits)**ETEC 536/636**

This course is designed to provide you with basic knowledge and skills that you need for evaluating various instructional materials. Although the focus of the course is on formative and summative evaluation, but some basic approaches and issues in educational evaluation will also be addressed. This course consists of two major themes: the evaluation techniques (i.e., evaluation models, methods and approaches), and applying evaluation techniques to various instructional materials (educational audio/video products, educational computer applications, etc

Prerequisite

ETEC 512/712 -- Human Performance Technology (6 credits)

Educational Simulation and Gaming (3 credits)**ETEC 537/637**

This course examines the role of games and simulations in educational settings. Students study the learning models and theories that underpin the cognitive, motivational and affective qualities of these instructional strategies. They learn to evaluate, design and develop an appropriate game and/or simulation for a specific learning context.

At the end of this course students will be able to:

- analyze and evaluated the instructional value of a game or simulation

- determine an appropriate game or simulation strategy for a specific educational context
- explain the affective and motivational qualities of instructional games and simulations, using specific theories and models of learning
- design and develop a prototype of a computer-based educational simulation/game, using the concepts and skills covered in the course
- To use a WIKI as an online collaborative learning environment to describe the theories, people and issues related to the design and use of educational games and simulations

Prerequisites

ETEC 512/712--Human Performance Technology (6 credits)

ETEC 513/613--Learning Theories (3 credits)

Introduction to Qualitative and Case Study Research (3 credits)

ETEC 546/646

Qualitative research provides an alternative to experimental and survey research for collecting empirical data. Qualitative or “non-numerical” research provides insights that differ in nature and scope to those of experimental and survey research. This course introduces you to the theories and methodologies of qualitative research, as well as the analysis and reporting of results of qualitative studies. Specifically, this course:

- Begins by providing the foundation of qualitative research. Its underlying philosophy fundamentally differs from experimental and other quantitative approaches and, as a result, researchers view hypotheses, literature reviews, research results, and similar research fundamentals from a significantly different vantage, and use them for different purposes.
- Continues by describing the design of qualitative research studies, addressing such issues guiding questions, choosing participants, analyzing data, and ensuring the trustworthiness of results
- Explores a variety of qualitative research methods (and when feasible, provides you with an opportunity to try them for yourself); including those used in academic studies, like ethnography, case study research, and narrative analysis, and those used in business settings, such as usability tests and focus groups.
- Explains how to analyze the data of qualitative studies and report the results
- Considers broader issues in qualitative research, such as critical and action research, and meta-analysis of qualitative studies

Fundamental Methods of Inquiry for Educational Technology (6 credits)

ETEC 548/648

This course introduces students with little or no experience in research to the nature of design and analysis. In early sessions, emphasis will be placed on:

- determining the kinds of questions that can be answered by research,
- reviewing the philosophical and methodological underpinning of various methods of inquiry,
- stating research problems and questions,
- defining research variables,,
- choosing designs that are appropriate to the questions they are intended to address.

The course will begin with an overview of the underpinnings of research and development activities in education, covering theoretical and epistemological issues as they pertain to the field in general and educational technology in particular. Concepts and methods in research design (experimental, quasi-experimental, correlational and qualitative) will then be treated, including descriptive and inferential statistics, ethnographic and qualitative data collection techniques, and historical and case-based methods. Emphasis will fall on the logic of research design, demonstrated through practical work on problems, exercises, critiques, a research proposal and

project. The major research project, largely completed in the second term, will emphasize the methodological approach best suited to respond to the student's research interests. This course includes weekly lectures and labs.

Course Goal and Assignments

The overall goal of this course is to enable the student to read and critique the research literature, understand the rationale behind various educational enterprises, and design and carry out research in the field. Evaluation will be based on students' achievement on assigned problems, critiques of research articles, a literature review, research proposal and project, and exams.

Topics in Methods of Enquiry (3 credits)

ETEC 549/649

There have been (and will be) various topics offered under this heading. Topics are subject to change.

