B.Ed. Bachelor of Education (Computer Education)

1. Name of the Program
   Bachelor of Education Program (5 Years) in Computer Education

2. Title of the Degree
   Full Title: Bachelor of Education (Computer Education)
   Abbreviated Title: B. Ed. (Computer Education)

3. Responsible Offices
   Department of Educational Technology and Communications, Faculty of Education,
   Naresuan University.

4. Philosophy
   To produce prospective teacher graduates who are equipped with knowledge and skill, as
   well as leadership, in educational technology and communications, and who are self-directed,
   inquiry-minded, faithful to their professional code of conduct, and who keep pace with changes
   and developments in the world.

5. Objectives
   1. To produce graduates who are equipped knowledge and ability in computer,
      computer system design and development, and an application of educational
      technology and communications in educational institutions.
   2. To produce graduates with skills and abilities in teaching compute and in the
      management of computer education programs in formal, informal, and nonformal
      education settings.
   3. To produce graduates who are ethically and morally responsible, faithful to their
      professional code of conduct, inquiry-minded, and able to improve and develop
      themselves continually.

5. Program Implementation
   The program will be inaugurated in the first semester of the academic year 2005.

6. Qualifications of Applicants
   In accordance with the requirements as stipulated in the Naresuan University Rules and
   Procedure for Undergraduate Studies A.D. 2002. (See Appendix).

7. Selection of Applicants
   In accordance with the requirements as stipulated in the Naresuan University Rules and
   Procedure for Undergraduate Studies A.D. 2002. (See Appendix).

8. Educational System
   In accordance with the requirements as stipulated in the Naresuan University Rules and
   Procedure for Undergraduate Studies A.D. 2002. (See Appendix).

9. Duration of Study
In accordance with the requirements as stipulated in the Naresuan University Rules and Procedure for Undergraduate Studies A.D. 2002. (See Appendix).

10. Class Registration
In accordance with the requirements as stipulated in the Naresuan University Rules and Procedure for Undergraduate Studies A.D. 2002. (See Appendix).

11. Assessment and Graduation
In accordance with the requirements as stipulated in the Naresuan University Rules and Procedure for Undergraduate Studies A.D. 2002. (See Appendix).

17. Curriculum
17.1. The total number of credits for the program is at least 169 credits
17.2. Curriculum Structure

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<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>The Office of the Higher Education Commission Criteria</th>
<th>The Criteria for this Curriculum</th>
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<tbody>
<tr>
<td>1</td>
<td>General Education Area of Specialization</td>
<td>A minimum of 30</td>
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<td>2</td>
<td>2.1. Teacher Education, a minimum of 2.1.1. Required Courses</td>
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<td>2.1.1.1. General Professional Courses</td>
<td>114</td>
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<td>2.1.1.2. Professional Practicum</td>
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<td>2.1.2. Electives, a minimum of</td>
<td>30</td>
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<td>3</td>
<td>2.2. Major Courses, a minimum of 2.2.1. Required courses</td>
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<td>2.2.2. Electives in the major, a minimum of 2.2.3. Electives in a specialized field,</td>
<td>133</td>
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<td>a minimum of</td>
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<td>Free Electives, a minimum of</td>
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<td>Total Number of Credits</td>
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Description of Courses

373111  English in Computer Education 3(2-2)
Examination, analysis, and synthesis of English found in computer education and information literature, texts, and in computer programming activities.

373212  Instructional Systems Design 3(3-0)
Study of instructional model and design for teaching computer; characteristics of appropriate computer teaching methodology; different types of curriculums for teaching computer, and computer curriculum management.

373351  Database for Education 3(1-3)
Study of basic database structure; sources of data; database design and management; application of database in education such as student database, record of study database, class registration database, instructional media database, and other important educational databases.

373331  Operating system and Application Software for Education 3(2-2)
Study of meaning; development and evolution of operating systems; roles, functions, and types of operating systems; practice in using basic operating systems; study of computer networking, computer network design, and application of computer network in educational institutions; computer software programs and their applications in education.

373432  Development of Computer System for Education 3(0-2)
Study of fundamental principles, structures, conditions for computer programming and computer programming for use in educational institutions; study of the execution and workflow of computer system; analysis of input-processing-output system; designing of computer folders and report formats; preparation of workflow for information system development and management.

373252  Management Information System for Education 3(2-2)
Study of data, sources of data, data processing; appropriate characteristics of information; analysis and design of information system for use in education.

373348  Computer Laboratory Management 3(2-2)
Study of computer laboratory design and management; study of basic computer architectural structure and components for maintenance, repair, and fixing of computer problems; and computer network in a classroom.

373441  Internet Technology in School 3(2-2)
Examination, analysis, design, and installation of the Internet network; the Internet network system management; evaluation of the network system; the school Internet network system troubleshooting/shooters.
373461 e-Media Production for Education 3(2-2)
Survey, and analysis of demand for educational media; design and development of electronic media, using software programs, on standalone computers, on local area networking, as well as on the Internet networking system; evaluation of the electronic media.

373362 Multimedia Technology 3(2-2)
Study of meaning, principles and theory of communication; practice in using computer software programs in compiling images and sounds; presentation of multimedia on a computer network system as well as on a standalone system.

373471 Intelligent Media System 3(2-2)
Study of principles and theories of artificial intelligence, export system, intelligence tutoring system, adaptive hypermedia, including the principles and theories of other intelligent media system; development of intelligent media system.

