1985

Doctor of Education in Computer Education
1985-86 Catalog

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Doctor of Education in Computer Education
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Volume 1, Published December, 1985

Policies and programs set forth herein are effective through June 30, 1986. The regulations and requirements herein, including fees, are necessarily subject to change without notice at any time at the discretion of the Nova University administration.

Nova University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award bachelor's, master's, and doctoral degrees. Nova University admits students of any race, color, and national or ethnic origin.
Now entering its third decade, Nova University is beginning to see the impact that its graduates are having on the institutions within our society. Many of the University's programs are mission-oriented, designed to improve the performance of professionals, and evidence is being collected which indicates that Nova alumni are having a strong, positive effect on the institutions in which they are employed.

Independent education must continue to be responsive and adaptable to the varying needs of potential students if it is to represent a true alternative to the tax-supported sector. Nova University is committed to maintaining quality while it is meeting these needs.

Abraham S. Fischler
President, Nova University

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The Doctor of Education in Computer Education

PHILOSOPHY AND MISSION
The doctor of education in computer education (Ed.D./CED) program was established in 1984 at Nova University to provide effective leadership to help improve the field of education through effective use of this technology. The program was designed for practitioners working in an educational or training setting. Effective educators with experience in programming at university, college, or K-12 levels, as well as trainers in business and government, are eligible to apply for this opportunity to become skilled in telecommunications, software design, and educational applications of research and theory. Participation in the program is open to qualified individuals who have access to Tymnet. Students currently enrolled are from each region of the United States and Canada.

THE COHORT CONCEPT
The Ed.D. in computer education is a computer-based program that is delivered on-line to students organized as “cohorts” or groups of learners. There are two new cohorts (i.e. groups of students from across the country) formed each year; one cohort begins each January, the second cohort starts in July. Individuals are expected to apply and begin their on-line introductory work in the program up to five months before the official starting date for their cohort.

The most salient aspect of this field-based approach is the extensive use of computer-based telecommunications supplemented by the intensive summer and winter institutes. As practitioners, students are required to apply their newly acquired knowledge and competencies to the test of reality through direct application within their own work environments.

The significance of this structured intermingling of study and practice is summed up in the following point: in most traditional doctoral programs, the ability to perform as an outstanding practitioner is assumed to be a consequence of earning the degree. At Nova University, it is a condition for earning the degree.

PROGRAM OVERVIEW
The four major components in the program are: 1) the eight on-line study areas, 2) the professional experience project (PEP), 3) two one-week institutes each year, and 4) three practicums.
Study Areas

The program includes completion of eight formal study areas. Each study area, directed by a senior national lecturer, introduces students to the topic through a printed study guide and structured on-line and off-line activities. Students meet with the national faculty at the institute sessions; they then have six months to complete the study area. Assignments and questions are submitted electronically to the faculty. Exams for the study areas are administered at the institute meetings.

Professional Experience Project (PEP)

Each student must plan an individual professional growth and dissemination experience project and have it approved. It must contain the equivalent of participation at two annual conferences (including presentations and service to the profession) of a major professional association related to computer-based learning and other activities designed to enable the student to grow professionally.

Summer and Winter Institutes

All students are brought together from the cohorts to meet in Florida twice a year for one week institutes. Each summer and winter, a formal institute is held in South Florida for a full week to complete the following activities: presentations; informal interactions; lecture, discussion, and seminar activities in two new study areas; and completion of exams. This event brings together students from all cohorts and all geographic locations served by the program. Emphasis at the institutes is on the key issues in computer education. Institutes are included in the student's tuition. Students are required to provide their own lodging and travel expenses for these institutes.

Practicums

Practicums are applied research projects designed to promote solutions to current problems in the students' institutions or their professional field through the application of microcomputers and/or telecommunications. Students must successfully complete three practicums. The third practicum is a major practicum; it is of broader scope and impact than the first two practicums.

PROGRAMMING PROFICIENCY

It is the responsibility of each student, during the first two years of the program, to acquire—outside the program—and to be able to demonstrate competency in advanced BASIC and introductory Pascal programming. This must be completed prior to registering for Study Area #7 (Advanced Structured Programming) in the student's third year.

