

DEPARTMENT OF APPLIED TECHNOLOGY
SCHOOL OF BUSINESS AND TECHNOLOGY

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**DEPARTMENT MISSION STATEMENT
AND GOALS**

The Department of Applied Technology is one of three departments in the School of Business and Technology (SBT) at Rogers State University (RSU), located in northeastern Oklahoma, governed by the University of Oklahoma Board of Regents within a state system coordinated by the Oklahoma State Regents for Higher Education. The mission of the Department of Applied Technology is to support the SBT and RSU in their mission to prepare students to achieve professional and personal goals in dynamic local and global communities. Specifically, the organizational structure of the Department of Applied Technology provides the technology course support for the Associate in Science and Associate in Applied Science degrees, as well as the Bachelor of Science in Business Information Technology, the Bachelor of Science in Game Development, and the Bachelor of Technology in Applied Technology. As indicated, many of the programs offered by the Department of Applied Technology are available online.

PROGRAMS OF STUDY

Bachelor of Science

Business Information Technology
Option: Computer Network Administration*
Option: Software Development and Multimedia*
Option: Telecommunications Foundations

Game Development

Minor

Computer Science*

Bachelor of Technology

Applied Technology*

Associate in Science

Computer Science*

Associate in Applied Science

Applied Technology*

**Available online at www.rsu.edu.*

BACHELOR OF SCIENCE

BUSINESS INFORMATION TECHNOLOGY (108)

OPTION: COMPUTER NETWORK ADMINISTRATION (108N)

OPTION: SOFTWARE DEVELOPMENT AND MULTIMEDIA (108S)

OPTION: TELECOMMUNICATIONS FOUNDATIONS (108T)

Computer Network Administration and Software Development and Multimedia Options are offered online at www.rsuonline.edu

The Bachelor of Science in Business Information Technology is designed to meet the growing demand for information technology specialists who are able to communicate effectively and are knowledgeable of business needs. Students may choose from options in Computer Network Administration, Software Development and Multimedia, or Telecommunications Foundations.

REQUIRED HOURS 124

Communications 9

- ENGL 1113 Composition I
- ENGL 1213 Composition II
- SPCH 1113 Speech Communication

Social and Behavioral Sciences 9

- History 3
- Select from the following:*
- HIST 2483 American History to 1877
- HIST 2493 American History since 1877

POLS 1113 American Federal Government 3

Social Science 3

Select from the following:

- ECON 2113 Principles of Macroeconomics
- ECON 2123 Principles of Microeconomics
- PSY 1113 Introduction to Psychology
- SOC 1113 Introduction to Sociology

Science and Mathematics 11

Physical Science 4

Select from the following:

- CHEM 1315 General Chemistry I
- GEOL 1014 Earth Science
- GEOL 1114 Physical Geology
- GEOL 1124 Physical Geography
- GEOL 1224 Historical Geology
- GEOL 2124 Astronomy
- PHYS 1014 General Physical Science
- PHYS 1114 General Physics I

Biological Science 4

Select from the following:

- BIOL 1114 General Biology
- BIOL 1134 General Environmental Biology
- BIOL 1144 General Cellular Biology

Mathematics 3

Select from the following:

- MATH 1503 Mathematics for Critical Thinking
- MATH 1513 College Algebra
- MATH 1613 Trigonometry
- MATH 1715 Pre-Calculus
- *MATH 2264 Analytical Geometry and Calculus I**

Humanities 6

Select from the following:

- ART (HUM) 1113 Art Appreciation
- COMM (HUM) 2413 Theatre Appreciation
- ENGL 2613 Introduction to Literature
- HUM 2113 Humanities I
- HUM 2223 Humanities II
- HUM 2893 Cinema
- MUSC (HUM) 2573 Music Appreciation
- PHIL 1113 Introduction to Philosophy

Global Studies 3

Select from the following:

- BIOL 3104 Plants and Civilization
- ECON 3003 International Economic Issues and Policies
- GEOG 2243 Human Geography
- HIST 2013 World Civilization I
- HIST 2023 World Civilization II
- HUM 3633 Comparative Religion
- LANG 1113 Foundations of World Languages
- NAMS 1143 Native Americans of North America
- NAMS 2503 Cherokee I
- PHIL 1313 Values and Ethics
- POLS 3053 International Relations
- SOC 3213 Minority Groups
- SPAN 1113 Beginning Spanish I

Elective 3

Select three additional hours from the courses listed above and not previously selected.