373165 Digital Art 3(2-2)
Creation of artwork with computer software programs; digital photography and decoration and modification of digital images with computer software programs; sound digitalization management; different forms of digital artwork presentation.

373363 Digital Television Production 3(2-2)
Study of basic principles and theories of radio-television production; digital television production system; practice in using digital video-recorder camera; editing and frame sequencing; storage of data using digital media tools; presentation of work with digital media tools.

373166 Basic Design Concept 3(2-2)
Study of art theory--line, light, shadow, shape, color, weight, and other related topics; principles, methods, and skill practice in using computer programs for lettering, creating images and clip arts, coloring, and other art techniques.

373213 Computer Teaching Behavior 3(1-3)
Method of teaching, lesson plan preparation; determining of objectives, context, and division of topics into units; teaching and learning activities; assessment of teaching and learning; survey and observation of teaching behavior of computer teachers in a student’s own institution and those in other educational institutions; synthesis, reflection, and suggestions for teaching improvement; teaching simulation, and student teaching record.

373472 Selected Topics in Computer Based Education 3(3-0)
Study of selected hot topics, controversial and critical debates, and issues of interest which are of benefit to the field of computer education.
373173 Ethic and Law for Information and Communication Technology 3(3-0)
Study of regulations, rules, and etiquettes, including laws related to information
technology and communication both in domestic and global contexts.

373121 Logical Thinking 3(3-0)
Analysis of characteristics, forms, and system of critical and logical thinking;
knowledge and social behavior as expressed in the form of arts, music, sports, science, logics,
language, and occupation.

373222 Problem Solving Process 3(3-0)
Examination of principles and concepts of problem-solving process in educational
institutions; including the use of tools in data analysis and processing.

373242 Web Technology for Education 3(2-2)
Study of computer programming, and application of software programs on a
computer network system for the management and presentation of information on a computer
network system.

373243 System Administration in School 3(2-2)
Study of design, installation, management, and troubleshooting of computer
networking system as a groundwork for school networking operation system and as readiness
preparation for implementing and maintaining an advanced and more complex computer
networking.

373344 Advanced System Administration in School 3(2-2)
Study of design, installation, management, and troubleshooting of advanced
computer networking system as a preparation for implementing and maintaining an operation of
a computer networking system in school.

373346 System Administration for Media on Demand 3(2-2)
Design, installation, management, and troubleshooting of computer network
system for the delivery of media services on demand by users at the end of a school computer
network system. These media include images, sound, images and sound, graphics, electronic
texts, and other forms of media which can be sent digitally.

373346 Mobile Technology for Education 3(1-3)
Study and application of collaborative, interactive, and participatory learning in a
classroom; principles of mobile technology; application of mobile technology to synchronous as
well as asynchronous delivery of collaborative, interactive, participatory learning.

373374 Instructional Simulations and Games 3(2-2)
Principles and theory of computer assisted instruction, with emphasis on those
focusing on simulations and games; synthesis of simulations and games; workflow analysis and
operation procedures; application of simulations and games in classroom teaching and learning.
Study of design, installation, management, and readiness preparation for and troubleshooting of security system for education network.

**Elective Courses: Teaching Computer**

373347 Security for Education Network 3(2-2)
- Study of design, installation, management, and readiness preparation for and troubleshooting of security system for education network.

**Elective Courses: Teaching Computer**

354441 School Quality Management 3(3-0)
- Principles of educational administration; Thai bureaucratic administration; evolution and development of Thai educational administration; concepts of organization, organizational structure; power, authority, and functions of administrators at different hierarchical levels; organizational structuring in educational institutions; school administration; school-community relationship; educational standards and quality assurance assessment; internal quality assurance assessment; Office of the Educational Standards and Quality Assurance Assessment.

373375 Computer Center Management 3(1-3)
- Design, planning, project preparation, management, provision and delivery of services in a computer center—the use of computers, software loans, and other related services.

373323 Collaborative Learning 3(1-3)
- Principles and theories of learning systems, with emphasis on collaborative learning approach; analysis, design, and application of collaborative learning approach to both actual and virtual classroom setting.

373315 Teaching Computer Project 3(3-0)
- Application of knowledge of computer to designing computer instructional projects, with a focus on computer training projects, or projects on the establishment of computer education institutes, or projects on the preparation of computer curriculum. Try-out and data collection for the projects must be conducted in an actual classroom setting.

**Elective Courses: Electronic Media Cluster**

373324 Knowledge Management 3(3-0)
- Study of principles and theories of expert system, intelligent tutorial system, and other related theories; import of knowledge, inquiry, management, transfer, and presentation of knowledge as desired.

373376 e-Education System 3(1-3)
- Introduction to education, educational system, components of education; input system, personnel, budget, materials and facilities; educational operation and management; educational output; application of computer hardware and software (LMS and CMS), and peopleware to educational system.

373333 Application Programs for Education 3(1-3)
- Use of application programs for educational system, with special consideration to
system components, input system, personnel, budget, materials and equipment facilities, and educational operation and management; educational output; and other supporting facilities.

37334  Design and Development of Software for Education 3(2-2)
Application of computer knowledge for the management of information technology for education; analysis of systems; design and development of educational software packages using either a computer compiling language or a commercial software program; assessment and evaluation of the invented software.

373364  e-Media Project 3(2-2)
Application of computer knowledge to conducting electronic education projects, with emphasis on design and development of computer programs, or the use of commercial software programs to create e-media projects. Tryout, assessment, and evaluation of the product must be conducted in an actual classroom setting.