

PSYCHOLOGY, BACHELOR OF SCIENCE (B.S.) WITH A CONCENTRATION IN LIFE SCIENCE

The Bachelor of Science in Psychology curriculum reflects the discipline's major functions — scientific research, teaching, acting as a healing profession and raising philosophical questions about the assumptions, values and ideals of human beings and their societies, which reflects psychology's origin in philosophy. Through a core set of requirements the student systematically develops understanding and skill in scientific methods of inquiry, focusing on the human mind and behavior. To fulfill the degree requirements, students may pursue the standard curriculum by selecting courses from four content areas that introduce students to the healing and philosophical sides of psychology and provide a broad understanding of the field as a whole; or the student may apply to one of several more focused concentrations that draw upon the special strengths of the VCU Department of Psychology.

Learning outcomes

Upon completing this program, students will know and know how to do the following:

- **Understanding of content domain**
The curriculum of the B.S. in Psychology is designed to provide students with an accurate, comprehensive and up-to-date understanding of psychological concepts, principles and findings in the key domains of the field, including developmental processes, social processes, physiological and behavioral processes, and mental health and well-being.
- **Development of intellectual domain**
The curriculum of the B.S. in Psychology fosters the development of the intellectual skills required to generate theories, do research, communicate ideas and information to others, evaluate conclusions statistically and locate the information needed for these intellectual pursuits. Students will learn to think scientifically, understand the relationships between theories, observations and conclusions, and skillfully evaluate the empirical support for various theories and findings.
- **Development of affective and interpersonal domain**
Students seeking the B.S. in Psychology learn a number of practical, applied life skills pertaining to personal adjustment, relations with others and cross-cultural awareness.

Special requirements

The Bachelor of Science in Psychology curriculum requires a minimum of 120 credits, with at least 30 credits in psychology courses. A maximum of 40 credits in psychology (this limit does not apply to PSYC courses numbered 490 and above) can be presented for the degree. At least 15 of the 30 minimum-required credits must be completed at VCU. All students must complete the following:

Course	Title	Hours
Psychology core requirements		
PSYC 101 Play course video for Introduction to Psychology	Introduction to Psychology	4
PSYC 214	Applications of Statistics	3
PSYC 317	Experimental Methods	3
Collateral requirements		
BIOL 101 & BIOZ 101	Biological Concepts and Biological Concepts Laboratory	4
Select one of the following:		3-4
BIOL 103	Environmental Science	
BIOL 201	Human Biology	
Or an approved biology course		
STAT 210	Basic Practice of Statistics	3

This information outlines the requirements for students who are admitted and pursuing the life science concentration. To be admitted, continue and graduate with this concentration, students must achieve a minimum cumulative VCU GPA of 2.5 and also achieve a minimum GPA of 2.5 in the major. This concentration requires 34 credit hours in the major.

Core courses must be taken sequentially and ideally should be completed by the end of the junior year. Core courses are PSYC 101 with a minimum grade of C; PSYC 214 with a minimum grade of C (PSYC 214 also has the prerequisite requirement of STAT 210 or its equivalent with a minimum grade of C); and PSYC 317 with a minimum grade of C (PSYC 317 also has the prerequisite requirement of PSYC 214 or its equivalent with a minimum grade of C).

PSYC 451 is the capstone course and must be taken in the senior year.

Degree requirements for Psychology, Bachelor of Science (B.S.) with a concentration in life science

General education requirements

Course	Title	Hours
University Core Education Curriculum (minimum 21 credits)		
UNIV 111 Play course video for Focused Inquiry I	Focused Inquiry I	3
UNIV 112 Play course video for Focused Inquiry II	Focused Inquiry II	3
UNIV 200	Inquiry and the Craft of Argument	3
Approved humanities/fine arts		3
Approved natural/physical sciences		3-4
Approved quantitative literacy		3-4
Approved social/behavioral sciences		3-4
Total Hours		21-24

Course	Title	Hours
Additional College of Humanities and Sciences requirements (11-23 credits)		
HUMS 202	Choices in a Consumer Society	1