Topics that have been offered in the past:

-Correlational Methods

Prerequisite

ETEC 548/648--Fundamental Methods of Inquiry for Educational Technology
(6 credits)

Global Perspectives in E-Learning (3 credits)

ETEC 555/655

Is technology culturally neutral? This course will provide opportunities to explore a range of issues in global e-learning including opportunities for expanding learning markets to concerns related to the digital divide. In order to test this question, we examine the use of information and communication technologies across cultures, in multicultural environments and also compare and contrast the use of educational technology in different contexts. The course will examine key issues across different regions by means of the theory of communal constructivism, where learners are expected to learn both with and *for* each other. Creating course content will take place in a number of face-to-face and online environments including Moos, Wikis, VLEs etc.

Introduction to Educational Computing (3 credits)

ETEC 560/660

The aim of this course is to provide students with an understanding of the theoretical and practical issues related to computer applications in educational and training settings. Topics that will be covered include:

- the history of educational computing
- the different varieties of computer-based applications and systems
- development methodologies
- evaluation methodologies
- application of learning theory and principles of cognitive science to the design of computer-based environments for learning.

Methods

Lectures, seminars, demonstrations, labs

Prerequisites

Students are expected to have completed a basic computer literacy course or have demonstrated basic computer skills.

This course is a prerequisite for:

ETEC 562/662--Computer Based Systems (3 credits)
ETEC 564/664--Computer Assisted Instruction (3 credits)
ETEC 568/668--Design, Development and Production of Computer- Based Multimedia (6 credits)

Social Computing and Computer-Supported Collaborative Learning and Working (CSCL/W) (3 credits) ETEC 562/662

Supporting learning and performance through (a) non-training and (b) training solutions is in the core of the practice of Educational Technology. A third area is co-emerging: The internet and its services are utilized for many applications that attempt to foster cognitive and intellectual developments. Besides specifically designed learning environments in their many shapes and purposes, the internet also gave raise to new social phenomena and their respective tools (like instant messaging, discussion boards, blogging, wiki movement(s), and gaming). In this course, students will examine theoretical bases for using social interaction as methods for learning, and explore key functions and approaches for using computers for collaborative learning. Learning designers and community managers in the field of computer-supported collaborative learning/work (CSCL/W) try to harness the power of these 'social' tools in integrating elements into educational environments and workplace settings. They face relatively new questions about the social awareness, social ability, and important contextual factors of social interaction in mediated interaction, especially in the creation, design, and sustainable support of communities of practices. In designing and supporting communities, the emphasis is to support people in their self-chosen initiatives of learning and their building of new social networks and strengthening existing ones. The class will examine social phenomena facilitated through web-technology and the possibilities and limitations for integrating social aspects into educational and workplace settings.

Computer Assisted Instruction (3 credits) ETEC 564/664

The ETEC 564/664, *Computer-Assisted Instruction*, is designed to engage graduate learners in Educational Technology in a discussion of the current trends in computer-assisted instruction (CAI) applications and learning technologies, including those relevant in (a) school, college and university-based educational environments, as well as (b) human performance technology-related industrial and business settings.

Readings are compiled from databases managed by the Association for Advancement of Computing in Education (AACE), Association for Educational Communications and Technology (AECT), online editions of relevant educational technology and e-learning-based journals, and web-based white papers. Readings and class discussion focus on the following topics: e-learning overview; e-learning design issues and strategies; learning technology standards and meta-data tagging; re-usable learning objects; human resource issues and competency models; learning content management systems and learning management systems; organizational impact of learning technologies; usability; content management strategies; blended learning; and best practices in e-learning.

Prerequisites

ETEC 513/613--Learning Theories (3 credits)
ETEC 560/660--Introduction to Educational Computing (3 credits)

Introduction to Digital Media (3 credits) ETEC 565/665

This course introduces educational technology students to new concepts in the ever changing area of digital media. A core emphasis in the course is to set the concepts in relation with theory and practice of educational technology. This will be accomplished by the introduction of different software applications and a strong focus on evaluation of technological concepts for their usefulness for the practice of educational technology. The course has three special emphasis: a)

introducing students to especially open source products and an open source framework of technology integration, b) an information literacy model that emphasizes an active citizenship role in participating in the web, and c) providing a practical framework of keeping personally up-to-date with the changes in technology. Students will be able to install open source desktop & server-side applications and will be able to utilize key concepts in order to engage in a design project.