***Required for Telecommunications Foundations Option**

Program Core Requirements 32

- CS 1213 Introduction to Computing
- CS 2223 Programming I
- CS 2323 Programming II
- CS 3223 Data Modeling
- CS 3413 Systems Analysis
- CS 3623 Human-Computer Interface Development
- IT 1411 Orientation to Computer Technology
- IT 2143 Introduction to Networking
- IT 2153 Network Operating Systems I
- IT 3723 Computer Architecture
- IT 4504 Practicum and Capstone

Computer Network Administration Option 12

Select from the following to equal 12 credit hours:

- IT 3153 Network Operating Systems II
- IT 3253 Advanced TCP/IP Administration
- IT 3753 Network Security
- IT 4113 Network Routing
- IT 4313 Emerging Technologies
- IT 4353 Information Assurance and Security Management
- IT 4373 Information Assurance Regulations and Ethics

Software Development and Multimedia Option 12

Select from the following to equal 12 credit hours:

- CS 3213 Multimedia Development
- CS 3333 Object-Oriented Technology
- CS 3423 Software Engineering
- CS 3523 Distributed Systems Development
- CS 4523 Advanced Web System Development
- IT 3113 Integrated Applications
- IT 4313 Emerging Technologies

Telecommunications Foundations Option 12

Select from the following to equal 12 credit hours:

- IT 3333 Fundamentals of Electronics
- IT 3413 Electromagnetics
- IT 3443 Digital Design
- IT 4223 Analog and Digital Circuits Lab
- IT 4333 Introduction to Signals and Systems

Business Support Courses 27

- ACCT 2103 Accounting I – Financial
- ACCT 2203 Accounting II – Managerial
- BADM 2843 Business Statistics
- ECON 2113 Principles of Macroeconomics
- or
- ECON 2123 Principles of Microeconomics
- ENGL 3113 Advanced Technical Writing
- * **MATH 2364 Analytical Geometry and Calculus II**
- * **MATH 2464 Analytical Geometry and Calculus III**
- MKTG 3113 Principles of Marketing
- MGMT 3013 Principles of Management
- MGMT 3423 Management Information Systems

Select one from the following:

- ACCT 3243 Accounting Information Systems
- MGMT 3303 Organizational Behavior
- FINA 3503 Principles of Finance
- TECH 3013 Leadership and Decision-Making Skills for Managers and Professionals

Selected Electives 12

Electives will be chosen to complete the 124 credit hours required for graduation; two of the electives must be regarded as liberal arts.

- * **MATH 3113 Differential Equations**
- * **PHYS 1214 General Physics II**

Total Credit Hours 124

***Required for Telecommunications Foundations Option**

BACHELOR OF SCIENCE

GAME DEVELOPMENT (117)

The Bachelor of Science in Game Development is designed to provide students with the highest possible quality education in the areas of game development and general education. It will provide the student with a bachelor-level education focused on preparing the student to gain employment in the game development field or continue his/her graduate education. The Game Development degree has additional entrance requirements of a 3.0 (on a 4.0 scale) high school GPA and a composite score of 25 on the ACT.