Approved H&S diverse and global communities	3
Approved H&S human, social and political behavior (fulfills University Core social/behavioral sciences)	
Approved H&S literature and civilization (fulfills University Core humanities/fine arts)	
Approved H&S science and technology (fulfills University Core natural/physical sciences)	
Approved H&S general education electives	6-8
Experiential fine arts ¹	1-3
Foreign language through the 102 level (by course or placement)	0-8
Total Hours	11-23

¹

Course offered by the School of the Arts

Collateral requirements

Course	Title	Hours
BIOL 101 & BIOZ 101	Biological Concepts and Biological Concepts Laboratory	4
BIOL/ENVS 103 or BIOL 201	Environmental Science ¹ / Human Biology	4
STAT 210	Basic Practice of Statistics	3
Total Hours		7

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BIOL 201 fulfills both collateral and concentration requirement.

Major requirements

Course	Title	Hours
BIOL 201	Human Biology	3
BIOL 445	Neurobiology and Behavior	4
PHTX 400	Drugs and Their Actions	3
PSYC 101 Play course video for Introduction to Psychology	Introduction to Psychology	4
PSYC 214	Applications of Statistics	3
PSYC 317	Experimental Methods	3
PSYC 401	Physiological Psychology	3
PSYC 406	Perception	3
PSYC 410	Principles of Learning and Cognition	3
PSYC 412	Health Psychology	3
Select one of the following:		3
PSYC 492	Independent Study	
PSYC 493	Fieldwork: Human Services	
PSYC 494	Research Internship in Psychology	
Total Hours		35

Capstone

Course	Title	Hours
PSYC 451	History of Psychology	3

Open electives

Course	Title	Hours
Select 29-43	open elective credits	29-43

The minimum total of credit hours required for this degree is 120.

What follows is a sample plan that meets the prescribed requirements within a four-year course of study at VCU. Please contact your adviser before beginning course work toward a degree.

Freshman year

Fall semester		Hours
BIOL 101 & BIOZ 101	Biological Concepts and Biological Concepts Laboratory (Approved H&S science and technology and collateral)	4
PSYC 101 Play course video for Introduction to Psychology	Introduction to Psychology (approved human, social and political behavior)	4
STAT 210	Basic Practice of Statistics (approved quantitative literacy and collateral)	3
UNIV 101	Introduction to the University	1
UNIV 111 Play course video for Focused Inquiry I	Focused Inquiry I	3

Term Hours: 15

Spring semester

HUMS 202	Choices in a Consumer Society	1
UNIV 112 Play course video for Focused Inquiry II	Focused Inquiry II	3
Approved diverse and global communities		3
Approved General Education elective		3
Approved literature and civilization		3
Open elective		3

Term Hours: 16

Sophomore year

Fall semester		Hours
BIOL 201	Human Biology (collateral and concentration requirement)	3
HUMS 291	Special Topics in the Humanities and Sciences	1
PSYC 214	Applications of Statistics	3
UNIV 200	Inquiry and the Craft of Argument	3
Foreign language (101 level)		4

Term Hours: 14

Spring semester

PSYC 317	Experimental Methods	3
PSYC 401	Physiological Psychology	3

Approved General Education elective	3
Experiential fine arts	1-3
Foreign language (102 level)	4
Open elective	2
Term Hours:	16-18

Junior year**Fall semester**

PSYC 406 Perception	3
PSYC 410 Principles of Learning and Cognition	3
Open elective (upper-level)	3
Open electives (upper- or lower-level)	6
Term Hours:	15

Spring semester

BIOL 445 Neurobiology and Behavior	4
PSYC 412 Health Psychology	3
Open elective (upper-level)	3
Open electives (upper- or lower-level)	5
Term Hours:	15

Senior year**Fall semester**

PHTX 400 Drugs and Their Actions	3
PSYC 451 History of Psychology	3
PSYC 492 Independent Study	3
or or Fieldwork: Human Services	
PSYC 493 or Research Internship in Psychology	
or PSYC 494	
Open elective (upper- or lower-level)	3
Psychology elective or open elective (upper-level)	3
Term Hours:	15

Spring semester

Psychology elective or open elective (upper-level)	3
Open electives (upper-level)	6
Open electives (upper- or lower-level)	5
Term Hours:	14
Total Hours:	120-122

The minimum total of credit hours required for this degree is 120.

PSYC 101. Introduction to Psychology. 4 Hours.

