

JANNEN SCHOOL OF ARTS & SCIENCES

Trine University's Jannen School of Arts & Sciences includes:

- Department of Criminal Justice, Psychology and Social Sciences
- Department of Health Sciences
- Department of Language and Humanities
- Department of Mathematics and Informatics
- Department of Science
- Music Program
- Academic Support Services
- Learning Center
- Mathematics Help Sessions
- Study Abroad
- Writing Center

Academic programs administered by the school are as follows:

- Bachelor of Arts

Major

General Studies

- Bachelor of Science

Majors

Biology

Chemistry

Criminal Justice

Exercise Science

Forensic Science

Informatics

Mathematics

Psychology

- Associate in Arts
- Associate in Criminal Justice
- Associate in Science
- Minors in: *SEE PAGE 70*

Athletic Training

Biology

Chemistry

Criminal Justice

History

Pre-Med Professional Track

Humanities

International Studies

Mathematics

Music

Psychology

THE SCHOOL

The Jannen School of Arts and Sciences was named in honor of Robert L. Jannen, a 1950 chemical engineering graduate and member of the University's Board of Trustees, and his wife Dolores.

While Trine University is recognized for its long-standing and highly regarded programs in engineering, business, and teacher education, the Jannen School of Arts and Sciences is becoming known for its career-oriented, challenging, and competitive programs in its five departments. These quality programs prepare graduates to be successful in their careers and to pursue graduate and professional studies.

The Jannen School of Arts and Sciences has a special relationship with the Franks School of Education through secondary education majors in mathematics, science, and social studies. Dedicated faculty in the Jannen School of Arts and Sciences teach the content areas as well as the general education component for secondary education majors.

Faculty members in the Jannen School of Arts and Sciences are committed to providing an excellent foundation for all Trine University students in the areas of written and oral communication; social, historical, and global studies; the humanities; the natural sciences; and the mathematical and computational sciences. Student learning in these disciplines provides the knowledge basis for the University's general education component that complements the professional program courses for all Trine University students.

THE MISSION

In concert with the mission of Trine University, the Jannen School of Arts and Sciences provides students with the cultural, scientific, and academic platform from which to begin their journeys as lifelong learners and active contributors to the development of society.

ARTS & SCIENCES ASSOCIATE DEGREES

Jannen School of Arts & Sciences offers the following Associate degrees:

Associate in Arts

Associate in Criminal Justice

Associate in Science

In the degree program descriptions that follow, an asterisk(*) indicates courses that satisfy the university's General Education Requirements.

ASSOCIATE IN ARTS**65 HRS.****PROGRAM REQUIREMENTS****REQUIRED HOURS****WRITTEN COMMUNICATION****6 HRS.**

*ENG 103 English Composition I (3)

*ENG 113 English Composition II (3)

ORAL COMMUNICATION**3 HRS.**

*SP 203 Effective Speaking

SOCIAL SCIENCES & HUMANITIES**12 HRS.**

*ENG 153 Introduction to Literature (3)

*Humanities (3)

*Social sciences (6)

COMPUTER LITERACY**3 HRS.**

*INF 103 Information Technology Applications

or

*INF 113 Business Computer Applications (3)

MATHEMATICS & SCIENCE**7 HRS.**

*100 level or higher math (3 or 4)

*Science elective(s) (4 or 3)

FRESHMAN STUDIES**1 HR.**

UE 101 University Experience (1)

ASSOCIATE IN ARTS CORE**8 HRS.**

*ENG 253 Readings in World Literature (3)

COM 213 Business Communication (3)

*FLM 202 Film Appreciation

or

*SP 102 Introduction to Theater (2)

COMMUNICATION CONCENTRATION**15 HRS.**

*COM 163 Interpersonal Communication (3)

*COM 203 Media and Communication (3)

COM 223 Theories and Practices in Communication (3)

*COM 233 Intercultural Communication (3)

3 additional hours in COM, FLM, SP, or writing/language

ENG courses (*ENG 133, *ENG 273, & *ENG 363) (3)

GENERAL ELECTIVES**10 HRS.****TOTAL IN DEGREE PROGRAM:****65 HRS.**

In the degree program descriptions that follow, an asterisk(*) indicates courses that satisfy the university's General Education Requirements.

ASSOCIATE IN CRIMINAL JUSTICE

66 HRS.

PROGRAM REQUIREMENTS

REQUIRED HOURS

WRITTEN COMMUNICATION

6 HRS.

*ENG	103	English Composition I	(3)
*ENG	113	English Composition II	(3)

ORAL COMMUNICATION

3 HRS.

*SP	203	Effective Speaking	
or			
*COM	163	Interpersonal Communication	(3)

SOCIAL SCIENCES & HUMANITIES

15 HRS.

*ENG	153	Introduction to Literature	(3)
*ECO	213	Microeconomics	
or			
*ECO	223	Macroeconomics	(3)
*GOV	113	Introduction to Government	(3)
*PSY	113	Principles of Psychology	(3)
*3 hours of humanities electives			(3)

COMPUTER LITERACY

3 HRS.

*INF	103	Information Technology Applications	(3)
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MATHEMATICS & SCIENCE

