

EXECUTIVE DOCTORAL PROGRAM IN INFORMATION SYSTEMS AND COMMUNICATIONS: A DESCRIPTION

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ABSTRACT

The expanding needs of informational specialists and professionals in today's business environments is the basic rationale for the Doctor of Science in Information Systems and Communications degree program. The program is interdisciplinary in nature. The doctoral program is aimed at information professional who work full-time. The doctoral program intends to develop individuals who will be leaders in their current or future organizations and the world of information technology application.

Keywords: executive style doctoral program, Information Systems, Communications, interdisciplinary

INTRODUCTION

The expanding needs of informational specialists and professionals in today's business environments is the basic rationale for the Doctor of Science in Information Systems and Communications degree program now offered by Robert Morris University. The degree program is designed in the executive educational format. It follows the international standards that have been adopted by information systems and information science organizations for the education of informational professionals.

The program is interdisciplinary in nature. There is an integrated series of seminars and a capstone field investigative project. The course of study progresses over three years and allows students to complete the degree while working full time. The executive format requires students to attend one week residencies at the beginning of each term (6 in all) and three weekends per term (18 in all). The program is cohort-driven.

AUDIENCE

The doctoral program is aimed at information professional who work full-time. They should have undergraduate and graduate degrees or the equivalent professional experience. Furthermore, they are required to have at least five years of management or technological experience in organizational environments. Profiles of students of the current cohorts cover a wide range of professional experiences from health care to military. One is a CEO of a major corporation. Several own, or have owned, their own firms. Others are in major leadership roles (vice-presidents) in the IT areas within their organizations. Some work as consultants in technology firms. Some are in the military. Several have Ph.D. already. All of the cohort members have other lives.

PROGRAM GOALS

The doctoral program intends to develop individuals who will be leaders in their current or future organizations and the world of information technology applications. Thus, the program purports to further develop the abilities of students to apply their knowledge and skills in providing leadership and expertise on issues and problems resulting from human-technology interfaces.

The curriculum intends that students will demonstrate intellectual achievement in understanding information systems and interrelated disciplines so as to deal with information management issues across a range of situations. The program of study also intends that the students will be able to synthesize theory and practice and apply this knowledge to the development and evolution of informational systems within organizations.

The doctoral program also aims at fostering students to develop and apply a range of investigative methods from ethnographic techniques to quantitative methods for the study of informational system problems. The curriculum also intends to have students develop abilities to track innovative technology and incorporate such ideas into an organization's planning process.

Finally, the program aims at developing competent individuals who will be able to conduct research and to design innovative and effective solutions to problems of information management and resource allocation.

RESIDENCIES

The executive format of this program requires attendance of the student at term-beginning week-long residencies with their cohort. There are six such weeks in the program. The daily activities during these weeks are intensive in-class and out-of-class experiences and study. A typical day during the residency week begins at 7:30am and ends at 9:00pm. A seminar session lasts for an hour and a half. There are five of these in a typical day. The residency week itself typically begins at noon of the first day (this day shifts depending upon Fall or Spring terms) and ends at 5:00pm the following Sunday. For example, in the 2001 Spring term, the beginning day was a Tuesday, sessions began at 12:00pm. They ended on Sunday at 5:00pm.

Each term also has three weekend residencies that students must attend. These weekend residencies begin on Friday afternoon and finish on Sunday afternoon. A typical day during the residency weekend begins at 7:30am and ends at 9:00pm. A seminar session lasts for an hour and a half. There are five of these in a typical day. A residency weekend begins at 4:00pm on Friday and runs until 2:00pm on Sunday.

PROGRAM FORMAT

The program format is an executive style of educational experience for professionals working full-time in business or elsewhere. This style is most conducive to the busy IT professional in today's world. The program is interdisciplinary in nature. The program is based

on the latest IT standards that have been adopted by many information systems and information science organization for curricular design.