Semester course; 3 lecture and 1 computer-assisted instructional hours. 4 credits. A survey of the basic principles, methods of investigation and fields of study and application. Includes individualized application of principles and methods in computerized learning activities. This course is a prerequisite for upper-level work in the field of psychology.

PSYC 201. Career Development in Psychology. 2 Hours.

Semester course; 2 lecture hours. 2 credits. Prerequisite: PSYC 101. Introduction to the discipline of psychology and the career alternatives available in various specialties. Self-assessment, career decision-making skills, educational program planning methods will be covered. Special topics will include graduate/professional school options, opportunities for minority students and job search strategies for the B.A. or B.S. psychology major.

PSYC 214. Applications of Statistics. 3 Hours.

Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisites: PSYC 101 and STAT 210 both with a minimum grade of C. Frequency distributions, measures of central tendency and variability; sampling, probability, correlation and significance tests as applied in psychological data.

PSYC 301. Child Psychology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. A study is made of the growth and development of the child until puberty. Childlike is viewed in terms of physical, mental, social, emotional and educational factors. PSYC 304 Life Span Developmental Psychology also may not be taken for credit.

PSYC 302. Psychology of Adolescence. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: PSYC 101. A study of mental, moral, social and physical development from puberty to maturity viewed as in child psychology. Designed for secondary school teachers, youth leaders and professional psychologists.

PSYC 303. Personal Adjustment. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Surveys major theories of personality as a basis for studying theory, research and intervention into areas that require personal adjustment. Such areas include sense of self, stress and coping, work and career and several varieties of interpersonal relationships. Positive adjustment and growth as well as problems are discussed.

PSYC 304. Life Span Developmental Psychology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Reviews the basic concepts and principles of physical, cognitive and social development at each major stage of life-prenatal, infancy, toddlerhood, preschool, middle childhood, adolescence, adulthood and old age. Consideration is given to the study of development at each stage of life and to different theoretical explanations for development. PSYC 301 Child Psychology may not also be taken for credit.

PSYC 305. Educational Psychology. 3 Hours.

Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: PSYC 101. The application of psychological principles to the teaching-learning process, with special emphasis on theories of learning and development. Crosslisted as: EDUS 305.

PSYC 306. Psychology of Adult Development. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. The life stages and transitions of the young adult, middle age and young-old phases of the life cycle are considered, following a review of methods of research within life-span development psychology. Topics include the impact of events such as birth of the first child, job relocation, mid-life re-evaluation and anticipated retirement.

PSYC 307. Community Solutions: Multiple Perspectives. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Explores possibilities for addressing social concerns of the Richmond community by understanding the complex nature of social issues as essential to their successful amelioration via perspectives of life and social sciences. Toward this end, expertise from the social sciences, the life sciences and the community are integrated. Includes a service-learning experience (a 20-hour volunteer requirement). Crosslisted as: LFSC 307.

PSYC 308. Stress and its Management. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Physiological and psychological aspects of stressors and the stress response. Review of principles, research and methods of stress management, such as relaxation, self-suggestions, meditation and biofeedback.

PSYC 309. Personality. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. The study of the various approaches to understanding human behavior in terms of personality theory. Various theories will be examined for commonality and uniqueness in assumptions, dynamics and development of personality.

PSYC 310. Industrial Psychology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Application of psychological principles and techniques to problems in personnel management and human engineering; recruitment, selection, training and placement in industry; criteria in testing and test development; morale evaluation and improvement, employee counseling; work-management communications; human engineering in equipment design, quality control, working conditions and safety.

PSYC 317. Experimental Methods. 3 Hours.

Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: PSYC 214 with a minimum grade of C. Introduction to experimental procedures and laboratory techniques in psychology. Demonstrations and experiments in sensation, perception, learning, emotion and motivation.

PSYC 318. Principles of Psychological Tests and Measurements. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: minimum grade of C in PSYC 101 and minimum grade of C in STAT 210. Concepts in psychological measurement and a survey of commonly used tests; testing procedures and rationale underlying these tests; tests of intelligence, aptitude, achievement, interest and personality critically examined, procedures described for selecting and evaluating specific group tests in these areas.