11 HRS.

*MA	113	College Algebra	
or			
*MA	153	Elements of Mathematics	(3)
*BIO	104	General Biology	(4)
*CH	144	Chemistry-Ideas & Applications	(4)

LAW ENFORCEMENT

18 HRS.

LE	103	Introduction to Criminal Justice	(3)
LE	153	Juvenile Justice	(3)
LE	253	Probation, Parole & Community Corrections	(3)
LE	263	Introduction to Criminal Law and Justice	(3)
LE	273	Criminal Procedures and Evidence	(3)
LE	343	Criminalistics and Crime Scene Investigations I	(3)

ADDITIONAL SOCIAL SCIENCES COURSES

9 HRS.

GOV	333	State and Local Government	(3)
GOV	403	American Constitutional Development	(3)

PSY 383 Forensic Psychology (3)

FRESHMAN STUDIES 1 HR.

UE 101 University Experience (1)

TOTAL IN ASSOCIATE DEGREE PROGRAM: 66 HRS.

In the degree program descriptions that follow, an asterisk(*) indicates courses that satisfy the university's General Education Requirements.

ASSOCIATE IN SCIENCE 65 HRS.

PROGRAM REQUIREMENTS REQUIRED HOURS

WRITTEN COMMUNICATION 6 HRS.

*ENG 103 English Composition I (3)

*ENG 113 English Composition II (3)

ORAL COMMUNICATION 3 HRS.

SP 203 Effective Speaking

or

COM 163 Interpersonal Communication (3)

SOCIAL SCIENCES & HUMANITIES 12 HRS.

*ENG 153 Introduction to Literature (3)

*Social Sciences or Humanities electives (9)

Note: Of the 12 hours in Social Sciences & Humanities, 6 hours must be in Social Sciences and 6 hours must be in Humanities.

COMPUTER LITERACY 3 HRS.

*INF 103 Information Technology Applications (3)

MATHEMATICS & SCIENCE 10 HRS.

*MA 113 College Algebra (3)

Two science classes, one a lab science (7)

ADDITIONAL MATHEMATICS OR SCIENCE COURSES 13 HRS.

The student must complete an area of emphasis which includes 20 total hours in either a science discipline or mathematics.

FRESHMAN STUDIES 1 HR.

UE 101 University Experience (1)

GENERAL ELECTIVES 17 HRS.

TOTAL IN ASSOCIATE PROGRAM: 65 HRS.

DEPARTMENT OF CRIMINAL JUSTICE, PSYCHOLOGY, & SOCIAL SCIENCES

The Department of Criminal Justice, Psychology, & Social Sciences' mission is to provide career-oriented higher education and to deliver quality teaching to students seeking to complete the Trine University General Education requirements as well as to meet the social sciences, humanistic, global and American perspectives required by the Common Ground component in General Education. The Department of Criminal Justice, Psychology and Social Sciences provides an educational environment in which students receive individual attention as well as excellence in teaching. The Department offers programs leading to careers in criminal justice, mental health, and social sciences education, as well as a preparation for further professional training in law, public administration, psychology, history, and social service. The Department aims to prepare graduates to be productive early in their professional careers and to assume leadership roles in the public and private sector, while providing service to society.

The Department of Criminal Justice, Psychology, & Social Sciences offers the following degrees:

- Bachelor of Science
 - Majors
 - Criminal Justice
 - Psychology
- Bachelor of Arts
 - Majors
 - General Studies

In the degree program descriptions that follow, an asterisk (*) indicates courses that satisfy the University's General Education Requirements.

BACHELOR OF SCIENCE— CRIMINAL JUSTICE MAJOR 124 HRS.

PROGRAM REQUIREMENTS	REQUIRED HOURS
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WRITTEN COMMUNICATION	6 HRS.
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*ENG	103	English Composition I	(3)
*ENG	113	English Composition II	(3)

ORAL COMMUNICATION	3 HRS.
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*SP	203	Effective Speaking	
or			
*COM	163	Interpersonal Communication	(3)

SOCIAL SCIENCES & HUMANITIES	21 HRS.
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*ENG	153	Introduction to Literature	(3)
*GOV	113	Introduction to Government	(3)
*HIS	103	American History I and	
*HIS	113	American History II	

or

*HIS 203 World Civilization I and (6)
 *HIS 213 World Civilization II

*PSY 113 Principles of Psychology

or

*SOC 103 Principles of Sociology (3)

*Global elective (3)

*Humanities elective (3)

COMPUTER LITERACY 3 HRS.

*INF 103 Information Technology Applications (3)

MATHEMATICS & SCIENCE 10 HRS.

*MA 113 College Algebra

or

*MA 153 Elements of Mathematics (3)

*BIO 104 General Biology (4)

*One additional science or mathematics course (3)

HEALTH AND PHYSICAL EDUCATION 2 HRS.

*EXS 102 Lifetime Wellness (2)

FRESHMAN STUDIES 1 HR.

UE 101 University Experience (1)

CRIMINAL JUSTICE SUBJECT MATTER CONCENTRATION 49 HRS.

