TEXAS A&M UNIVERSITY SAN ANTONIO

Addendum to the 2022-2023 Catalog

Reflecting New Programs Available in 2023-2024

2022-2023 Undergraduate Catalog Updates and Changes

The updates listed in this addendum apply to the 2022-2023 catalog. The contents of this addendum are an integral part of the University's Catalog. The addendum is provided as an update to the original catalog and may contain new or revised information.

Texas A&M University-San Antonio has made every effort to ensure that everything stated in the catalog is accurate. However, sometimes changes are necessary after the date of publication. Courses and programs offered, together with other matters contained herein, are subject to change at the discretion of the university.

New Programs to be Offered in 2023-2024

College of Arts and Sciences
Master of Science, Psychology (**Program pending SACSCOC approval)

Master of Science, Cyber Security

College of Arts and Sciences

Administrative Officers

Dr. Debra Feakes, *Dean, College of the Arts and Sciences*
Dr. Marvin M. F. Lutnesky, *Associate Dean, College of the Arts and Sciences*
Dr. Katherine Gillen, *Department Chair of Language, Literature, and Arts*
Dr. Jackson Ayres, *Graduate Coordinator (English), Central Academic Building*
Dr. Mirley Balasubramanya, *Department Chair of Mathematical, Physical, and Engineering Sciences*
Dr. Walter Den, *Graduate Coordinator (Water Resources Science and Technology)*
Dr. Megan Wise de Valdez, *Department Chair of Life Sciences*
Dr. Elizabeth Borda, *Graduate Coordinator (Biology)*
Dr. Izzat Alsmadi, *Department Chair Computing and Cyber Security, and Associate Professor of Computing*

The College's faculty excels in teaching, scholarship, and service. The faculty and the curriculum engage student learning in a culturally diverse environment, serving the needs of traditional and non-traditional students. In pursuit of our mission, the College challenges our students to apply their intellectual curiosity and skills in order to improve their communities.

Programs

- Department of Language, Literature, and Arts
    - English, Master of Arts
- Department of Life Sciences
    - Biology, Master of Science
    - **Psychology, Master of Science**
- Department of Mathematical, Physical, and Engineering Sciences
    - Water Resources Science and Technology, Master of Science
- Department of Social Sciences
    - Criminology and Criminal Justice, Master of Science
- Department of Computing and Cyber Security
    - Computer Science, Master of Science
    - **Cyber Security, Master of Science**

Academic Advising

Students should meet with their graduate academic advisor upon admission to their master's program. It is then recommended that students meet with their graduate academic advisor on a regular basis to discuss their academic progress, scheduling of courses, and discuss any questions or concerns they may have. For any questions or to schedule an appointment please contact a graduate advisor.

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The first cohort will be admitted for the Fall 2023 semester.

The Master of Science degree with a major in Psychology provides graduate training in the psychological sciences that prepares students for further study in doctoral programs as well as professional careers in a variety of fields. Students may choose from a thesis and a non-thesis option. The focus of the non-thesis option is upon the breadth of knowledge in psychology; whereas, the thesis option is focused on producing empirical studies or other substantial work that moves the discipline forward by generating new knowledge. Because the non-thesis option does not involve time-intensive knowledge generation required for a thesis, it instead allows students to gain extra breadth through taking more courses.

Administrative Officers

Dr. Amy Bohmann, *Graduate Coordinator (Psychology),* STEM Building

Minimum admissions requirements include: (1) a B.A. or B. S. in psychology or a related eld with a GPA of 2.75 or higher, and (2) scores in the 40th percentile or better on the verbal, quantitative, and analytical sections of the GRE. International applicants must demonstrate English pro ciency by scoring a minimum TOEFL score of 550 (paper-based), 213 (computer-based) or 79 (Internet-based).

Program Details

There are two tracks in the program - a Thesis Track and a Non-Thesis Track. Students pursuing the degree should consult with their thesis advisor and declare for one of the two tracks at the time of application. Of the 30-36 SCH to ful ll the coursework required to graduate, students declaring the Thesis Track will have a 6 SCH allotted for a research thesis; whereas, those in the Non-Thesis Track will have a maximum of 3 SCH allotted for a capstone project that includes a major area paper.

- Thesis Track: Submission of a thesis based on the in-depth analysis of a research study. The thesis should conform to the format required by the Psychology program.