REQUIRED HOURS 124

Communications 9

- ENGL 1113 Composition I
- ENGL 1213 Composition II
- SPCH 1113 Speech Communication

Social and Behavioral Sciences 9

- History 3
- Select from the following:*
- HIST 2483 American History to 1877
- HIST 2493 American History since 1877

POLS 1113 American Federal Government 3

Social Science 3

- Select from the following:*
- ECON 2113 Principles of Macroeconomics
- ECON 2123 Principles of Microeconomics
- PSY 1113 Introduction to Psychology
- SOC 1113 Introduction to Sociology

Science and Mathematics 12

Physical Science 4

- Select from the following:*
- CHEM 1315 General Chemistry I
- GEOL 1014 Earth Science
- GEOL 1114 Physical Geology
- GEOL 1124 Physical Geography
- GEOL 1224 Historical Geology
- GEOL 2124 Astronomy
- PHYS 1014 General Physical Science
- * **PHYS 1114 General Physics I**

Biological Science 4

- Select from the following:*
- BIOL 1114 General Biology
- BIOL 1134 General Environmental Biology
- BIOL 1144 General Cellular Biology

Mathematics 4

- Select from the following:*
- MATH 1503 Mathematics for Critical Thinking
- MATH 1513 College Algebra
- MATH 1613 Trigonometry
- MATH 1715 Pre-Calculus
- ***MATH 2264 Analytical Geometry and Calculus I**

Humanities 6

- Select from the following:*
- ART (HUM) 1113 Art Appreciation
- COMM (HUM) 2413 Theatre Appreciation
- ENGL 2613 Introduction to Literature
- HUM 2113 Humanities I
- HUM 2223 Humanities II
- HUM 2893 Cinema
- MUSC (HUM) 2573 Music Appreciation
- PHIL 1113 Introduction to Philosophy

Global Studies 3

- Select from the following:*
- BIOL 3104 Plants and Civilization
- ECON 3003 International Economic Issues and Policies
- GEOG 2243 Human Geography
- HIST 2013 World Civilization I
- HIST 2023 World Civilization II
- HUM 3633 Comparative Religion
- LANG 1113 Foundations of World Languages
- NAMS 1143 Native Americans of North America
- NAMS 2503 Cherokee I
- PHIL 1313 Values and Ethics
- POLS 3053 International Relations
- SOC 3213 Minority Groups
- SPAN 1113 Beginning Spanish I

Elective 3

Select three additional hours from the courses listed above and not previously selected.

***Required**

Program Core Requirements:..... 70

ART	1103	Art Foundations I
ART	1213	Digital Foundations
ART	2553	Digital 3D Foundations
ART	3553	Digital 3D Studio
ART	4433	Sequential Art
CS	2223	Programming I
CS	2323	Programming II
CS	3333	Object Oriented Technology
CS	3363	Data Structures
CS	3413	Systems Analysis
CS	3573	Operating Systems
CS	3623	Human-Computer Interface Development
CS	3733	Computer Graphics Programming
CS	3753	Introduction to Modeling and Simulation

CS	3813	Game Programming I
CS	3823	Game Programming II
CS	4403	Game Development Seminar
CS	4504	Capstone
ENGL	3033	Creative Writing for Game Design
IT	3723	Computer Architecture
MATH (CS)	3433	Discrete Mathematics
MATH	3523	Linear Algebra
PHYS	3113	Physics for Gaming

Selected Electives 12

Total Credit Hours 124

BACHELOR OF TECHNOLOGY

APPLIED TECHNOLOGY (107)

This degree offered online at: www.rsuonline.edu

The Bachelor of Technology in Applied Technology is designed to provide educational opportunities for individuals who possess an Associate in Applied Science degree or equivalent and need additional education in order to perform job requirements or to advance their professional careers. The degree program consists of 41 hours in general education, 30 hours (minimum) in a technical specialty, 37 hours in the professional program core, and 12 hours of electives.