GOVERNMENT

GOV 333 State and Local Government (3)

GOV 403 American Constitutional Development (3)

LAW ENFORCEMENT

LE 103 Introduction to Criminal Justice (3)

LE 153 Juvenile Justice (3)

LE 253 Probation, Parole & Community Corrections (3)

LE 263 Introduction to Criminal Law and Justice (3)

LE 273 Criminal Procedures and Evidence (3)

LE 343 Criminalistics and Crime Scene Investigations I (3)

LE 473 Law Enforcement Internship I (3)

PSYCHOLOGY

PSY 383 Forensic Psychology (3)

SCIENCE

CH 144 Chemistry—Ideas and Applications (4)

Select one of the four 15-credit options below: (15)

OPTION A—LAW ENFORCEMENT

LE	313	Police Administration
LE	353	Criminalistics & Crime Scene Investigation II
LE	423	Criminal Justice Agency Administration
PSY	443	Advanced Forensic Psychology
SOC	323	The Family

OPTION B—FORENSIC AND CORRECTIONAL PSYCHOLOGY

LE	363	Institutional Corrections and Correctional Law
PSY	323	Abnormal Psychology
PSY	413	The Psychology of Addiction
PSY	423	Counseling Theories and Practices
PSY	443	Advanced Forensic Psychology

OPTION C—AGENCY ADMINISTRATION

LE	313	Police Administration
LE	363	Institutional Corrections and Correctional Law
LE	423	Criminal Justice Agency Administration
MGT	313	Human Resources Management
MGT	363	Organizational Behavior

OPTION D—PSYCHOLOGY

PSY	323	Abnormal Psychology
PSY	333	Psychology of Personality
PSY	343	Social Psychology
PSY	353	Child and Adolescent Psychology
PSY	423	Counseling Theories and Practices

ELECTIVES **29 HRS.**

TOTAL IN DEGREE PROGRAM: **124 HRS.**

In the degree program descriptions that follow, an asterisk(*) indicates courses that satisfy the University's General Education Requirements.

BACHELOR OF SCIENCE—PSYCHOLOGY MAJOR **124 HRS.**
PROGRAM REQUIREMENTS **REQUIRED HOURS**

WRITTEN COMMUNICATION **6 HRS.**

*ENG	103	English Composition I	(3)
*ENG	113	English Composition II	(3)

ORAL COMMUNICATION **3 HRS.**

*SP	203	Effective Speaking
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or

*COM 163 Interpersonal Communication (3)

SOCIAL SCIENCES & HUMANITIES**22 HRS.**

*ECO 213 Microeconomics

or

*ECO 223 Macroeconomics (3)

*GOV 113 Introduction to Government (3)

*HIS 103 American History I and

*HIS 113 American History II

or

*HIS 203 World Civilization I and

*HIS 213 World Civilization II (6)

*PSY 113 Principles of Psychology (3)

*Humanities electives (7)

COMPUTER LITERACY**3 HRS.**

*INF 103 Information Technology Applications (3)

MATHEMATICS & SCIENCE**14 HRS.**

*MA 113 College Algebra

or

*MA 153 Elements of Mathematics (3)

*BIO 104 General Biology (4)

*Two Math/Science courses (at least one a lab science) (7)

HEALTH AND PHYSICAL EDUCATION**2 HRS.**

*EXS 102 Lifetime Wellness (2)

FRESHMAN STUDIES**1 HR.**

UE 101 University Experience (1)

PSYCHOLOGY SUBJECT MATTER CONCENTRATION**45 HRS.**

Primary Core (12)

PSY 113 Principles of Psychology

PSY 303 Research Methods in Psychology

PSY 453 Clinical Internship

PSY 473 Psychology Capstone Demonstration

Choose two of the following 3-hour clinical courses (6)

PSY 323 Abnormal Psychology

PSY 403 Human Sexuality

PSY 413 The Psychology of Addiction

PSY 423 Counseling Theories and Practices

Choose two of the following 3-hour social core courses (6)

PSY	313	Topics in Psychology
PSY	333	Psychology of Personality
PSY	343	Social Psychology
PSY	373	Political Psychology

Choose one of the following 3-hour developmental core courses (3)

PSY	353	Child and Adolescent Psychology
SOC	323	The Family

Choose 15 hours from any 300 level or higher psychology courses (15)
or SOC 323, SOC 343, excluding subject area concentration courses chosen above.

ELECTIVES**31 HRS.**

Students wishing to pursue graduate training in psychology should take MA 113 College Algebra, MA 253 Statistics.