Prerequisite:

ETEC 560/660—Introduction to Educational Computing (3 credits)

Modeling and Simulation (3 credits)

ETEC 566/666

The purpose of this course is to enable you to design, develop and evaluate instructional modules (learning objects) which involve the learners in modeling a complex dynamic system and/or involve them in running and discussing computer-based simulations. The models may be of science systems, training systems, schools, or business systems and may or may not involve dynamic role-play. The simulations based on the models may be purely parameter-controlled or may even involve real-time role-play via avatars (MMORPGS), etc.

Topics:

- 1) why models and simulations—basic theory
- 2) which kinds of models, which kinds of simulations for a given educative purpose
- 3) notational representations
- 4) dynamic system representations
- 5) game representations
- 6) virtual reality simulations
- 7) modeling and simulation project management
- 8) formative evaluations

Knowledge Management (3 credits)

ETEC 567/667

Knowledge management is an area of research and application that spans the boundaries of organizational science and our own field of human performance technology. Put succinctly, knowledge management is about how an organization ensures that the right knowledge is available to the right individuals at the right time. In order to accomplish this goal, knowledge management theory addresses the whole life cycle of knowledge: creation, dissemination, utilization, evaluation. Broadly speaking, the whole notion of knowledge management fits with the framework of the knowledge economy, and the concept of knowledge as an asset and a strategic resource. At a more detailed level there are important links with other, older literatures including those concerning, for example, the learning organization, the agile organization, the virtual organization and to areas of technology such as document management and the more recent specialty of content management.

Designing and Developing Web-Based Interactive Instruction (3 credits)

ETEC 569/669

This course provides an introduction to the theoretical and practical components in the design and production of web-based interactive programs and materials. The instruction will focus on planning and producing of web-based interactive material and learning environments. It includes introductions into web-design, design for interactivity and usability testing. Students will be introduced to web-development tools, including authoring tools for web pages, flash, programming languages, and the production of data-base driven web-based solutions.

Prerequisites

ETEC 512/712--Human Performance Technology (6 credits)

ETEC 513/613--Learning Theories (3 credits)

ETEC 565/665—Introduction to Digital Media (3 credits)

Human Resources Development (3 credits)**ETEC 576/ 676**

Human Resource Planning and Policy (HRPP) generally deals with the matching of abilities to employment opportunities in such a way as to maximize personal, social and economic benefits. In an institutional context--educational systems or government agencies--HRPP means the development and evaluation of academic programs, training courses or employment support policies (e.g., unemployment insurance) that will meet projected needs for skills and knowledge.

In a corporate context, HRPP covers a wide range of interrelated functions: forecasting, recruitment, training, job evaluation, work design, organizational design, compensation, career and succession planning.

This course offers an overview of research and practice in this very broad field. Part of the approach will be theoretical, presenting the basics of “human capital theory” (the notion that education and training are investments) and more recent research on “organizational capital” (the notion that organizations can be designed to learn). Part of the approach will be practical, using case studies to critically examine current techniques for developing and deploying human resources.

Planning and Producing Audio Visual Programs (6 credits)**ETEC 583/683**

This course introduces the theoretical and practical components of the design and production of audiovisual materials for instructional purposes. Coursework focuses on planning and producing audio-visual materials from the perspectives of theory-based design, storyboarding, and evaluation.

Prerequisites

ETEC 512/712--Human Performance Technology (6 credits)

ETEC 513/613--Learning Theories (3 credits)

ETEC 565/665—Introduction to Digital Media (3 credits)

Designing and Developing Print-Based Instruction (3 credits)**ETEC 584/684**

This course intends to introduce educational technology students to all aspects of print-based design. It is neither, exclusively, a theory nor a production course, but a blending of the two within the text design role of the instructional designer. It includes topics related to the aesthetics of design and layout, instructional strategies appropriate to the medium of text, elements of typography and typesetting, selection and/or creation of illustrations, table, graphs, etc., copyright and other aspects specific to this medium. Students will learn PageMaker 5.0 to a medium level of skill through a tutorial created especially for this course.