REQUIRED HOURS 120

Communications 9

- ENGL 1113 Composition I
- ENGL 1213 Composition II
- SPCH 1113 Speech Communication

Social and Behavioral Sciences 9

History 3

Select from the following:

- HIST 2483 American History to 1877
- HIST 2493 American History since 1877

POLS 1113 American Federal Government 3

Social Science 3

Select from the following:

- ECON 2113 Principles of Macroeconomics
- ECON 2123 Principles of Microeconomics
- PSY 1113 Introduction to Psychology
- SOC 1113 Introduction to Sociology

Science and Mathematics 11

Physical Science 4

Select from the following:

- CHEM 1315 General Chemistry I
- GEOL 1014 Earth Science
- GEOL 1114 Physical Geology
- GEOL 1124 Physical Geography
- GEOL 1224 Historical Geology
- GEOL 2124 Astronomy
- PHYS 1014 General Physical Science
- PHYS 1114 General Physics I

Biological Science 4

Select from the following:

- BIOL 1114 General Biology
- BIOL 1134 General Environmental Biology
- BIOL 1144 General Cellular Biology

Mathematics 3

Select from the following:

- MATH 1503 Mathematics for Critical Thinking
- MATH 1513 College Algebra
- MATH 1613 Trigonometry
- MATH 1715 Pre-Calculus
- MATH 2264 Analytical Geometry and Calculus I

Humanities 6

Select from the following:

- ART (HUM) 1113 Art Appreciation
- COMM (HUM) 2413 Theatre Appreciation
- ENGL 2613 Introduction to Literature
- HUM 2113 Humanities I
- HUM 2223 Humanities II
- HUM 2893 Cinema
- MUSC (HUM) 2573 Music Appreciation
- PHIL 1113 Introduction to Philosophy

Global Studies 3

Select from the following:

- BIOL 3104 Plants and Civilization
- ECON 3003 International Economic Issues and Policies
- GEOG 2243 Human Geography
- HIST 2013 World Civilization I
- HIST 2023 World Civilization II
- HUM 3633 Comparative Religion
- LANG 1113 Foundations of World Languages
- NAMS 1143 Native Americans of North America
- NAMS 2503 Cherokee I
- PHIL 1313 Values and Ethics
- POLS 3053 International Relations
- SOC 3213 Minority Groups
- SPAN 1113 Beginning Spanish I

Elective 3

Select three additional hours from the courses listed above and not previously selected.

Program Requirements:

Technical Specialty 30 credit hours (minimum)

A cohesive program of study in a technical field that fulfills the requirements of an Associate in Applied Science (A.A.S.), Associate in Science (A.S.), or the equivalent.

Program Core Courses 37

BADM	3913	Communication Skills for Managers and Professionals
CS	3213	Multimedia Development
MGMT	3013	Principles of Management
MGMT	3303	Organizational Behavior
MKTG	3113	Principles of Marketing
TECH	3013	Leadership and Decision-Making Skills for Managers and Professionals
TECH	3023	Emerging Technologies
TECH	3203	Introduction to Risk Management
TECH	4003	Introduction to Computer and Telecommunications Tools for Managers and Professionals
TECH	4013	Computer and Telecommunications Applications for Managers and Professionals
TECH	4113	Government Regulation of Business
TECH	4504	Practicum and Capstone Experience

Selected Electives 12

Electives will be chosen to complete the 120 credit hours required for graduation.*

Total Credit Hours 120

*Students are advised to take one three-credit hour upper-division liberal arts and sciences course to meet the requirements for graduation. If this requirement is not met in fulfilling a general education requirement, then it may be met using an upper-division liberal arts course as a program elective.

A minor requires completion of at least 18-24 designated credit hours of course work outside the student's major field, including a minimum of 9 upper-division credit hours, and may have a required core. The same courses may not be used to fulfill the requirements for both a major and a minor.

MINOR IN COMPUTER SCIENCE (097)

Requirements

A minimum of nine hours must be upper level. The same courses may not be used to fulfill the requirements for both a major and a minor.

