

## College of Arts and Sciences – Departments

### Psychology (PSY)

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The courses and programs offered by the Department of Psychology are meant to be a part of a liberal arts education, teaching the basic principles and theory of psychology, the scientific study of human behavior, mental processes, and emotions. The psychology programs are designed to prepare students with the analytical and technical skills necessary for graduate study in psychology and for careers in human services and other occupations for which a psychology background is valuable. Courses are offered that introduce psychology to non-majors, enabling students to make practical applications of psychology to their own lives.

Students who graduate with a major in psychology will be able to write a research paper written in accordance with guidelines set forth by the American Psychological Association (APA). They will be trained in those research and statistical skills frequently employed in the field of psychology. They will be able to complete an independent research project, and write a synthesis of the psychological literature in an area of psychological interest.

Students majoring in psychology must successfully complete a minimum of twenty-four credits in psychology at St. Thomas.

The department also offers courses for the non-major to fulfill the Social Analysis component of the core curriculum.

#### Psychology Honor Society

*Psi Chi*, the National Honor Society in psychology, was founded in 1929 for the purpose of encouraging, stimulating, and maintaining excellence in scholarship and advancing the science of psychology. The St. Thomas chapter was established in 1997. Students who have a grade point average of at least 3.00 in psychology, rank in the highest 35 percent of their class, and who have completed at least three semesters of college coursework, including nine hours in psychology, are eligible to apply for membership.

The Department of Psychology also recognizes selected students each year for outstanding research, service, and academic achievements.

#### Major in Psychology

- 111 General Psychology
- 212 Research Methods in Psychology
- 422 History and Systems (to be taken during the senior year)

*Plus two laboratory courses from:*

- 321 Current Research Issues in Social Psychology
- 322 Sensation and Perception
- 323 Learning and Memory
- 325 Research Issues in Cognition
- 401 Physiological Psychology

*Plus one of:*

- 200 Psychology of Infancy and Childhood
- 202 Lifespan Development (students may not receive credit for both 202 and 200)
- 203 Psychology of Adolescence
- 204 The Psychology of Adulthood and Aging

*Plus one of:*

- 121 Social Psychology
- 301 Psychopathology
- 302 Personality Theories

*Plus one of:*

- 206 The Brain and Human Behavior
- 275 Cognition
- 400 Seminar in Cognitive and Language Development

*Plus:*

Twelve elective credits in psychology

A total of 44 credits in psychology are required for the major. Twenty of the 44 credits in psychology must be 300- or 400-level courses.

*Allied requirements*

All of the following or an adequate substitute approved by the chair:

BIOL 101 General Biology or 105 Human Biology

*Plus:*

MATH 101 Finite Mathematics

(or MATH 108-109, 111 or 113; students should take highest level for which eligible)

QMCS 220 Statistics I

Students should take the following courses in the following order:

MATH 101 (or 108-109 or 111 or 113)

QMCS 220

PSY 212

These courses should be taken early in the college career, since they are prerequisites for some required courses in psychology. A student should consult early with her/his department adviser to have her/his plan approved.

**Concentration in Behavioral Neuroscience**

111 General Psychology

212 Research Methods in Psychology

422 History and Systems (to be taken during the senior year)

*Plus one of:*

200 Psychology of Infancy and Childhood

202 Lifespan Development (students may not receive credit for both 202 and 200)

203 Psychology of Adolescence

204 The Psychology of Adulthood and Aging

*Plus one of:*

121 Social Psychology

301 Psychopathology

302 Personality Theories

*Plus:*

206 The Brain and Human Behavior

207 Alcohol, Other Drugs and Behavior

322 Sensation and Perception

401 Physiological Psychology

*Plus:*

Two elective courses in psychology

*Allied requirements*

All of the following or an adequate substitute approved by the chair:

BIOL 101 General Biology or 105 Human Biology

Plus:

MATH 101 Finite Mathematics

(or MATH 108-109, 111 or 113; students should take highest level for which eligible)

QMCS 220 Statistics I

Students should take the following courses in the following order:

MATH 101 (or 108-109 or 111 or 113)

QMCS 220

PSY 212

These courses should be taken early in the college career, since they are prerequisites for some required courses in psychology.