Prerequisites

ETEC 512/712--Human Performance Technology (6 credits)

ETEC 513/613--Learning Theories (3 credits)

ETEC 565/665—Introduction to Digital Media (3 credits)

Digital Media Studio (3 credits)**ETEC 585/685**

This course introduces educational technology students to new concepts in the ever changing domain of digital media. As a core feature, the course relates these concepts to theory in human cognition by examining different software applications (such as Photoshop, Quicktime) with an emphasis on evaluating their usefulness in the practice of educational technology.

Prerequisites:

ETEC 565/665—Introduction to Digital Media (3 credits)

Plus one of the following:

ETEC 569/669--

ETEC 583/683—Planning and Producing Audio Visual Programs (6 credits)

ETEC 584/684—Designing & Developing Print-Based Instruction (3 credits)

**Administration of Educational Technology Units for Education and Training Systems
(3 credits)****ETEC 591/701**

Regardless of the environment in which you will work, and the key audiences you will serve, the business realities in the K-12, higher education, and work place environments affect what educational technologists can do and the quality of our work.

This course covers the three basic areas of administering educational technology units. First, it explores project management--that is, the challenges of scheduling and budgeting projects, ensuring that they meet the design plans, and that the challenges that arise during the project are addressed with the least impact on the end result. Second, it explores people management--that is, the challenges of staffing projects with people who have appropriate skills, and coaching them to the highest levels of performance. Last, this course explores business management--that is, the challenges in ensuring that educational technologists successfully compete for work assignments and receive the resources needed to accomplish that work.

Fundamentals of Distance Education (3 credits)**ETEC 592/702**

This course is an overview of salient issues and advances in theory, research and practice of distance education. It is an overview of the field that is intended to help you begin thinking about distance education (henceforth, DE) systems and making judgments about the strategies and technologies that will facilitate teaching and learning processes (i.e., what, when and how to use technology, how technology transforms distance teaching and learning paradigms).

The purpose of this course is to help students acquire a clearer understanding of the area of DE and the major issues related to the design and implementation of instructional programs. In this way it is a "survey course". It also aims to help students better define the role of educational technology in both the organization and development of DE systems. Several institutions in distance education will be examined—how they began and changed and how they are currently coping with, and using, the Internet and the World Wide Web. Since computer conferencing has become such an important feature of most modern distance education courses, a portion of this course will be devoted to the growing literature on cooperative and collaborative learning in an online environment.

Project Management

ETEC 594/704

Project Management will focus on the components of a project and of project management as a discipline, as well as project management as a process and as a system. We will identify and demonstrate the skills, techniques and software tools required in successful project management. Specific examples of real life projects will include: creating and managing online communities for the visually impaired, directing educational software development, keeping a rock band on the straight and narrow, costing and directing a movie, managing international funded research projects and educational repositories, as well as other topics so to reflect the experiences and interests of the students in the class. The class will be taught in a communally constructed way in that students will learn with and for each other.

Philosophical Aspects of Educational Technology (3 credits)

ETEC 607

(Cross-listed with ESTU 601--Educational Concepts and Research)

Effective educational research requires careful reflection about both the concepts we are investigating and the concepts we are implicitly or explicitly using in our investigation. This course is concerned with ideas and procedures for clarifying and testing educational concepts. In the first part of the course, we will examine some general notions about educational language falling under such headings as slogans, metaphors, terms and distinctions; and, we will examine some ideas relevant to educational theory from the “new philosophy of science”. In the second part of the course, students will participate in group projects investigating areas of educational research (to be selected by the instructor) current in theoretical “flux”.

Educational Systems Analysis (3 credits)

ETEC 653

Educational technology and human performance innovations frequently fail to yield desired outcomes for reasons that have nothing to do with instructional designs, seductiveness of media, nor even with needs analysis, but rather are failures of cybersystem design and products of systemic action processes. In this course we will carry on together creating knowledge that extends and strengthens what you have already learned in ETEC 648 and ETEC 606 and/or on the job.

Content

“Participatory systems analysis” here, means both that the system analysts should be/include actual participants in the systems which they improve. And it also means that the post-graduate students in this course are participants in inventing the course to better suit us all together. (We are generating really new knowledge not just transmitting old information to new heads.) There will be interbibliography and resource search assignments and a substantial quantitative systemic analysis assignment. WEB-CT will be used as a virtual workspace/resource space. (We want to compare it with First Class.)