TOTAL IN DEGREE PROGRAM:**124 HRS.****BACHELOR OF ARTS—GENERAL STUDIES MAJOR****124 HRS.****PROGRAM REQUIREMENTS****REQUIRED HOURS****OPTIONS A, B, & C****WRITTEN COMMUNICATION****6 HRS.**

*ENG	103	English Composition I	(3)
*ENG	113	English Composition II	(3)

ORAL COMMUNICATION**3 HRS.**

*SP	203	Effective Speaking	(3)
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SOCIAL SCIENCES & HUMANITIES**24 HRS.**

*ECO	213	Microeconomics	
or			
*ECO	223	Macroeconomics	(3)
*ENG	153	Introduction to Literature	(3)
*GOV	113	Introduction to Government	(3)
*HIS	103	American History I	
and			
*HIS	113	American History II	(6)
*PSY	113	Principles of Psychology	(3)
*Humanities		electives	(6)

COMPUTER LITERACY **3 HRS.**
 *INF 103 Information Technology Applications (3)

MATHEMATICS & SCIENCE **10 HRS.**
 *MA 113 College Algebra (3)
 *Two science courses (at least one a lab science) (7)

HEALTH & PHYSICAL EDUCATION **2 HRS.**
 *EXS 102 Lifetime Wellness (2)

FRESHMAN STUDIES **1 HR.**
 UE 101 University Experience (1)

SELECT ONE OF THE OPTIONS BELOW

OPTION A - PRE-LEGAL STUDIES CONCENTRATION **49 HRS.**

SOC 103 Principles of Sociology (3)
 SOC 323 The Family (3)
 COM 213 Business Communication (3)
 COM 363 Persuasion and Argumentation (3)
 ENG 214 American Literature (4)
 GOV 333 State and Local Government (3)
 GOV 403 American Constitutional Development (3)
 PHL 313 Ethics (3)
 PHL 343 Logic (3)
 PSY 373 Political Psychology (3)
 PL 4003 Legal Capstone Experience (3)

LE 153 Juvenile Justice
 and
 LE 263 Introduction to Criminal Law and Justice
 and
 LE 273 Criminal Procedures and Evidence
 or
 9 hours from BA or LAW. (9)

6 hours from LE, ENG, PSY, or COM (6)

ELECTIVES **26 HRS.**

OPTION B – GENERAL SOCIAL STUDIES CONCENTRATION 45 HRS.

15 hours from three of the following:

GOV 300 or higher level courses
 HIS 300 or higher level courses
 PSY 300 or higher level courses
 ECO 300 or higher level courses

GEO 300 or higher level courses

ELECTIVES

30 HRS.

OPTION C – SELF-DESIGNED STUDIES CONCENTRATION 45 HRS.

15 TO 30 HOURS MUST BE TAKEN FROM TWO TO THREE DIFFERENT ACADEMIC DEPARTMENTS AT THE 300 LEVEL OR HIGHER

WRITTEN CAPSTONE PROJECT

3 HRS.

GS 4003 Senior Capstone Project

(3)

ELECTIVES

27 HRS.

TOTAL IN DEGREE PROGRAM

124 HRS.

PRE-LAW

Admission to an accredited school of law normally requires a bachelor's degree. The Association of American Law Schools does not recommend a specific major, but students will be expected to have a broad academic background, a good scholastic record, and acceptable scores on the law school admission test. Usually that type of preparation is more beneficial for a prospective law student than is the specialized study of subjects closely related to law.

Any degree program that stresses the ability to communicate both verbally and in writing, encourages an understanding of human values, promotes understanding, reasoning and critical thinking, and fosters creativity is an excellent program for a student planning to pursue a law degree after graduation.

The Department of Criminal Justice, Psychology and Social Sciences offers a General Studies major with a Concentration in Pre-Legal Studies which is designed to prepare students for law school and is recommended for students intending to go to law school who do not have a strong interest in another undergraduate discipline. The department stresses that pre-law students should seek frequent, regular advice from their advisors and from the pre-law advisor located in this department.

DEPARTMENT OF HEALTH SCIENCES

The Department of Health Sciences offers the following degree:

- Bachelor of Science
Major
Exercise Science

In the degree program descriptions that follow, an asterisk (*) indicates those courses that satisfy the University's General Education Requirements.

PROGRAM REQUIREMENTS	REQUIRED HOURS
BACHELOR OF SCIENCE—EXERCISE SCIENCE MAJOR	124 HRS.
WRITTEN COMMUNICATION	6 HRS.
*ENG 103 English Composition I	(3)
*ENG 113 English Composition II	(3)
ORAL COMMUNICATION	3 HRS.
*SP 203 Effective Speaking	
or	
*COM 163 Interpersonal Communication	(3)
SOCIAL SCIENCES & HUMANITIES	18 HRS.
*ENG 153 Introduction to Literature	(3)
*GOV 113 Introduction to Government	(3)
*PSY 113 Principles of Psychology	(3)
*ECO 213 Microeconomics	
or	
*ECO 223 Macroeconomics	(3)
*HIS 103 American History I	
and	
*HIS 113 American History II	
or	
*HIS 203 World Civilization I	
and	
*HIS 213 World Civilization II	(6)
COMPUTER LITERACY	3 HRS.
*INF 103 Information Technology Applications	(3)
MATHEMATICS & SCIENCE	11 HRS.
*MA 113 College Algebra	
or	
*MA 153 Elements of Mathematics	(3)
*BIO 104 General Biology	(4)
*BIO 254 Human Anatomy	(4)

FRESHMAN STUDIES			1 HR.
BA	101	University Experience	(1)

ADDITIONAL REQUIREMENTS

BUSINESS COURSES			13 HRS.
BA	123	Business Concepts	(3)
BA	301	Professional Development & Strategies	(1)
MGT	363	Organizational Behavior	(3)
MK	303	Marketing	(3)
		Business Elective	(3)