*Recommended:*

Those students planning to pursue graduate study in behavioral neuroscience should consider:

493, 494 Research

Additional courses in biology and chemistry (consult the Behavioral Neuroscience adviser)

**Teacher Licensure**

Elementary Education with a Specialty in Social Studies (5-8)

Co-major in Social Studies (5-12) and a Co-major in Secondary Education

*See School of Education Department of Teacher Education*

**Minor in Psychology**

111 General Psychology

*Plus two of:*

121 Social Psychology

151 Cross-Cultural Psychology

200 Psychology of Infancy and Childhood

202 Lifespan Development (students may not receive credit for both 202 and 200)

203 Psychology of Adolescence

204 The Psychology of Adulthood and Aging

205 Psychology of Women

## College of Arts and Sciences – Departments

206	The Brain and Human Behavior
207	Alcohol, Other Drugs and Behavior
212	Research Methods in Psychology
275	Cognition
288	Psychology of Marriage and the Family

*Plus two of:*

301	Psychopathology
302	Personality Theories
308	Motivation and Emotion
313	Psychological Testing
321	Current Research Issues in Social Psychology
322	Sensation and Perception
323	Learning and Memory
325	Research Issues in Cognition
342	Industrial/Organizational Psychology
400	Seminar in Cognitive and Language Development
340	Physiological Psychology
422	History and Systems
424	Clinical Psychology
428	Theories of Counseling and Psychotherapy

Students should consult early with a department adviser to have their plan approved.

### 111 General Psychology

An introduction to the research questions, concepts, theories, methods, and findings of psychological science. Although the selection varies with instructor, topics include brain function, psychological testing, sensation and perception, cognition (learning, memory, language), states of consciousness, motivation, human development, personality, origins and treatment of disorders, social behavior, stress and health, and applied psychology (work-place, community, environment). This course fulfills the Social Analysis requirement in the core curriculum.

### 121 Social Psychology

A survey of theories and research findings in social psychology. Topics covered include attitude change, love and liking, aggression, stereotypes and altruism and conformity.

Prerequisite: 111

### 151 Cross-Cultural Psychology

This course is designed to cover the issues and themes current in the field of cross-cultural psychology. Examples of such issues include: cultural variation along the lines of collectivism and individualism; psychological principles that might be universal compared to those that are culturally specific; how content and context affect psychological functioning, and variation within as well as between cultures. A range of substantive areas within psychology will be examined, including social, developmental, organizational, cognitive, health psychology, and psychology of emotion. Examples will be drawn from a range of non-Western cultures (*e.g.*, Japan, India, Liberia) as well as various cultures within the United States (*e.g.*, African-American, Hispanic, American Indian). Emphasis will be placed on how Western and non-Western cultures differ from each other, on how non-Western cultures differ from each other, and on how intra-cultural variation also plays important roles in psychological functioning. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 111

### 200 Psychology of Infancy and Childhood (202)

An introduction to issues and theories of development dealing with infancy, toddlerhood, and early and middle childhood. The course covers physical, intellectual, emotional, personality, and social development. Mechanisms of heredity, as well as the relative effects of heredity and environment also are covered.

Prerequisite: 111

### 202 Lifespan Development (200)

Principles and theories of development throughout the life span; interplay among the physical, emotional, social and intellectual variables in the process of growth and development.

Prerequisite: 111

### 203 Psychology of Adolescence

This course reviews the principles, theories, research and application of physical, psychological and social growth during the adolescent's relationships with adults and peers, their sex attitudes and behaviors, moral development and religious values, school and vocational choices, alienation and commitment.

Prerequisite: 111

**204 The Psychology of Adulthood and Aging**

Theories of and research in physical, emotional, social, personality and intellectual development in adulthood and in old age. This course will emphasize the psychological adjustment to the stresses and demands (*e.g.*, vocation, marriage, retirement, bereavement) the individual encounters during those developmental stages.

Prerequisite: 111

**205 Psychology of Women**

An examination of physiological, experiential, and social factors affecting the psychological development of women and their status as adults. Topics include: biological and social learning factors in the development of sex roles and other prescribed behavior patterns, the development of performance and intellectual skills, achievement motivation, identity and self-esteem, changing concepts of sex roles, women and psychological disorders, global women's issues, *etc.* This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 111

**206 The Brain and Human Behavior**

An examination of brain systems that subserve human behavior. Topics include: human development, consciousness, social behavior, cognition, emotion and abnormal behavior.