PSYC 321. Social Psychology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Survey theory and research in social psychology. Topics include interpersonal and social influence processes, attitudes and social cognition, the impact of personality on social behavior, conformity, leadership and small group behavior.

PSYC 322. Personality and Behavior of the African American. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. A study of personality factors such as motivation, ego-functioning and the socialization processes, with special emphasis on living conditions of African-Americans. Crosslisted as: AFAM 322.

PSYC 323. Interpersonal Relations. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Analyzes human relations from various theoretical perspectives. Typical topics include the effects of attraction, friendship, love and dependency on relationships; the evolution of relationships from initiation through termination. Strategies for increasing effectiveness of communication between individuals also are addressed.

PSYC 333. Psychology and Religious Experience. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Religious belief and experience as viewed by major psychological theorists. How psychological methodology has been used to study religious experience. Topics include personality factors and development, conversion experiences, religious experiences and mental health and human values. Crosslisted as: RELS 333.

PSYC 335. Psychology of Women. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Overview of issues in psychology relevant to women. Topics include: research methods of women's issues; sex-role socialization; women and hormones; psychological androgyny; personality theory and counseling strategies for women; women and language; women and violence; and rape and abuse. Crosslisted as: GSWS 335.

PSYC 340. Introduction to the Helping Relationship. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Overview to the dynamics of communication in a helping relationship. Didactic material includes the principles of empathy, nonverbal behavior, problem-solving, crisis intervention and interview techniques. Basic paraprofessional counselor skills will be demonstrated and practiced through structured exercises.

PSYC 341. Group Dynamics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Social and psychological principles and research related to the individual in groups. Specific topics include motivation for individuals forming and joining groups, performance and productivity of group members, group leadership and majority and minority influence. The group will be examined in relation to the larger society and as a subculture in itself. Crosslisted as: SOCY 341.

PSYC 401. Physiological Psychology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Data from the fields of anatomy and physiology are presented, and their implications for psychology are discussed. The central nervous system, internal environment, vision, audition, reflexes, emotion, learning behavior disorders and their physiological components. Behavior of the human organisms is studied from the biopsychological point of view.

PSYC 404. Social Psychology of Emotions. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: PSYC 101, SOCY 101. An examination of the social shaping of emotion as well as its function in maintaining the social process. Cross-cultural uniformities and diversity in basic emotions and their expression are addressed as well as selected social psychological theories of emotions.

PSYC 406. Perception. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Perception of information from sensory systems with concentration on vision and hearing. Research and theories on how we learn and judge color, form, movement, depth and how individuals integrate these in object identification.

PSYC 407. Psychology of the Abnormal. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Development of personality is discussed, with emphasis on factors leading to maladjustment. Lectures and reading cover the symptom groups of emotional disorders of both psychological and organic origin. Methods of assessing and treating these disorders are surveyed.

PSYC 410. Principles of Learning and Cognition. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Comprehensive treatment of learning and cognition with emphasis on humans, from behavioral, cognitive, biological and developmental viewpoints. Topics include conditioning, information processing, memory, sociobiology and cognitive and moral development.

PSYC 412. Health Psychology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Application of the principles and techniques of psychology to the field of medicine, to health maintenance and to illness. The integration of theoretical, research and applied issues is emphasized in the analysis of such topics as psychological/behavioral factors contributing to and protecting against physical illness (stress, smoking, exercise), factors relating to treatment and recovery (coping, treatment compliance), psychological problems resulting from illness and injury, and specific techniques and problem areas in health psychology (such as biofeedback, pain management, pediatric psychology, geropsychology, rehabilitation psychology and lifestyle change.).

PSYC 414. Psychology of Women's Health. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Overviews the psychological research on women's health. Topics include health behavior change, personality and individual differences, cognitive factors, disease-specific behaviors and interventions. Crosslisted as: GSWS 414.

PSYC 415. Psychological Theories of Addiction. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 101. Enrollment restricted to psychology majors (standard curriculum/all concentrations) and minors in psychology. An overview of current and historical theories related to the causes of and risk factors for problematic drug use and other addictive behaviors. Describes specific effects of different drugs of abuse and explores various behaviors (gambling, gaming, internet use) that have been identified as addictive in nature. Provides an understanding of the harms and costs associated with drug use and abuse, major approaches to understanding drug addiction (e.g., epidemiological, biological, genetic, behavioral, cognitive, transtheoretical/motivational, sociocultural, developmental), and the human experience of addiction. Introduces research methods used to generate knowledge about the causes of drug use and abuse.