INFORMATION RETRIEVAL SERVICE

The Information Retrieval Service (IRS) was designed to provide Nova students with an opportunity to acquire resources that might not otherwise be available to them. Its function is to supply students with some of the resources (e.g., computer searches, ERIC microfiche, and consultation services) needed to perform practicums. A search is conducted for each practicum.

The result of a computer search is a printout that contains the full bibliographic citation of all documents and journal articles related to the requested search. The computer printout amounts to an annotated bibliography. Using the data in the printout, students can locate complete copies of desired materials.

COMMUNICATION PROCESS

Electronic Tools

The program facilitates the design and application of information systems based on emerging technologies in computers and telecommunications. It enables students to develop programs and instructional systems using them in their own work environments to take full advantage of the latest in software tools, telecommunications, and hardware design. For this reason the program has been designed to operate in a UNIX* operating system environment. The UNIX operating system has expanded into most fields of computer usage, from university mainframe environments to office computers and personal microcomputers. Using modems with their personal computers, students can connect to Nova's computers by calling local phone numbers.

Students who do not live in a normal Tymnet access location within the continental United States will have to pay a toll or service charge to their nearest local Tymnet number. Student tuition includes up to 100 hours of connect time on Nova's computer each year. If they wish, students may also purchase additional hours of connect time.

The UNIX system includes numerous software tools in a command interpreter called the “Shell.” The Shell enables students to communicate on-line with professors and with other students about projects and problems. This is accomplished through communication utilities in the Shell called “mail,” “write,” and “talk.” These utilities enable students: to “mail” documents to their professors; to ask questions of their instructors or other students; and to receive bulletins concerning the program.

Written Assignments and the Practicum Archive

Most written assignments are entered on-line. Students are required to complete satisfactorily three practicums that address significant problems in their own organizations. These projects are reviewed, corrected, and sent back to the students' home directories to be read, filed, and reacted to by the students.

*UNIX is a trademark of Bell Laboratories.
SEQUENCE OF INSTRUCTION

Following acceptance and payment of the service fee, new students usually spend one to three months becoming familiar with the techniques of electronic telecommunications. Each new student is allotted sufficient on-line time during the familiarization period to learn how to use his/her equipment to communicate electronically. Students then begin formal coursework with their cohort in the instructional sequence listed below:

The Doctor of Education in Computer Education Curriculum Sequence

FIRST YEAR

TERM 1

STUDY AREA #1—DIGITAL COMPUTERS AND TELECOMMUNICATIONS
CED 7711—Digital Computers in Education (3 semester hours)
CED 7712—Applications in Telecommunications and Networking (3 semester hours).

STUDY AREA #2—EDUCATIONAL RESEARCH AND EVALUATION
CED 7721—Educational Research And Evaluation (3 semester hours).
CED 7722—Applications Of Educational Research And Evaluation (3 semester hours).

TERM 2

STUDY AREA #3—LEARNING THEORY AND COMPUTER-BASED LEARNING (CBL)
CED 7735—Learning Theories (3 semester hours)
CED 7736—Curriculum Design and Computer-Based Learning (CBL) (3 semester hours).

PRACTICUM #1
CED 7701—Practicum in the Utilization of Computers in Education (6 semester hours).

SECOND YEAR

TERM 3

STUDY AREA #4—DATABASE MANAGEMENT SYSTEMS
CED 7745—Fundamentals of Database Management Systems (3 semester hours).
CED 7746—Applications Of Database Management Systems (3 semester hours).

STUDY AREA #5—COURSEWARE
CED 7755—Courseware Design For Computer-Based Learning (CBL) (3 semester hours).
CED 7756—Applications Of Software and Courseware Design Principles (3 semester hours).

TERM 4

STUDY AREA #6—INSTRUCTIONAL SYSTEMS
CED 7761—Introduction to Systems Analysis (3 semester hours).
CED 7762—Applications Of Systems Analysis (3 semester hours).

PRACTICUM #2
CED 7702—Practicum in the Utilization of Computers in the Problem Solving Process (6 semester hours).