EXERCISE SCIENCE			61 HRS.
*EXS	102	Lifetime Wellness	(2)
EXS	103	Teaching of Sport Skills I	(3)
EXS	123	Teaching of Sport Skills II	(3)
EXS	131	First Aid	(1)
EXS	243	Athletic Training	(3)
EXS	273	Nutrition	(3)
EXS	333	Kinesiology	(3)
EXS	353	Exercise Physiology	(3)
EXS	383	Nutrition Counseling	(3)
EXS	402	Aerobic Leadership	(2)
EXS	433	Developing Health Promotion Programs for Adults	(3)
EXS	452	Fitness Evaluation Assessments	(2)
EXS	463	Motor Learning	(3)
EXS	464	Capstone Experience in Exercise Science	(4)
EXS	474	Internship in Exercise Science	(4)
EXS	493	Personal Training Certification	(3)
HPE	253	Risk Management	(3)
HPE	313	Principles of Sport & Recreation Management	(3)
HPE	332	Drug Education	(2)
HPE	343	Sport Psychology	(3)
HPE	373	Health Problems	(3)
HPE	412	Business Planning in Sport & Recreation	(2)

ELECTIVES (DETERMINED IN CONSULTATION WITH ADVISOR)			8 HRS.
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TOTAL IN DEGREE PROGRAM:			124 HRS.
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DEPARTMENT OF MATHEMATICS & INFORMATICS

The Department of Mathematics & Informatics offers the following degree:

- Bachelor of Science
 - Majors
 - Mathematics
 - Informatics

BACHELOR OF SCIENCE—MATHEMATICS MAJOR 124 HRS.

The mathematics curriculum is a broad-based program designed to advance mathematical reasoning and to develop communication skills. Recent graduates of the mathematics program have pursued graduate degrees while others have found employment as secondary school teachers, computer analysts, actuaries, statisticians with government agencies, quality-control engineers, mathematics consultants for education research companies, and supervisors in industrial plants.

In the degree program descriptions that follow, an asterisk (*) indicates courses that satisfy the University's General Education Requirements.

PROGRAM REQUIREMENTS	REQUIRED HOURS
WRITTEN COMMUNICATION	6 HRS.
*ENG 103 English Composition I	(3)
*ENG 113 English Composition II	(3)
ORAL COMMUNICATION	3 HRS.
*SP 203 Effective Speaking	
or	
*COM 163 Interpersonal Communication	(3)
SOCIAL SCIENCES AND HUMANITIES	18 HRS.
*ENG 153 Introduction to Literature	(3)
*PSY 113 Principles of Psychology	(3)
*History elective	(3)
Social Sciences elective	(3)
Humanities electives	(6)
COMPUTER LITERACY	2-3 HRS.
*INF 132 Integrated Development (Visual Basic)	
or	
*INF 163 Structured Logic and Design (C Programming)	(2-3)
MATHEMATICS & SCIENCE	10 HRS.
*MA 312 Historical Aspects of Mathematics	(2)
Laboratory Science electives	(8)
OTHER	0-1 HR.
(Courses must be chosen from the above categories.)	

HEALTH & PHYSICAL EDUCATION**2 HRS.**

*EXS 102 Lifetime Wellness

(2)

FRESHMAN STUDIES**1 HR.**

UE 101 University Experience

(1)

MATHEMATICS CORE**38 HRS.**

(Grade of "C" or higher in all 38 hrs. of mathematics)

MA 134 Calculus I (4)

MA 164 Calculus II (4)

MA 213 Calculus III (3)

MA 233 Differential Equations (3)

MA 303 College Geometry (3)

MA 313 Linear Algebra (3)

MA 403 Advanced Calculus (3)

Mathematics electives (15)

ELECTIVES**43 HRS.**

Directed electives (22-25)

General electives (18-21)

(Electives are determined in consultation with an advisor and based on student career objectives.)

TOTAL IN DEGREE PROGRAM:**124 HRS.****BACHELOR OF SCIENCE – INFORMATICS MAJOR**

The Informatics program is designed to prepare students for a wide range of endeavors in the information field, including information management and technology, research and information services, interactive system design, human-computer interaction, and information science.

Graduates of the Informatics program will be qualified for jobs in the information and technology industry and in business, public service, and other various professions. Possible job titles include security and performance analyst, web developer, information management specialist, network administrator, product developer, business analyst, usability engineer, database administrator, and many others.

The program also provides strong preparation for graduate studies. Graduates will qualify to be placed in prestigious graduate schools and pursue a variety of programs, including information and management science, information science, biomedical informatics, business and accounting, information technology and technical law.

The mission of this program is to provide students with a broadly based and sophisticated understanding of information and its technology, preparing them for careers in the rapidly emerging field defined as "informatics."

BACHELOR OF SCIENCE – INFORMATICS MAJOR 124 HRS.

In the degree program descriptions that follow, an asterisk (*) indicates courses that satisfy the University's General Education Requirements.