PSYC 416. Psychological Treatment of Addiction. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: PSYC 415. Enrollment restricted to psychology majors (standard curriculum/all concentrations). A review of evidence-based practices in the assessment, diagnosis and treatment of substance use, abuse and dependence, and comorbid conditions. Discusses psychosocial and psychological approaches as well as medication-assisted therapies for substance use disorders. Examines societal views of addiction and their influences on treatment capacity and services, as well as treatment needs and services for special populations (e.g., pregnant women, adolescents).

PSYC 426. Child Psychopathology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: PSYC 101. Principal childhood behavioral abnormalities. A review of causes, assessment and diagnostic methods, and treatment, intervention and prevention approaches.

PSYC 451. History of Psychology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: PSYC 101 and senior standing. Traces the history of ideas about mind and behavior as they relate to the theory and practice of psychology.

PSYC 491. Topics in Psychology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Maximum total of 6 credits in topics courses. Prerequisite: PSYC 101. An in-depth study of selected topics and issues in psychology. See the Schedule of Classes for specific topics to be offered.

PSYC 492. Independent Study. 1-3 Hours.

Semester course; variable hours. 1, 2 or 3 credits per semester. Maximum of 6 credits for all independent study courses. PSYC 492, PSYC 493 or PSYC 494 may be repeated for a total of 6 credits but a maximum of 12 credits total for all three courses. Prerequisite: PSYC 101. Open only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chair must be procured prior to registration of the course. Independent study is defined as student-conceived and initiated readings or research project which is supervised by a psychology faculty member. An oral examination or written, comprehensive paper is required at the end of the semester.

PSYC 493. Fieldwork: Human Services. 3 Hours.

Semester course; 3 credits. PSYC 492, PSYC 493 and PSYC 494 may be repeated for a total of 6 credits but a maximum of 12 credits total for all three courses is allowed. Prerequisite: permission of instructor. Students are placed in an agency, which will provide supervised work experience in various aspects of helping other people. The setting might be a government or private community agency, or a corporation, depending on the student's goals. The student works eight hours per week at the placement site, attends several group discussion sessions during the semester and completes written assignments. This course is designed to enhance the psychology major's career pursuits for either graduate-level training or post-baccalaureate employment.

PSYC 494. Research Internship in Psychology. 1-3 Hours.

Semester course; variable hours. 1, 2 or 3 credits per semester. May be repeated for a maximum of 6 credits with adviser's approval. PSYC 492, PSYC 493 or PSYC 494 may be repeated for a total of 6 credits but a maximum of 12 credits total for all three courses. Prerequisites: PSYC 101 and permission of faculty research supervisor must be obtained prior to registration. PSYC 214 and PSYC 317, or permission of supervisor. Students will work on various phases of a research project (design, data collection, data analysis, manuscript writing) under a psychology faculty member's close supervision. This course is designed to enhance the psychology major's career pursuits for either graduate-level training or post-baccalaureate employment.

PSYC 497. Honors in Psychology I. 3 Hours.

Semester course; variable hours. 3 credits. Prerequisites: PSYC 317 (co-requisite with permission) and admission to the honors in psychology program. First in a three course sequence to develop, execute and defend an empirically based thesis in psychology. Students will work with a mentor to develop ideas into a tangible research project, working toward a proposal.

PSYC 498. Honors in Psychology II. 3 Hours.

Semester course; variable hours. 3 credits. Prerequisite: PSYC 497 with a grade of A. Students will refine research ideas developed in PSYC 497 into a formal proposal document with introduction, method and proposed results. Students are expected to propose the thesis to their committee members no later than the second week of this course and begin data collection thereafter.

PSYC 499. Honors in Psychology III. 3 Hours.

Semester course; variable hours. 3 credits. Prerequisite: PSYC 498 with a grade of A. Students will complete the research project developed in PSYC 497 and 498 and generate the final thesis, including introduction, method, results and discussion. Students must orally defend the thesis to their committee members by the end of this course with time for revisions to be submitted within the semester's defined grading period.