Core Topics

- Balancing--goodness (love, ethics, aesthetics) versus effectiveness and efficiency goals through multi-level learning conversations
- The limits of qualitative analysis of ET and HPT systems
- Choosing and using matrix tools for canonically representing complex systems (e.g., j-MAPS/EXCEL, etc.)

- Choosing and using systems dynamics modeling tools for sensitivity analysis and efficiency improvement (e.g., STELLA, I-think, Dynamo, etc.)

Prerequisites

ETEC 548/648--Fundamental Methods of Inquiry for Educational Technology (6 credits)

Suggested: ETEC 506/606--Educational Cybernetics (3 credits)

Advanced Readings and Research in Educational Technology ETEC 691 I and ETEC 692 II (3 credits each)

These courses are intended to provide students who possess a serious interest in educational technology an opportunity to deepen their knowledge through intensive research in a restricted area and to communicate this to others. It may be especially useful for students soon beginning a thesis as well as those who wish to pursue their own interests (insofar as possible) in aspects of educational technology not considered in sufficient depth in other courses.

This is essentially a tutorial course, with occasional seminars, for the advanced student. Emphasis will be placed on conducting one or more individual research projects. When the subject has been fully prepared the student will be expected to present it as part of a seminar with other students. The latter, therefore, will be held irregularly.

In conjunction with a faculty member, the student should develop a written outline of his/her research program. Normally, the research should be in the area in which that faculty member is actively engaged in (as evidenced by e.g., paper, publications, research grants). If in doubt ask the Educational Technology Administrative Assistant or the faculty member for a description of research in progress, past research, special interests, etc.

Note 1

There is a form which must be obtained from the Administrative Assistant which the faculty member must sign BEFORE YOU REGISTER FOR THE COURSE (ETEC 691 AND ETEC 692 MUST BE TAKEN IN ORDER)

Note 2

Students usually meet individually with the faculty member with whom they are registered. However, they must be prepared to present research work in a presentation style to other students.

Note 3

See faculty research interests on back cover for potential supervisors.

Special Issues in Educational Technology (3 credits) ETEC 693

There will be various topics offered under this heading. Topics are subject to change. The topics provided here are examples of areas that have /will be covered.

Some of the topics that have been offered in the past (or in the present) include:

- The Past and Future of Educational Technology
- Education Technology and Popular Culture
- Integrating Technology into Educational Practice
- Exemplary Methods and Potent Practices in Current Research
- Designing and Developing Web-Based Interactive Instruction/Performance Systems
- Self-Regulated Learning
- Corporate Practicum

Internship I Thesis/Thesis Equivalent Option (Option A) (3 credits) ETEC 790

This non-course component will normally consist of a supervised internship activity (135 hours). Typically an internal internship consists of course or program material design and/or production, systems analysis and design or participation in a research project. External internships might also be arranged. They vary with the environment and are typically conducted in industry, schools, government organizations, etc. A brief report on the activity will be required on completion.

When a student is ready to start an internship, they should consult the internship handbook, available from the Administrative Assistant.

Internship II -- Non-Thesis Option (Option B) (15 credits) ETEC 791

Normally, internships are completed in the environment in which the student hopes to find employment (e.g., schools, industry, government, etc.). As a 15-credit, non-course component, the internship requires a minimum of 675 hours of direct project work, completed on a full- or part-time basis. Students may create their own internship opportunities. Students are asked to consult with the Internship Coordinator **before** committing to an internship.

(Note: Students must minimally have completed all required courses and ideally a total of 30 credits in the program before undertaking this component.)

When a student is ready to start an internship, they should consult the internship handbook, available from the Administrative Assistant.

Internship Report -- Non-Thesis Option (Option B) (6 credits) ETEC 792

For information on internship report requirements please consult with the Internship Coordinator as well as your faculty supervisor.

Please consult the Internship Handbook (available from the Administrative Assistant) for information on preparing and presenting your internship report.