SUMMER INSTITUTE
One week in July in Florida

WINTER INSTITUTE
One Week in January in Florida

THIRD YEAR

TERM 5

STUDY AREA #7—ADVANCED STRUCTURED PROGRAMMING
CED 7775—Advanced Pascal (3 semester hours).
CED 7776—The “C” Programming Language (3 semester hours).

TERM 6

STUDY AREA #8—MANAGEMENT & LEADERSHIP IN THE USE OF TECHNOLOGY
CED 7785—Management Techniques (3 semester hours).
CED 7786—Leadership In Education And Training (3 semester hours).

MAJOR PRACTICUM #3—
CED 7704—Major Practicum (12 semester hours).
CED 7705—Major Practicum (12 semester hours).

SUMMER INSTITUTE
One week in July in Florida

WINTER INSTITUTE
One week in January in Florida
Dr. Jacques Levin works directly with student George Hannah during the summer institute.

PROGRAM ADMINISTRATION

Admissions

Since the program is designed for professionals in education and training, the following entry requirements must be satisfied by each applicant:

1. A master's degree from an accredited university;
2. At least one year's professional experience in education or training;
3. Sufficient computer literacy to select and use microcomputer software in an educational setting and to describe the purposes of programming languages;
4. Completion of a portfolio with appropriate work experience, credentials, and original written materials that demonstrate effective communication skills;
5. Three letters of recommendation;
6. An application form with the application fee and transcripts of all prior graduate work;
7. Demonstration of effective oral communication skills through a formal oral interview;
8. Ability to describe how proficiency in Advanced BASIC programming (through random file handling) and Introductory Pascal programming will be accomplished prior to taking Advanced Structured Programming (Study Area #7) at the start of the third year in this program.

The Ed.D./CED admissions committee will make the decisions concerning admissions. Following formal acceptance, students must submit the service fee. They will then receive their user code and introductory UNIX materials so they can get "on-line" experience prior to their initial cohort meeting at the institute.

Fees and Tuition

The application form must be accompanied by a $30 check made payable to Nova University. This is a one-time, nonrefundable doctoral program application fee. Also, there is a nonrefundable service fee of $250 due upon acceptance into the program. The tuition for the current year is $3,700 plus a $50 registration fee for each six-month term. If quarterly payments are selected, each payment is $950. A registration fee of $25 is included in each payment. A $50 late fee is assessed on each payment received after the due date. Students who must continue beyond three years go into Continuing Services. Students may extend their time to complete the program for a six-month period at an additional charge of one-half of the then-current tuition. A second six-month extension may also be requested. Students may receive a third six-month extension with the permission of the student affairs committee. The fee is the same regardless of how much of the six-month period is used to complete the program. The full payment for each extension must be paid at the beginning of the extension. On-line charges are purchased separately in packages of twenty hours each at the then-current hourly charge. Graduation fees and cap and gown rentals may be paid during the final year. Tuition and fees are subject to change.

Up to 100 hours of computer time are provided for each of the three years of the program; they are not cumulative. Additional hours are billed at the then-current rate. The hours for on-line operation are between 6 P.M. and 7 A.M. (local time) on weekdays and all day on weekends.

Students must purchase their own textbooks and cover the cost of their own lodging, meals, and travel expenses for the institute sessions.

Refunds

Students who have paid tuition before the start of the first study area must notify the CED office in writing of their intent to withdraw from the program before the first on-line session is scheduled. They will be entitled to a full refund of all monies paid, with the exception of the $30 nonrefundable application and the $250 service fee. If an official withdrawal letter is received during the first month of any quarter, the student will be entitled to a credit for two-thirds of the tuition paid for that quarter. If the withdrawal occurs during the second month of the quarter, students will receive credit for one-third of that quarter's tuition. If written notice of withdrawal is received after the second month, refund credit will not be given. Students are responsible for continuing tuition payments until the official withdrawal is received by the program office. If an application is rejected, the applicant will be refunded all monies paid except the nonrefundable application fee.
STUDENT FINANCIAL AID

Nova University offers a comprehensive program of financial aid to assist students in meeting educational expenses. Financial aid is available to help cover direct educational expenses, such as tuition, fees, and books, as well as indirect expenses such as food, clothing, room and board, and transportation expenses.