CS	1213	Introduction to Computing
CS	2223	Programming I
CS	2323	Programming II
CS	3223	Data Modeling
CS	3333	Object-Oriented Technology
CS	3623	Human-Computer Interface Development
IT	1411	Orientation to Computer Technology

Total Credit Hours **19**

ASSOCIATE IN SCIENCE

COMPUTER SCIENCE (097)

This degree offered online at: www.rsuonline.edu

The Associate in Science degree in Computer Science program has two principal goals. One goal of the program is to provide students with the necessary skills required to become competent in computer programming at the entry level, as well as understanding the significant issues of how technology is changing the workplace. The second goal is to provide students with the academic background to enable them to be successful while seeking a baccalaureate degree in Computer Science, Computer Information Systems, or Information Technology. Transferability of this degree should be confirmed with the receiving institution. The specialty courses in this degree will partially satisfy the specialty area of the Bachelor of Technology in Applied Technology program offered at Rogers State University.

REQUIRED HOURS65-66

Communications9

- ENGL 1113 Composition I
- ENGL 1213 Composition II
- SPCH 1113 Speech Communication

Social and Behavioral Sciences9

History3

Select from the following:

- HIST 2483 American History to 1877
- HIST 2493 American History since 1877

POLS 1113 American Federal Government3

Social Science3

Select from the following:

- ECON 2113 Principles of Macroeconomics
- ECON 2123 Principles of Microeconomics
- PSY 1113 Introduction to Psychology
- SOC 1113 Introduction to Sociology

Science and Mathematics11

Physical Science4

Select from the following:

- CHEM 1315 General Chemistry I
- GEOL 1014 Earth Science
- GEOL 1114 Physical Geology
- GEOL 1124 Physical Geography
- GEOL 1224 Historical Geology
- GEOL 2124 Astronomy
- PHYS 1014 General Physical Science
- PHYS 1114 General Physics I

Biological Science4

Select from the following:

- BIOL 1114 General Biology
- BIOL 1134 General Environmental Biology
- BIOL 1144 General Cellular Biology

Mathematics3

Select from the following:

- MATH 1503 Mathematics for Critical Thinking
- MATH 1513 College Algebra
- MATH 1613 Trigonometry
- MATH 1715 Pre-Calculus
- MATH 2264 Analytic Geometry and Calculus I

Humanities6

Select from the following:

- ART (HUM) 1113 Art Appreciation
- COMM (HUM)2413 Theatre Appreciation
- ENGL 2613 Introduction to Literature
- HUM 2113 Humanities I
- HUM 2223 Humanities II
- HUM 2893 Cinema
- MUSC (HUM) 2573 Music Appreciation
- PHIL 1113 Introduction to Philosophy

Global Studies3

Select from the following:

- BIOL 3104 Plants and Civilization
- ECON 3003 International Economic Issues and Policies
- GEOG 2243 Human Geography
- HIST 2013 World Civilization I
- HIST 2023 World Civilization II
- HUM 3633 Comparative Religion
- LANG 1113 Foundations of World Languages
- NAMS 1143 Native Americans of North America
- NAMS 2503 Cherokee I
- PHIL 1313 Values and Ethics
- POLS 3053 International Relations
- SOC 3213 Minority Groups
- SPAN 1113 Beginning Spanish I

Elective3

Select three additional hours from the courses listed above and not previously selected.

Program Requirements18

- CS 1213 Introduction to Computing
- CS 2223 Programming I
- CS 2323 Programming II
- IT 2143 Introduction to Networking
- IT 2153 Network Operating Systems I
- IT/CS 2000 or above equal to 3 credit hours.