**Thesis Proposal/Thesis-Thesis/Thesis-Equivalent Option (Option A) (3 credits)
ETEC 795 and ETEC 796**

ETEC 795

Thesis Proposal --Thesis/Thesis-Equivalent Option (Option A) (3 credits)

And

ETEC 796

**Thesis or Thesis-Equivalent -- Thesis/Thesis-Equivalent Option
Option A (15 credits)**

For information on thesis or thesis-equivalent possibilities, please contact a faculty member. More information is contained in the front of this handbook under the M.A. program requirements--thesis/thesis-equivalent.

Thesis advisors are usually chosen by the student. A signed copy of the “thesis proposal acceptance form” and a hard copy of the proposal itself must be placed in the student’s file before actual credit is given. Student must also receive approval from the Departmental Ethics Committee before a grade of “ACCEPTED” is granted for the thesis/thesis-equivalent proposal.

**Educational Technology Research Seminar I (3 credits)
(for PhD students in their first year)**

ETEC 800

**Educational Technology Research Seminar II (3 credits)
(for PhD students in their second year)**

ETEC 801

Cases of current research from the literature, and from Concordia and visiting researchers will be presented at the bi-weekly meetings, and will be examined comparatively and critically from multiple perspectives by the participants working in pairs. First class CMC will be used to host ongoing work. On the basis of the discussions research practice guidance reports will be produced and placed on the public course website. Assessment will be of a collaborative nature.

**Advanced Research Design and Quantitative Methods in Educational Technology
(3 credits)**

ETEC 802

This course provides an advanced treatment of quantitative technologies applicable to educational technology research. Research design, univariate and multivariate parametric statistics (e.g., MANOVA) and correctional methods (e.g., factor analysis) will form the focus of this course.

The literature of education and educational psychology will be used to set statistical procedures within the context of research design and practical problems.

Another topic of importance that will be dealt with is the technology of quantitative literature review (meta-analysis) as a means of summarizing and drawing conclusions from large bodies of empirical studies.

Prerequisite

ETEC 548/648—Fundamental Methods of Inquiry for Educational Technology (6 credits)

Research Reports (3 credits)

ETEC 805

This seminar and tutorial will enable doctoral candidates to develop skills needed for the dissemination of research results, and to develop both a commitment to, and the habit of, scholarly productivity.

Students will be expected to develop and practice critical skills in readings and preparing research reports. They will prepare and discuss critiques, book reviews and annotated bibliographies.

Each student will be expected to prepare two scholarly papers (e.g., research reports, authoritative review paper) covering areas of educational technology research. Each will be critically evaluated by students in the course and by the instructor. Students will be expected to submit their reviews and papers to scholarly journals for possible publication.

Ph.D. Area Tutorials

The main feature of the program, with its commitment to training for research and scholarly productivity, is its organization around problem areas. PhD. candidates will be required to register for 18 credits from the Area Tutorials which are concerned with substantive issues within the field of educational technology (Of course, along with the above, students must also complete 12 credits from the “Research Methods and Practice” category {i.e., required courses} plus ETEC 890--Doctoral Research Proposal, ETEC 891--Doctoral Comprehensive Examination and ETEC 895--Doctoral Research and Thesis.)

Permission to follow a tutorial with a specific instructor must be given in writing prior to registration.

Tutorials will present specific problems or topics within the areas of specialization offered by the Graduate Program in Educational Technology: Human Performance Technology; Human Resources Development; Educational Cybernetics, Systems Analysis and Design; Theory, Development and Research in Educational Media; Distance Education. The precise content and format of “Area Tutorials” may vary from year to year as a function of student numbers and interests and of faculty availability. Any specific “Area Tutorial” would involve directed reading, research, seminar presentation and discussion seminars on selected topics within that problem area.

Human Performance Technology

Educational Technology 810-819

Area Tutorials in Human Performance Technology I-X

Tutorial topics to be chosen from: problems in organization and representation of knowledge, problems in cognition, mental modeling and learning, memory systems and instructional design, sequencing of language instruction, design of self-instructional systems, tutorial-dialogue analysis, prose processing, small group learning processes and techniques, diagnosis of human performance problems; applications of performance assessment tools and techniques used in business and industry.

Human Resources Development

Educational Technology 820-829

Area Tutorials in Human Resource Development I-X

Tutorial topics to be chosen from: program development in corporate and industrial training; models for occupational skills training; affirmative action training; learning variables and problem solving in adults, learner motivation.