The primary responsibility to pay for education rests with the student and his or her family. Need-based financial aid is available to "fill the gap" between the cost of education and the amount that the family can reasonably be expected to contribute. The Office of Student Financial Planning and Resources will determine the family's ability to pay by performing a needs analysis based on the family's income and asset information. However, other types of aid, which are not need-based, are also available.

With the exception of academic scholarships, students must meet the following criteria in order to be eligible to apply for aid: be a U.S. citizen, national, or permanent resident; be accepted into an academic program; and be enrolled on at least a half-time basis. Students who meet these criteria and are unable to meet college expenses are urged to apply for financial assistance. The following is a list of the student aid programs available at Nova:

STATE SUPPORTED SCHOLARSHIPS

Seminole and Miccosukee Indian Scholarships

Grants of up to $2000 per year are available to qualified members of the Seminole or Miccosukee Indian tribes. Applications are available from the Higher Education Committee of either tribe.

LOANS

Guaranteed Student Loans

The Guaranteed Student Loan program provides low-interest, long-term educational loans through participating banks, credit unions and other financial institutions. The interest rate for first-time borrowers is 8%. Graduate students are eligible to borrow up to $5000 per year. Repayment begins six months after the student leaves school.

National Direct Student Loans

The National Direct Student Loan program offers long-term, 5% interest loans to students enrolled at least half-time. Eligibility is based on financial need. Repayment begins six months after the student leaves school.

Parent Loans/Auxiliary Loans to Assist Students

The PLUS/ALAS loan program provides non-need-based loans to independent student and parents of dependent students. The annual maximum loan limit is $3000. Repayment begins 30 to 60 days after the loan is disbursed; however, principal payments may be deferred while the student is enrolled full-time. The current interest rate on PLUS loans is 12%.

EMPLOYMENT

College Workstudy

Part-time jobs on campus are available for needy students under the workstudy program. Generally, students work 15 to 20 hours per week. Students may also work off-campus for participating non-profit agencies. College Workstudy awards are based on financial need.

Nova Student Employment

Part-time employment is available in many departments on campus. Positions are open to all students regardless of financial need.

OTHER SOURCES OF ASSISTANCE

Many employers offer tuition reimbursement plans to their employees and employee dependents. Numerous scholarships and grants are available through outside agencies, community organizations, and private donors. Veteran's benefits are also available.

HOW TO APPLY FOR AID

Students who wish to be considered for aid must complete and submit the following forms to the Office of Student Financial Planning and Resources:

- College Scholarship Service Financial Aid Form (FAF)
- Nova Graduate Financial Aid Application
- Financial Aid Transcripts from all previous post-secondary schools
- Student Loan Application

APPLICATION DEADLINES

Applications for campus-based aid which are received in the Office of Student Financial Planning and Resources by April 15, 1986, will be given priority consideration for funds. Applications received after that date will be considered on a funds-available basis only. The last date to submit an application for the 86-87 academic year is May 1, 1987.
NOTIFICATION OF AWARDS

Students who have applied before April 15, 1986, and are awarded aid by the University should receive notification by June 15, 1986.

The application process normally takes six to eight weeks, and possibly up to twelve weeks. It is important that applicants respond promptly to all inquiries in order to prevent delays in processing.

RENEWAL OF AWARDS

Awards made by the University are not automatically renewed. All students must re-apply for aid each academic year. All awards are contingent upon available funding, and upon demonstration of financial need and continued satisfactory academic progress by the student.

FOR MORE INFORMATION AND APPLICATION FORMS

Contact the Nova University Office of Student Financial Planning and Resources, 3301 College Avenue, Parker Bldg., Room 351, Ft. Lauderdale, Florida 33314. Phone (305) 475-7411 or 475-7410. Miami line 940-7940 ext. 7410, or toll-free within Florida 1-800-432-5021, ext. 7410.

Veterans’ Benefits

Nova University academic programs are approved by the Coordinator for Veterans Approval, State of Florida, Department of Education, for veterans’ education benefits. The Student Services Office will assist veterans in applying for benefits.

Grading System

Grades of PASS or NO PASS are assigned for each course and practicum. A “pass” is equivalent to a minimum of a letter grade of “B”. Course grades are assigned by the faculty responsible for each course, and practicum grades are assigned by the practicum evaluator and are reviewed by the Director of Practicums. Course grades are sent to students and are also maintained by the Registrar’s Office so that official transcripts may be requested when needed.