PROGRAM REQUIREMENTS**REQUIRED HOURS****WRITTEN & ORAL COMMUNICATION****9 HRS.**

*ENG	103	English Composition I	(3)
*ENG	113	English Composition II	
or			
*ENG	133	Technical Communication	(3)
*SP	203	Effective Speaking	(3)

SOCIAL SCIENCES & HUMANITIES**18 HRS.**

(Students must choose electives that satisfy the University's General Education Requirements)

*ENG	153	Introduction to Literature	(3)
*PSY	113	Principles of Psychology	(3)
*Humanities elective			(3)
*Social Sciences elective			(3)
*Social Sciences or Humanities elective			(6)

MATHEMATICS & SCIENCE**19-20 HRS.**

*MA	103	Business Algebra	
or			
*MA	113	College Algebra	(3)
*MA	173	Applied Math	
or			
*MA	134	Calculus I	(3-4)
*Lab Science Elective			(4)
MA	203	Mathematical Foundations of Informatics	(3)
MA	253	Statistics	(3)
MA	323	Operations Research	(3)

HEALTH & PHYSICAL EDUCATION**2 HRS.**

*EXS	102	Lifetime Wellness	(2)
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COMPUTER LITERACY**3 HRS.**

*INF	103	Information Technology Applications	(3)
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FRESHMAN STUDIES**1 HR.**

*UE	101	University Experience	(1)
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INFORMATICS CORE**36 HRS.**

CS	1113	Object Oriented Java	(3)
INF	132	Integrated Development (Visual Basic)	(2)
INF	213	Digital Forensic Science I	(3)

INF	223	Digital Multi-Media	(3)
INF	263	Database Concepts and Applications	(3)
INF	303	Network Management	(3)
INF	313	Digital Forensic Science II	(3)
INF	343	Computer Security	(3)
INF	371	Advanced Microcomputers Lab	(1)
INF	373	Advanced Microcomputers	(3)
INF	383	Informatics Web Programming	(3)
INF	403	Advanced Database	(3)
INF	423	Informatics Capstone	(3)

STRAND (COGNATE)**24-27 HRS.**

Informatics students are encouraged to consult with their advisor to choose a minor that is appropriate to their career plan.

ELECTIVES**8-12 HRS.**

(Electives are determined in consultation with an advisor and based on student career objectives.)

TOTAL IN DEGREE PROGRAM:**124 HRS.**

DEPARTMENT OF SCIENCE

The Department of Science offers the following degree:

- Bachelor of Science
 - Majors
 - Biology
 - Chemistry
 - Forensic Science
 - Biology Concentration
 - Chemistry Concentration
- Pre-Med Professional Track

The Science Department seeks to prepare students for a professional career by providing a science foundation consisting of a body of information and the ability to use this information to solve problems. Important concepts of this information include the theory and practice of modern laboratory procedures, professional ethics, safety, statistical data handling, and scientific report writing.

The Science Department also seeks to provide non-science majors with an understanding of science as it relates to modern society.

Students who transfer into the Department of Science are expected to take at least two 300- or 400-level courses in their science major or primary teaching area in addition to SC 412 Senior Research Seminar and SC 422 Senior Research Project or SC 4004 Science Internship.

In the degree program descriptions that follow, an asterisk (*) indicates courses that satisfy the University's General Education Requirements.

BACHELOR OF SCIENCE—BIOLOGY MAJOR	124 HRS.
PROGRAM REQUIREMENTS	REQUIRED HOURS
WRITTEN COMMUNICATION	6 HRS.
*ENG 103 English Composition I	(3)
*ENG 113 English Composition II	
or	
*ENG 133 Technical Communication	(3)
ORAL COMMUNICATION	3 HRS.
*SP 203 Effective Speaking	
or	
*COM 163 Interpersonal Communication	(3)
SOCIAL SCIENCES AND HUMANITIES	12 HRS.
*ENG 153 Introduction to Literature	(3)

*PSY	113	Principles of Psychology	(3)
*Global	elective		(3)
*American	elective		(3)

COMPUTER LITERACY **3 HRS.**

*INF	103	Information Technology Applications	(3)
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MATHEMATICS AND SCIENCE **10 HRS.**

*CH	104	General Chemistry I	
or			
*CH	104H	Honors General Chemistry I	(4)
*MA	113	College Algebra	(3)
*MA	253	Statistics	(3)

HEALTH & PHYSICAL EDUCATION **2 HRS.**

*EXS	102	Lifetime Wellness	(2)
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FRESHMAN STUDIES **1 HR.**

UE	101	University Experience	(1)
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SUBJECT AREA REQUIREMENTS **49 HRS.**

CH	114	General Chemistry II	
or			
CH	114H	Honors General Chemistry II	(4)
BIO	114	Principles of Biology I	(4)
BIO	124	Principles of Biology II	(4)

Choose either the two 2-credit senior research classes or the 4-credit internship (2-4)

SC	412	Senior Research Seminar and
SC	422	Senior Research Project
or		
SC	43X	Science Internship

One of the following physiology classes: (3-4)

BIO	283	Marine Biology
BIO	304	Plant Biology
BIO	354	Human Physiology
BIO	344	Cell Biology
BIO	404	Embryology

One of the following ecology classes: (4)

BIO	211	Conservation Lab
and		
BIO	213	Conservation
or		
BIO	274	General Ecology

or

BIO 334 Environmental Biology

One of the following organism classes:

(3-4)

BIO 283 Marine Biology

BIO 304 Plant Biology

BIO 314 Animal Biology

BIO 324 Microbiology

Additional BIO courses to bring the total subject area requirements to 49 credit hours.