Educational Cybernetics, Systems Analysis and Design

Educational Technology 830-839

Area Tutorials in Educational Cybernetics, Systems Analysis and Design I-X

Tutorial topics to be chosen from: computer simulation of instructional systems; graph-theoretic models of curriculum and instruction; meta-scientific foundations of cybernetics; queuing theory models in planning learning resources centers; organizational cybernetics.

Theory, Development and Research in Educational Media Educational Technology 840-849

Area Tutorials in Theory, Development and Research in Educational Media I-X

Tutorial topics to be chosen from: educational message design; comparative effectiveness of media production variables; factors related to visual literacy; critical viewing skills in young children; semiologic analysis; conjugate analysis of attention to television; media design for traditional cultures.

Distance Education Educational Technology 850-859

Area Tutorials in Distance Education I-X

Tutorial topics to be chosen from: systems analysis and planning of self-instructional facilities and procedures; effects of television variables on attention, motivation and learning; study of telecommunications futures and implications for education; computer-video hybrid systems; investigation and simulation of human contact in distance education; learning styles and preferred learning activities; the “information society”.

Doctoral Research Proposal (6 credits)

ETEC 890

Students will be expected to prepare a paper outlining an original research proposal. This should include a literature search with a critical analysis of concepts, methods and conclusions, an outline of the theory involved, a research design that includes the method of analysis and the expected form of the conclusion (where appropriate). The student will also be expected to present their proposal to the Educational Technology Faculty Committee; this is a required component that must occur before credit is granted.

Formal acceptance of the dissertation proposal by the supervisory committee and the Educational Technology Graduate Studies Committee will only be made after the comprehensive examination has been successfully passed. Student must also receive approval from the Departmental Ethics Committee before a final grade of “ACCEPT” is granted for this program component.

Doctoral Comprehensive Examination (9 credits)

ETEC 891

Each student must pass a comprehensive examination that will be both written and oral before being admitted to candidacy for the Ph.D. degree. Normally, the comprehensive examination will be taken when course work has been completed. It shall be set and read by the student’s supervisory committee, which may add to its membership for this purpose. It will consist of an examination covering three fields as follows:

- philosophical and theoretical foundations of educational technology;
- any other two from the following areas; Human Performance Technology; Human Resources Development; Educational Cybernetics, Systems Analysis and Design; Theory, Development and Research in Educational Media; Distance Education.

The student will notify his/her supervisor and the Administrative Assistant in writing of their intention to take the comprehensives at least three months prior to the date they wish to sit for the examinations. The oral component is held within two weeks following the completion of the written component.

Doctoral Research and Thesis (45 credits)

ETEC 895

Each student is required to undertake a suitable research project under the supervision of a faculty member and in consultation with a Ph.D. Supervisory Committee; the student shall present an acceptable thesis at the conclusion. The thesis will be in the candidate's area of specialization and may be based on empirical research, or systems analytic research, or a theoretical contribution, or a comprehensive analysis of theory and practice, in a specific area.

The thesis must constitute a significant contribution to the advancement of knowledge in this field. It must be based on the student's own work and be defended in an oral examination. The candidate shall proceed to work on the thesis only after successfully completing ETEC 890 (Doctoral Research Proposal) and after obtaining the approval of the research project from both the research supervisor, the supervisory committee and the Educational Technology Faculty Committee

Program Areas and Courses

Required Courses

ETEC 512/712	Human Performance Technology	14
ETEC 513/613	Learning Theories	15
ETEC 548/648	Fundamental Methods of Inquiry in Educational Technology	17

Foundations

ETEC 504/604	Fundamentals of Educational Technology	13
ETEC 506/606	Educational Cybernetics	14
ETEC 607	Philosophical Aspects of Educational Technology	23
ETEC 514/614	Theory & Practice in Educational Communication	15
ETEC 516/616	Topics in Learning Theories	16
ETEC 653	Educational Systems Analysis	23
ETEC 560/660	Introduction to Educational Computing	18