Prerequisite: 111

**207 Alcohol, Other Drugs and Behavior**

The course surveys some basic facts and principles of administration, absorption, transport, action, deactivation and elimination of drugs. Various classes of drugs; their effects on mood, behavior, and consciousness; their use and misuse; and phenomena of chemical dependency and its treatment modalities are discussed. Lectures, readings, films, tapes and invited speakers are employed.

Prerequisite: 111

**212 Research Methods in Psychology**

Research designs and problems, with emphasis on operationalization of concepts, development of hypotheses, specific research designs, sources of error, literature reviews, data collection, data analysis and use of APA format. Three lecture and two laboratory hours per week.

Prerequisites: 111 and QMCS 220

**275 Cognition**

This course will provide an overview of cognitive processes, the processes that collectively comprise what is commonly termed "thinking." Topics discussed will include perception, attention, remembering, language, problem solving, reasoning, and social cognition. The course will focus on how these processes operate in everyday situations, as well as empirical (laboratory) investigations of these processes. Connections between cognitive psychology and other areas of psychology (*e.g.*, clinical, biological) will also be discussed.

Prerequisite: 111

**288 Psychology of Marriage and the Family**

An examination of the psychological concepts, issues, challenges and changes relevant to marriage and family today. Topics include intimacy, liking and loving, power and control, gender, marriage and family therapy, and the psychological effects of marriage vs. non-marriage, divorce, and various parenting styles.

Prerequisites: 111 and junior standing or permission of the instructor

**295, 296 Topics**

**2 credits**

**297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

**301 Psychopathology**

This course sets forth a framework for understanding abnormal or maladaptive behavior. It will investigate specific diagnostic categories (such as depression and schizophrenia), causal factors and treatments of these maladaptive patterns.

Prerequisites: 111 and junior standing

**302 Personality Theories**

A review of major theories of personality, including psychoanalytic, behavioristic, humanistic and trait-factor approaches.

Prerequisite: 111

**308 Motivation and Emotion**

Survey of research and theories related to specific motives (such as hunger and thirst) as well as approaches to emotional states such as anger, happiness and sadness. Relevant research will be drawn from both the social and physiological branches of psychology.

Prerequisites: 111 and junior standing

## College of Arts and Sciences – Departments

### 313 Psychological Testing

This course provides an overview of the principles of testing and measurement, particularly as they relate to the practice of psychology and education. The course examines the theories underlying individual and group-administered tests in such areas as intelligence, aptitude, achievement, interests, personality, neuropsychological and educational tests. Various controversial issues in the field of testing will also be addressed including ethics, bias, computer-based assessment, and testing of special populations.

Prerequisite: 212

### 321 Current Research Issues in Social Psychology

Discussion of several specific research issues in contemporary social psychology. The course includes presentation of computer applications. An original research project is required. Four lectures and three laboratory hours per week.

Prerequisites: 121 and 212

### 322 Sensation and Perception

A study of the structure and function of sensory systems, the information that these systems provide the brain, and the subsequent interpretation of sensory information that we call perception. The course focuses on visual perception (*e.g.*, brightness, color, form, depth, movement, constancy, illusions) and auditory perception (*e.g.*, detection, discrimination, loudness, pitch) and incorporates art and music. Four lectures and three laboratory hours per week.

Prerequisite: 212

### 323 Learning and Memory

The basic concepts involved in simple associative learning are presented, along with theoretical and applied concerns. The analysis and modification of animal and human behavior by means of classical and instrumental conditioning are discussed. The course also will trace the history of the study of learning from its roots in philosophy to the current cognitive approach.

Prerequisite: 212

### 325 Research Issues in Cognition

This course will explore research issues in cognitive psychology, with special emphasis on cognitive psychology methodology, current research issues, hands-on research, and discussion/analysis of primary research sources. Specific topics covered each semester may vary slightly. Examples of topics include: subliminal perception; automatic processing; implicit memory; eyewitness testimony; memory reconstruction; expertise and problem solving; the use of heuristics in decision making; person memory.