(21-26)

ELECTIVES**38 HRS.**

(Electives are determined in consultation with an advisor and based on student career objectives.)

TOTAL IN DEGREE PROGRAM:**124 HRS.**

In the degree program descriptions that follow, an asterisk (*) indicates courses that satisfy the University's General Education Requirements.

BACHELOR OF SCIENCE—CHEMISTRY MAJOR**124 HRS.****PROGRAM REQUIREMENTS****REQUIRED HOURS****WRITTEN COMMUNICATION****6 HRS.**

*ENG 103 English Composition I

(3)

*ENG 113 English Composition II

or

*ENG 133 Technical Communication

(3)

ORAL COMMUNICATION**3 HRS.**

*SP 203 Effective Speaking

or

*COM 163 Interpersonal Communication

(3)

SOCIAL SCIENCES AND HUMANITIES**18 HRS.**

*ENG 153 Introduction to Literature

(3)

*PSY 113 Principles of Psychology

(3)

*History elective

(3)

*Social sciences elective

(3)

*Humanities electives

(6)

COMPUTER LITERACY **3 HRS.**

*INF 103 Information Technology Applications (3)

MATHEMATICS AND SCIENCE **10 HRS.**

*CH 104 General Chemistry I

or

*CH 104H Honors General Chemistry I (4)

*MA 113 College Algebra (3)

*MA 123 Trigonometry (3)

HEALTH & PHYSICAL EDUCATION **2 HRS.**

*EXS 102 Lifetime Wellness (2)

FRESHMAN STUDIES **1 HRS.**

UE 101 University Experience (1)

SUBJECT AREA REQUIREMENTS **59 HRS.**

CH 114 General Chemistry II

or

CH 114H Honors General Chemistry II (4)

CH 203 Organic Chemistry I (3)

CH 211 Organic Chemistry I Laboratory (1)

CH 213 Organic Chemistry II (3)

CH 221 Organic Chemistry II Laboratory (1)

CH 234 Quantitative Chemical Analysis (4)

CH 244 Inorganic Chemistry (4)

CH 324 Chemical Instrumental Analysis (4)

CH 351 Physical Chemistry I Laboratory (1)

CH 353 Physical Chemistry I (3)

CH 361 Physical Chemistry II Laboratory (1)

CH 363 Physical Chemistry II (3)

CH 434 Biochemistry (4)

MA 134 Calculus I (4)

MA 164 Calculus II (4)

MA 213 Calculus III (3)

PH 224 University Physics I

or

PH 224H Honors University Physics I (4)

PH 234 University Physics II

or

PH 234H Honors University Physics II (4)

Choose either the two 2-credit research classes or the 4-credit internship (4)

SC 412 Senior Research Seminar and

SC 422 Senior Research Project

or

SC 4004 Science Internship

ELECTIVES**22 HRS.**

(Electives are determined in consultation with an advisor and based on student career objectives.)

TOTAL IN DEGREE PROGRAM:**124 HRS.**

In the degree program descriptions that follow, an asterisk (*) indicates courses that satisfy the University's General Education Requirements.

BACHELOR OF SCIENCE - FORENSIC SCIENCE MAJOR -**BIOLOGY CONCENTRATION****126 HRS.****PROGRAM REQUIREMENTS****REQUIRED HOURS****WRITTEN COMMUNICATION****6 HRS.**

*ENG 103 English Composition I (3)

*ENG 113 English Composition II

or

*ENG 133 Technical Communication (3)

ORAL COMMUNICATION**3 HRS.**

*SP 203 Effective Speaking (3)

SOCIAL SCIENCES AND HUMANITIES**16 HRS.**

*ENG 153 Introduction to Literature (3)

LE 273 Criminal Procedures & Evidence (3)

*PSY 113 Principles of Psychology (3)

*Global elective (3)

*American elective (3)

*General elective (1)

COMPUTER LITERACY**3 HRS.**

*INF 103 Information Technology Applications (3)

MATHEMATICS**4 HRS.**

MA 124 Precalculus (4)

HEALTH & PHYSICAL EDUCATION**2 HRS.**

*EXS 102 Lifetime Wellness (2)

ADDITIONAL REQUIREMENTS:**1 HR.**

Freshman Studies

UE 101 University Experience (1)

SUBJECT AREA REQUIREMENTS**NATURAL SCIENCE CORE COURSES 39 HRS.**

BIO	114	Principles of Biology I	(4)
BIO	254	Anatomy	(4)
*CH	104	General Chemistry I	
or			
*CH	104H	Honors General Chemistry I	(4)
CH	114	General Chemistry II	
or			
CH	114H	Honors General Chemistry II	(4)
CH	203	Organic Chemistry I	(3)
CH	211	Organic Chemistry I Laboratory	(1)
CH	213	Organic Chemistry II	(3)
CH	221	Organic Chemistry II Laboratory	(1)
*MA	134	Calculus I	(4)
*MA	253	Statistics	(3)
PH	154	College Physics I	(4)
PH	164	College Physics II	(4)

SPECIALIZED SCIENCE COURSES 12 HRS.