Research and Evaluation

ETEC 536/636	Evaluation of Educational Materials	16
ETEC 546/646	Introduction to Qualitative and Case Study Research	17
ETEC 549/649	Topics in Methods of Inquiry	18
ETEC 691/692	Advanced Readings & Research in Educational Technology I & II	24
ETEC 693	Special Issues in Educational Technology	24

Computer Aided Learning

ETEC 537/637	Educational Simulation and Gaming	16
ETEC 560/660	Introduction to Educational Technology	18
ETEC 562/662	Social Computing & Computer-Supported Collaborative Learning and Working (CSCL/W)	19
ETEC 564/664	Computer Assisted Instruction	19
ETEC 566/666	Modeling and Simulation	20
ETEC 567/667	Knowledge Management	20
ETEC 569/669	Designing & Developing Web-Based Interactive Instruction/Performance Systems	20
ETEC 830-839	Ph.D. Tutorials in Educational Cybernetics, Systems Analysis and Design	27

Educational Media

ETEC 535/635	Principles of Educational Message Design	16
ETEC 565/665	Introduction to Digital Media in Education	19
ETEC 569/669	Designing & Developing Web-Based Interactive Instruction/Performance Systems	20
ETEC 583/683	Planning and Producing Audiovisual Programs	21
ETEC 584/684	Designing and Developing Print-Based Content	21
ETEC 685/685	Digital Media Studio	22
ETEC 840-849	Ph.D. Tutorials in Theory, Development and Research In Educational Media	28

Distance Education

ETEC 555/655	Global Perspectives in E-Learning	18
ETEC 562/662	Social Computing and Computer-Supported Collaborative Learning and Working (CSCL/W)	19
ETEC 592/702	Fundamentals of Distance Education	22
ETEC 503/703	Design, Preparation and Evaluation of Mixed Media Courseware for Distance Education	13
ETEC 850-859	Ph.D. Tutorials in Distance Education	28

Human Performance Technology

ETEC 576/676	Human Resources Development	21
ETEC 591/701	Administration of Educational Technology Units For Education and Training Systems	22
ETEC 594/704	Project Management	23
ETEC 515/715	Topics Human Performance Technology	15
ETEC 810-819	Ph.D. Tutorials in Human Performance Technology	27
ETEC 820-829	Ph.D. Tutorials in Human Resources Development	27

Doctoral Seminars

ETEC 800/801	Educational Technology Research Seminars I and II	26
ETEC 802	Advanced Research Design and Quantitative Methods in Educational Technology	26
ETEC 805	Research Reports	26

Faculty Research Areas

DR. PHILIP ABRAMI

Classroom processes (e.g., cooperative learning); research design and methodology; research synthesis; technology in the schools
(Students are encouraged to visit the web site of the Centre for the Study of Learning and Performance for an overview of some of the research being undertaken by faculty. (<http://doe.concordia.ca/csfp/>))

Dr. ROBERT M. BERNARD

Print and image-based instructional systems; “Desktop Publishing”; research design and quantitative methods; distance education; instructional strategies and materials

DR. GARY M. BOYD

Cybernetic system theory of learning systems and organizations (Educational Cybersystemics); computer communication mediated collaborative learning (flexible and distance learning); cybersystemic educational technology applied to higher and adult education and training

DR. SAUL CARLINER

Emerging genres of online communication in the workplace and means of assessing the effectiveness of workplace learning products; application of qualitative research techniques to the study of educational technology; informal learning; the design of museum exhibits and education of volunteer community leaders.

Dr. Ann-Louise Davidson

Changes brought by ICT in society and in the educational system. Collaborative action research methods as a means to understand and explain the relations between pedagogy and technology. Impact of digital technologies on the social integration of minorities and marginalized populations

DR. BRYN HOLMES

E-learning in a global perspective; cross-cultural studies in the use of technology; use of technology and its application to increase student learning

DR. RICHARD F. SCHMID

Technology integration, particularly as applied to post-secondary education and early literacy; learning strategies; performance support systems; computer-mediated communication supporting collaborative learning

and performance

DR. STEVEN SHAW

Educational computing; methodological issues in educational technology research; cognitive science; diffusion of innovation

Dr. Vivek Venkatesh

Bridging the gap between the fields of information science and educational psychology by building indexing technologies that enable the efficient search-and-retrieval of information from large repositories