Prerequisites: 212 and 275

### 342 Industrial/Organizational Psychology

This course presents basic concepts of psychology as they apply everyday in the workplace. Topics to be covered include measurement and its applications in the workplace (*e.g.*, personnel decisions and performance appraisals), worker training, worker attitudes and motivation, worker adjustment, health and safety, leadership, communication and group behavior and development of the organization.

Prerequisites: 111 and junior standing

### 400 Seminar in Cognitive and Language Development

Current theory and research regarding children's understanding, thinking processes, and language acquisition are discussed. Topics include knowledge acquisition, concept formation, grammatical development, and the nature of developmental change.

Prerequisites: 200 and one additional PSY course or permission of the instructor

### 401 Physiological Psychology

A study of the brain, its function and its control of behavior. Neuroanatomical, neurophysiological, and biochemical substrates of behaviors associated with feeding, drinking, sex, sleep, arousal, emotion, learning and memory are examined. Four lectures and three laboratory hours per week.

Prerequisites: 212 and BIOL 101 (or equivalent)

### 407 Seminar in Behavioral Neuroscience

Analysis and discussion of selected theories and new research concerning brain mechanisms that subserve behavior. Advances in methodology and instrumentation also will be examined.

Prerequisite: 401

### 422 History and Systems

How contemporary psychology developed from its remote and more recent roots. Emphasis upon the contributions, contributors and perennial issues that led to psychology today and that could help to fashion its future.

Prerequisites: four courses in psychology

## Quantitative Methods and Computer Science

### 424 Clinical Psychology

Study of the clinical application of psychological processes in the evaluation, diagnosis and treatment of behavioral disorders.

Prerequisites: 301 and three psychology courses or permission of instructor

### 428 Theories of Counseling and Psychotherapy

Theories and procedures of counseling and psychotherapy are discussed, including psychoanalysis, client-centered therapy, cognitive therapy, behavior therapy, and others.

Prerequisites: 301 and three psychology courses or permission of the instructor

### 475, 476 Experiential Learning

2 credits

### 477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

### 483, 484 Seminar

2 credits

### 485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

### 487, 488 Topics

2 credits

### 489, 490 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

### 491, 492 Research

2 credits

### 493, 494 Research

See the description of these courses at the beginning of the "Curricula" section of this catalog.

### 495, 496 Individual Study

2 credits

### 497, 498 Individual Study

See the description of these courses at the beginning of the "Curricula" section of this catalog.

## Quantitative Methods and Computer Science (QMCS)

Hansen (chair), Bagley, Chung, Darling, Jarvis, Kaminski, Komar, Pliego, Raymond, Schwebel, Sturm, Werness; Callaghan

Quantitative Methods and Computer Science is part of the liberal arts curriculum at the University of St. Thomas. The QMCS program is concerned with the areas of today's society that involve the collection, organization, processing, storage, retrieval, communication and use of information. The department's emphasis is on the broad basic core of knowledge required to become an effective user of information; to design and implement system and application software; and to understand the concepts involved in areas such as computer graphics, telecommunication, artificial intelligence, database design, statistics and operations research.

Students who graduate with a major in quantitative methods and computer science will be prepared to work in business, industry, education, and government, as designers or users, or to pursue entrepreneurial interests in technologically supported areas or to continue study in graduate school.

Courses are arranged so that students from other disciplines may participate to whatever extent they wish. The department also strongly encourages its majors to obtain a minor in another field.

The undergraduate major or minors in QMCS are offered in the day school and through the School of Continuing Studies.

Students interested in teacher licensure should see the various science and mathematics programs in the Department of Teacher Education section of this catalog.

### Major in Quantitative Methods and Computer Science

220 Statistics I

230 Software Design Using the JAVA Language\*

281 Object-Oriented Design and Programming\*

350 Data and File Structures

\*A grade of C- or higher must be earned by majors in each of these courses chosen to fulfill the core requirement.

*Plus (for all majors):*

Eight credits numbered 300 through 450. Students should consult with their department adviser in choosing the most appropriate courses.

*Plus (for all majors):*

Four credits numbered 100 through 499. QMCS 238 is highly recommended for the CIS path.

*Plus:*

A set of courses in one of three paths (CS, CIS, or QM):