FACULTY MENTORS

Each cohort of students is assigned a full time faculty mentor that stays with the cohort for the full three years of the program. The faculty mentor acts as a liaison, advisor, confidant, friend, negotiator, and motivator for the students in the cohort. This mentor program has been successful in keeping retention high (100% for the first cohort and 90% for the second cohort.) This mentor-student relationship provides the consistent and effective communication required for intensive executive style programs—particularly those with a research orientation.

PROGRAM STRUCTURE

The program of study is made up of an integrated series of seminars and a capstone field investigative project (in total 60 credits of doctoral study beyond the master's degree). The curriculum, including the field project, covers three years of study. Students complete an interdisciplinary set of seven inquiry seminars in the application of theory to a variety of informational and communicative environments or settings.

There are also three field investigative seminars that study research strategies for investigating field-based problems.

There are two final seminars that work to pull the curriculum together holistically.

The field project is where the student demonstrates knowledge gained in the seminars by analyzing and solving an approved informational managerial problem relevant to the student's business or organization.

ADMISSION REQUIREMENTS

People submit for admission to the program by meeting the following requirements. They should have an accredited undergraduate and graduate degrees from national or international universities. They may also have an equivalent set of professional developmental experiences. They should show competence in the basics of information systems and communications. There must also be documentation of at least five years of managerial or technological experience in organizations. They must also write an essay in response to informational issues derived from an article given to them. They must be interviewed by the doctoral faculty. They should also submit at least three letters of reference from people from the business, organizational, or educational communities. Finally a letter of endorsement of their study is required from their organization.

COURSE OF STUDY

The curriculum is spread over the course of three years in the following manner. In the first year, during the Fall term, for 9 credits, Inquiry Seminar 1: The Information Age Organization, Inquiry Seminar 2: Technology, Human Communication, and Information

Transfer, and a Field Investigation Seminar 1: Applying Quantitative Methods to Information Systems are offered.

During the Spring term of the first year, for 9 credits, Inquiry Seminar 3: Culture, Values, and technology in a Global Environment, Inquiry Seminar 4: Information Technology in Legal Contexts, and a Field Investigation Seminar 2: The Ethnography of Information Systems are offered.

At the end of the first year, students must show satisfactory progress toward the degree by passing a qualifier examination. The qualifier examination is a series of questions grounded in the subject matter of the first two terms of study. These are given to the students after the end of the second term of the first year. The responses are read by the faculty who are instructors of the first year. They are graded using high pass, pass, low pass, no pass. The reading and grading are blind; students' names are removed from the documents. Faculty do not know who has written what (although on occasion, it is evident). Great care is taken in the development of the questions to make sure students do not give themselves away. The response to each question is rank-ordered. Anyone receiving 2 or more no passes in a question must write a revision and resubmit it. In the event that any weaknesses show up, the student may be directed toward work that will strengthen their knowledge and performance.

In the second year, during the Fall term, three more courses are offered for 9 credits. The courses offered are Inquiry Seminar 5: the Economics of Information Systems, Inquiry Seminar 6: Organizational Information Management, and a Field Investigation Seminar 3: Systems and Usability Studies, Testing, and Design.

During the Spring term of the second year, three courses are again offered. These courses are Inquiry seminar 7: Leadership, Strategic Problem Solving, and Organizational Change is offered along with Field Project I. Field Project I is the course where the doctoral students research and write the field project proposal. During this term, the students begin to form their field project committee. Each doctoral student is responsible for choosing an academic advisor, an industry advisor, a faculty reader, and a fellow classmate as members of the field project committee. This committee must approve the topic and proposed study of the field project. After the acceptance of a Field Project proposal at the end of the Spring term of the second year, the student is admitted to doctoral candidacy.

In the third year, during the Fall term, for 12 credits, an Advanced Information Technology Issues and Applications Seminar is offered along with Field Project II.

During the Spring term of the Third year, for 12 credits, Field Project III, and an Information Technology Management Seminar is offered, as well as the written and oral presentations of the Field Project.

COURSE DESCRIPTIONS

The following are brief descriptions of the seminars that make up the curriculum of the doctoral program.