Support and Related3-4

- ACCT 2103 Accounting I - Financial
- MGMT 3013 Principles of Management
- MATH 2264 Analytical Geometry and Calculus I

Elective3

Total Credit Hours65-66

ASSOCIATE IN APPLIED SCIENCE

APPLIED TECHNOLOGY (111)

This degree offered online at www.rsuonline.edu

Students seeking this degree may enter with a technical specialty gained from completion of vocational/technical programs, armed forces programs, or comparable programs that have been evaluated by the American Council on Education's College Credit Recommendation Service. The goal of the Associate of Applied Science in Applied Technology degree program is to provide students with a quality education in a technology area by emphasizing a combination of general education courses and a selection of courses in a technical specialty. The program develops a knowledge base through core courses and selected electives while advancing a generalist view of technology. Transferability of this degree should be confirmed with the receiving institution. The specialty courses in this degree will satisfy the technical specialty requirement of the Bachelor of Technology in Applied Technology program offered at Rogers State University.

REQUIRED HOURS 61

Communications 6

ENGL 1113 Composition I 3

Select from the following: 3

ENGL 1213 Composition II

ENGL 2333 Technical Writing

SPCH 1113 Speech Communication

U.S. History and Government 6

History 3

Select from the following:

HIST 2483 American History to 1877

HIST 2493 American History since 1877

POLS 1113 American Federal Government 3

The College Experience 1
ORIE 1151 The College Experience

Selected Electives 6

Select from the following:

Computer Science

Economics

Mathematics

Science

Social and Behavioral Science

Core Requirements 12

ACCT 2103 Accounting I – Financial

BADM 1203 Introduction to Business

CS 1113 Microcomputer Applications

ECON 2123 Principles of Microeconomics

Technical Specialty 30

Up to 30 hours accepted in the technical specialty. If additional courses are needed for the 30 hours, students will choose from computer science, business, accounting, or economics areas. Students and advisors will be expected to develop broad-based degree plans in completing the remaining course work (technical-specific or general education) in order to fully develop the multidisciplinary nature of the program.

Total Credit Hours 61

School of Business and Technology

ASSOCIATE IN APPLIED SCIENCE

APPLIED TECHNOLOGY (111)

OPTION: BUSINESS, INFORMATION, AND ENGINEERING TECHNOLOGIES (111B)

OPTION: CONSTRUCTION MANAGEMENT (111C)

OPTION: MANUFACTURING MANAGEMENT (111M)

OPTION: PUBLIC AND HEALTH SERVICES (111P)

OPTION: TELECOMMUNICATIONS (111A)

OPTION: TRANSPORTATION MANAGEMENT (111T)

Students seeking this degree may enter with a technical specialty gained from completion of vocational/technical programs, armed forces programs, or comparable programs that have been evaluated by the American Council on Education's College Credit Recommendation Service. The goal of the Associate of Applied Science in Applied Technology degree program is to provide students with a quality education in a technology area by emphasizing a combination of general education courses and a selection of courses in a technical specialty. The program develops a knowledge base through core courses and selected electives while advancing a generalist view of technology. Transferability of this degree should be confirmed with the receiving institution. The specialty courses in this degree will satisfy the technical specialty requirement of the Bachelor of Technology in Applied Technology program offered at Rogers State University.

REQUIRED HOURS61

Communications6

ENGL 1113 Composition I.....3

Select from the following:3

ENGL 1213 Composition II

ENGL 2333 Technical Writing

SPCH 1113 Speech Communication

U.S. History and Government6

History3

Select from the following:

HIST 2483 American History to 1877

HIST 2493 American History since 1877

POLS 1113 American Federal Government.....3

The College Experience1

ORIE 1151 The College Experience

Selected Electives6

Select from the following:

Computer Science

Economics

Mathematics

Science

Social and Behavioral Science

Core Requirements12

ACCT 2103 Accounting I – Financial

BADM 1203 Introduction to Business

CS 1113 Microcomputer Applications

ECON 2123 Principles of Microeconomics

Technical Specialty30

Up to 30 hours accepted in the technical specialty. If additional courses are needed for the 30 hours, students will choose from computer science, business, accounting, or economics areas. Students and advisors will be expected to develop broad-based degree plans in completing the remaining coursework (technical-specific or general education) in order to fully develop the multidisciplinary nature of the program.

Total Credit Hours61