BIO	414	Genetics	(4)
BIO	434	Biochemistry	(4)
CH	234	Quantitative Analysis	(4)

FORENSIC SCIENCE COURSES 20 HRS.

BIO	374	Forensic Biology	(4)
FS	203	Principles of Forensic Science I	(3)
FS	223	Principles of Forensic Science II	(3)
FS	423	Forensic Professional Practice	(3)
FS	373	Forensic Comparative Science	(3)
SC	4004	Science Internship	(4)

ADDITIONAL COURSES 20 HRS.

BIO	324	Microbiology	(4)
BIO	344	Cell Biology	(4)
BIO	443	Pathology	(3)
BIO	454	Molecular Biology	(4)
CH	324	Chemical Instrumental Analysis	(4)
FS	351	Criminalistics and Crime Scene Laboratory	(1)

Background checks similar to those required for law enforcement officers are likely to be a condition of employment.

TOTAL IN DEGREE PROGRAM: 126 HRS.

In the degree program descriptions that follow, an asterisk (*) indicates courses that satisfy the University's General Education Requirements.

**BACHELOR OF SCIENCE - FORENSIC SCIENCE MAJOR -
CHEMISTRY CONCENTRATION** **129 HRS.**

PROGRAM REQUIREMENTS **REQUIRED HOURS**

WRITTEN COMMUNICATION **6 HRS.**

*ENG 103 English Composition I (3)

*ENG 113 English Composition II

or

*ENG 133 Technical Communication (3)

ORAL COMMUNICATION **3 HRS.**

*SP 203 Effective Speaking (3)

SOCIAL SCIENCES AND HUMANITIES **15 HRS.**

*ENG 153 Introduction to Literature (3)

LE 273 Criminal Procedures & Evidence (3)

*PSY 113 Principles of Psychology (3)

*Global elective (3)

*American elective (3)

COMPUTER LITERACY **3 HRS.**

*INF 103 Information Technology Applications (3)

MATHEMATICS **4 HRS.**

*MA 124 Precalculus (4)

HEALTH & PHYSICAL EDUCATION **2 HRS.**

*EXS 102 Lifetime Wellness (2)

ADDITIONAL REQUIREMENTS: **1 HR.**

Freshman Studies

UE 101 University Experience (1)

SUBJECT AREA REQUIREMENTS

NATURAL SCIENCE CORE COURSES **42 HRS.**

BIO 114 Principles of Biology I (4)

*CH 104 General Chemistry I

or

*CH 104H Honors General Chemistry I (4)

CH 114 General Chemistry II

or

CH 114H Honors General Chemistry II (4)

CH 203 Organic Chemistry I (3)

CH 211 Organic Chemistry I Laboratory (1)

CH 213 Organic Chemistry II (3)

CH	221	Organic Chemistry II Laboratory	(1)
*MA	134	Calculus I	(4)
MA	164	Calculus II	(4)
*MA	253	Statistics	(3)
MA	213	Calculus III	(3)
PH	224	University Physics I	(4)
PH	234	University Physics II	(4)

SPECIALIZED SCIENCE COURSES **12 HRS.**

CH	234	Quantitative Analysis	(4)
CH	244	Inorganic Chemistry	(4)
CH	434	Biochemistry	(4)

FORENSIC SCIENCE COURSES **20 HRS.**

CH	374	Forensic Chemistry	(4)
FS	203	Principles of Forensic Science I	(3)
FS	223	Principles of Forensic Science II	(3)
FS	423	Forensic Professional Practice	(3)
FS	373	Forensic Comparative Science	(3)
SC	4004	Science Internship	(4)

ADDITIONAL COURSES **21 HRS.**

BIO	364	Toxicology	(4)
CH	324	Chemical Instrumental Analysis	(4)
CH	351	Physical Chemistry I Lab	(1)
CH	353	Physical Chemistry I	(3)
CH	424	Advanced Instrumental Analysis	(4)
CH	474	Advanced Forensic Chemistry	(4)
FS	351	Criminalistics and Crime Scene Laboratory	(1)

Background checks similar to those required for law enforcement officers are likely to be a condition of employment.

TOTAL IN DEGREE PROGRAM: **129 HRS.**

PRE-MED PROFESSIONAL TRACK**32 HRS.**

The Pre-Medical Professional Track is designed for students interested in preparing themselves for a career in the health sciences and can be associated with any major offered at Trine University.

PROGRAM REQUIREMENTS**REQUIRED HOURS**

General chemistry	(8)
Organic chemistry	(8)
Physics	(8)
Biological sciences	(8)

TOTAL IN DEGREE PROGRAM:**32 HRS.**

Also, students must maintain a cumulative GPA of 3.5 or better to stay in the track. They are evaluated during their senior years via benchmark interviews that address the following characteristics of a successful medical school applicant: MCAT preparation; development of personal and professional qualities; medical or graduate school applicants; portfolio comprehensiveness; and community services, research, and leadership experiences.