DISC 811 Inquiry Seminar 1: The Information Age Organization

This seminar focuses on the dramatic changes within organizations as affected by increased implementation of information technology and elements of change such as restructuring, entrepreneurship, just-in-time business processes, and management issues within complex organizations.

DISC 812 Inquiry Seminar 2: Technology, Human Communication, and Information Transfer

This seminar is about the complex relationships among technology in the form of information systems, and human communication and interaction.

DISC 813 Inquiry Seminar 3: Culture, Values, and Technology in a Global Environment

This seminar presents an integrative frame of reference for understanding and assessing the impact of technology in an increasingly diverse global context. It especially looks at how cultures and social structures, including politics, religion, ethics, and value systems, are interrelated with economic development and provide a context for the creation and use of information systems.

DISC 814 Inquiry Seminar 4: Information Technology in Legal Contexts

This seminar explores various complex legal issues that are currently being raised in this time of rising use of the world wide web as a global and business to business information system. The course examines the legal context of information technology in organizational and societal settings.

DISC 815 Inquiry Seminar 5: The Economics of Information Systems

This seminar focuses on examining and managing the increased complications of defining costs and benefits under an increased sense of urgency in making decisions about information technology and its competitive implications and impacts on the organization.

DISC 816 Inquiry Seminar 6: Organizational Information Management

This seminar explores the concepts of information and knowledge management within the framework of organizational and corporate information systems used in organizational decision making.

DISC 817 Inquiry Seminar 7: Leadership, Strategic Problem Solving, and Organizational Change

This seminar presents the use of information and information systems as corporate resources and tools for strategic planning, leadership, and organizational management.

DISC 871 Field Investigation Seminar 1: Applying Quantitative Methods to Information Systems

This seminar provides students with practice using quantitative methods to evaluate, adapt, improve, or verify the effectiveness of information systems and technology in organizational and professional settings.

DISC 872 Field Investigation Seminar 2: The Ethnography of Information Systems

This seminar examines how ethnographic methods may be used to analyze information-based work practices to generate user-centered knowledge requirements, and, to inform the design or redesign of information systems or situations in order to improve them in response to needs of system users.

DISC 873 Field Investigation Seminar 3: Systems and Usability Studies, Testing, and Design

This seminar focuses on identifying and specifying user needs and information requirements and their practical applications by investigating usability and its consequences for information design of documents, screen displays, presentation materials, user interfaces, and other information system displays and reports.

DISC 911-930 Data Mining and Warehousing

These seminars look at advanced information technology issues and applications and provides students with insights into and strategies for dealing with current aspects of information technology management and problem solving. The seminars treat different topics relevant to the student's interests and trends in the industry.

DISC 931-960 Internet Security

These seminars provide students with insights into and strategies for dealing with timely aspects of information technology management and problem solving. The topics of the seminars are focused on areas of relevance to students' interests and also current trends in the world of business.

FIELD PROJECT

The Field project is the student's proposal for doing applied research into an information system problem in order to generate a usable solution within an organizational situation. The proposal is developed during the Spring term of the Second year and presented to faculty and fellow students as partial completion of the requirements for admission to doctoral candidacy.

After the proposal has been accepted and the student admitted to doctoral candidacy, the student will work with a faculty adviser and a field project committee for the next year to

complete the project. The field project committee consists of the faculty adviser, a fellow cohort member, a faculty reader, and a field mentor or reader. All of these are picked by the student. The field mentor or reader is someone from the student's organization.

At the end of the Third year, the student presents the field project in a public session to the program faculty, cohort members, and specified members of the business and professional communities in which the project research was carried out. The degree is granted after a successful presentation of the field project.

CONCLUSION

This paper describes a new and exciting way of generating effective leaders and problem solvers in information systems and information technology by providing all of the benefits and advantages of a full time doctoral program in an intensive part time executive format. The program currently is in its third year. The program has three cohorts pursuing the doctorate of science in Information Systems and Communications. The program is currently enrolling a fourth cohort.