Students receiving a grade of NO PASS in a course or on a practicum will be placed on academic probation until the course has been retaken and passed. Students who receive two NO PASS grades (courses and/or practicums) will be terminated from the program. Readmission following academic dismissal is not possible.

Graduation Requirements

To be eligible for graduation, a student must fulfill the following requirements:

1. Complete the eight study areas successfully (six semester hours each for a total of 48 semester hours)
2. Pass two practicums (six semester hours each for a total of 12 semester hours)
3. Successfully complete the major practicum proposal and successfully complete the final project (six semester hours each for a total of 12 semester hours)
4. Participate in the required summer/winter institutes
5. Complete the professional experience projects (PEP)
6. Demonstrate proficiency in Advanced BASIC and Introductory Pascal programming
7. Be current in all tuition and fees

Total credit for the entire program is 72 semester hours. All requirements must be completed within four years from the date of enrollment into the program. An additional six months may be approved upon petition.

No provisions are made for credit for life experiences or other forms of advanced standing except that consideration will be given for the granting of up to six semester hours of credit in post-master’s work earned within the past ten years for the same or equivalent course work. There is no tuition credit for courses transferred into the program.

Harold Kime (Pennsylvania) and Mary Muldoon (Florida) put theory into practice in the campus UNIX-Lab.
Readmission
Students who have withdrawn and wish to be readmitted must complete a readmission form and be approved for readmission by the Admissions Committee. Students who withdraw and reenter are assessed a readmission fee equivalent to the current service fee and are subject to the prevailing tuition rate.

Student Conduct and Rights
Students are expected to comply with the legal and ethical standards of Nova University. Academic dishonesty and nonacademic misconduct are subject to disciplinary action.

When questions about procedures, decisions, or judgments occur, counseling is available for discussion and resolution of differences. An appeals policy is available upon request from the Director of Student Affairs.

Study Areas
Students must complete each of the eight study areas and three practicums. Each study area consists of two three-semester-hour courses; practicums 1 and 2 carry six semester hours of credit and the major practicum (i.e., practicum 3) carries 12 semester hours of credit.

STUDY AREAS

STUDY AREA #1—DIGITAL COMPUTERS AND TELECOMMUNICATIONS
CED 7701—Digital Computers In Education Students will begin to develop the skills needed to demonstrate mastery of the key concepts and rules pertaining to the use of digital computers and the UNIX operating system.

CED 7702—Applications In Telecommunications And Networking Expanding on their basic skills within the UNIX operating system, students will develop advanced competencies in communications to work with the UNIX environment and to apply this knowledge to access information in other databases via telecommunications.

STUDY AREA #2—EDUCATIONAL RESEARCH AND EVALUATION
CED 7721—Educational Research And Evaluation Basic statistical concepts and techniques of research design will be mastered and utilized, including the development of a potential practicum proposal.

CED 7722—Applications Of Educational Research And Evaluation Students will use computer-based research and statistical resources to apply the basic concepts of research and evaluation to educational problems.

STUDY AREA #3—LEARNING THEORY AND COMPUTER-BASED LEARNING (CBL)
CED 7735—Learning Theories The basic theories of learning, the use of these theories in the management of learning, and the application of learning theory and research to computer-based learning (CBL) constitute the main focus of this course.

CED 7736—Curriculum Design And Computer-Based Learning (CBL) During this course, students will explore various curriculum theories and become familiar with common instructional design models. Students will explore the psychology of software design and the relationship of curriculum design to computer-based learning (CBL) so that they can create a curriculum project.

STUDY AREA #4—DATABASE MANAGEMENT SYSTEMS
CED 7745—Fundamentals Of Database Management Systems Students will become familiar with database management systems, hierarchical and relational models, design philosophies, data dictionaries, and data directories.

CED 7746—Applications Of Database Management Systems Each student will be expected to build his or her own database and to utilize it in an appropriate situation selected by the student. The student will identify major issues, problems, and the structure of Management Information Systems (MIS).

STUDY AREA #5—COURSEWARE
CED 7755—Courseware Design For Computer-Based Learning (CBL) This course enables students to explore such topics as principles involved in authoring systems, graphics, documentation design and formatting, packaging and marketing, and educational applications and implementation guidelines, courseware evaluation and selection guidelines, copyrighting, software development tools, database management techniques, and educational applications of video disc systems.

CED 7756—Applications Of Software and Courseware Design Principles Students will be required to demonstrate their knowledge of courseware design principles by designing and implementing a project in which selected principles may be applied.
STUDY AREA #6—INSTRUCTIONAL SYSTEMS
CED 7761—Introduction to Systems Analysis Investigating the skills and techniques needed to analyze computer system design problems, students will be able to propose alternative problem-solving approaches. Systems models, development and design, and networking will be included in the topics explored.

CED 7762—Applications of Systems Analysis Students will conduct a study of selected computer systems, identify a problem, and prepare a final proposal for the solution of the problem selected. Implementation, testing, measuring effectiveness and efficiency, and reporting will constitute the major focus of this course.

STUDY AREA #7—ADVANCED STRUCTURED PROGRAMMING
CED 7775—Advanced Pascal Building on a foundation in structured programming, students will become proficient in the use of the Pascal programming language.

CED 7776—The “C” Programming Language Following structured programming techniques, the C programming language will be used to enable students to develop original programs and to convert shell scripts into more efficient “C” programs.

STUDY AREA #8—MANAGEMENT & LEADERSHIP IN THE USE OF TECHNOLOGY
CED 7785—Management Techniques Students will acquire a basic understanding of administration and management at all levels of organizations. The roles of administrators and teachers and the impact of technology on effective management will be explored. Case studies, readings and discussions on areas such as policy formation, strategic planning, MBO, budgeting, and proposal writing will help provide students with management tools.

CED 7786—Leadership in Education and Training The importance of organizational health will be explored as students use case studies and readings. Discussions will be used to help students investigate the effective use of committees, the methodology of conflict resolution, and techniques for effective supervision, brainstorming, decision-making, consultation, and communication skills. Futuristics and situational leadership models and theories will help develop leadership in the use of technology in educational and training settings.

PRACTICUMS
CED 7701—Practicum in the Utilization of Computers in Education A highly structured process to allow students to investigate and attempt to solve an educational problem that is directly related to their area of work. The microcomputer and/or the on-line system will be utilized in the solution strategy.

CED 7702—Practicum in the Utilization of Computers in the Problem Solving Process The practicum process will be utilized to identify and solve a problem that is amenable to the use of computers for its solution. There is to be an interaction between the graduate study completed and the working environment of the practicum.

CED 7704—Major Practicum Proposal A detailed online proposal describing a potential problem in a professional situation that the student can attempt to solve. The solution must attempt to lead to a significant improvement in educational practices through the utilization of technology. The proposal must adhere to the form and style specified by the current version of the Ed.D./CED Major Practicum Guidelines.

CED 7705—Major Practicum: (Title) Implementation of the approved Major Practicum Proposal is to result in a comprehensive report. The final report is submitted online so it is “searchable” by others and can add to the base of knowledge. The final report and/or the proposal must be shared orally at a Program Institute with colleagues in the program. The report format must adhere to the current version of the Ed.D./CED Major Practicum Guidelines.

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About Nova University

Chartered by the State of Florida in 1964, Nova University is an independent university—nonsectarian, nonprofit, and racially nondiscriminatory. Numerous graduate programs offer master’s and doctoral programs and postgraduate education. Nova College offers undergraduate education, and The University School, a demonstration school, serves children from preschool through high school. In addition, nondegree, continuing education, and certificate programs are available.

From the beginning, the University has distinguished itself by its innovative outlook, its unique programs that provide both traditional and nontraditional choices in educational programs, and its research in many fields aimed at solving the problems of immediate concern to mankind.

The Nova University campus is located on a 200-acre site west of Fort Lauderdale, Florida, at 3301 College Avenue in the town of Davie.
Summer institute classes are held on the main campus in Fort Lauderdale, Florida.

During the summer institute in the Parker Building, lecturers, guest speakers, seminars, videotapes, and demonstrations provide traditional instruction for each study area.