Non-Thesis Track

Core Courses		
PSYC 5301	Research Methods and Design	3
PSYC 5302	Statistics	3
PSYC 5303	Ethics	3
One from Biological Aspects of Behavior		3
PSYC 5310	Developmental Psychology	
PSYC 5311	Biopsychology	
One from Cognition and Learning		3
PSYC 5312	Learning	
PSYC 5313	Cognition	
One from Social Psychology and Emotion		3
PSYC 5314	Social Psychology	
PSYC 5315	Motivation and Emotion	
One from History and Systems		3
PSYC 5316	History and Systems	
PSYC 5317	Psychological Assessment	
Electives		12
Capstone Project		
PSYC 5304	Capstone Project	3
Total Credits		36

PSYC 5301	Research Methods and Design	
PSYC 5302	Statistics	
PSYC 5303	Ethics	
One from Biological Aspects of Behavior		3
PSYC 5310	Developmental Psychology	
PSYC 5311	Biopsychology	
One from Cognition and Learning		3
PSYC 5312	Learning	
PSYC 5313	Cognition	
One from Social Psychology and Emotion		3
PSYC 5314	Social Psychology	
PSYC 5315	Motivation and Emotion	
One from History and Systems		3
PSYC 5316	History and Systems	
PSYC 5317	Psychological Assessment	
Electives		3
Thesis (Two Semesters Required)		6
PSYC 5304	Capstone Project	
Total Credits		**30**

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PSYC 5301 Research Methods and Design

Credits: 3 (3-0-0)

Advanced research methodology for psychological research. Focuses on methods for use with experimental research design and nonexperimental research design (e.g., correlation and multiple regression). Measurement issues are covered, including reliability and validity. Computer lab uses statistical packages for analysis of data.

Restrictions: Enrollment is limited to Graduate level students.

PSYC 5302 Statistics

Credits: 3 (3-0-0)

This course will provide a theoretical background and practical experience to statistics for psychology and other behavioral sciences. Statistics are the tools we use to summarize and describe the world around us and to explore the causal processes at work. Understanding statistics and how they are used and misused is vital to assimilating information as an informed citizen, as well as pursuing a career in the behavioral sciences or similar fields. In this course will cover topics including: principles of measurement, measures of central tendency and variability, probability and distributions, correlation and regression, hypothesis testing, t-tests, analysis of variance, and chi-square tests. You will learn and use computer programs to help you understand and perform select statistical analyses.

Restrictions: Enrollment is limited to Graduate level students.

PSYC 5303 Ethics

Credits: 3 (3-0-0)

This ethics course is designed to provide a framework for the development of knowledge and skills related to ethical decision making in psychology. Attention will be given to ethics issues surrounding the science and practice of psychology in a broad context. The course is divided into three sections: (1) Interpersonal: the social context in which research/practice is conducted (e.g., mentoring, the peer-review process, and misconduct). (2) Research: issues pertinent to the collection of data (e.g., legal, ethical, and moral codes applied to human and non-human subjects). (3) Practice: the application of psychology ethics in professional practice settings (e.g., therapist-patient relationships; requirements for teaching). The ultimate goal of this class is to illuminate how ethical issues apply to all students as consumers, producers, and appliers of psychological research – and to embed ethicality in everyday professional practice and research. .

PSYC 5304 Capstone Project

Credits: 3 (3-0-0)

All graduate students who are not completing a thesis will be required to complete a capstone project. Students will complete a comprehensive literature search and effectively synthesize published research in a major area in psychology. The project applies knowledge and skills learned in the courses that comprise a student's degree program. Ultimately, the project will culminate in a well-written and thorough analysis of current state of research in a major area of psychology. .

Prerequisites: PSYC 5301 and PSYC 5302 with a grade of B or better.
Restrictions: Enrollment is limited to Graduate level students.

PSYC 5310 Developmental Psychology

Credits: 3 (3-0-0)

The focus of this seminar is the examination of development during childhood (infancy through middle childhood), including biological, cognitive, social, emotional, and cultural aspects. In particular, we will focus on theories, research, and applications for everyday interactions to garner an appreciation and understanding of normative and nonnormative patterns of development. The goals of this seminar are (1) to understand the mechanisms that shape development during childhood and (2) to articulate, critique, and defend theoretical, empirical, and applied positions concerning the nature of development. These objectives will be assessed through participation in and leadership of class discussion, systematic reflection, and completion of written reaction papers and a research paper/proposal. This seminar is part of the developmental graduate sequence.

Restrictions: Enrollment is limited to Graduate level students.

PSYC 5311 Biopsychology

Credits: 3 (3-0-0)

Biopsychology is devoted to understanding the mechanisms by which the brain takes in information through the senses, processes it, and translates it into thoughts and actions. This course will introduce students to the basic structure and function of neurons, the neurotransmitter systems, signal transduction in each of the senses, neuroanatomy, and research techniques. The ultimate goal of this class is to provide students with an advanced understanding of the physiology of behavior, and to identify ways in which these mechanisms underpin behavior relevant to other psychological disciplines.

Credits: 3 (3-0-0)

The study of learning is critical to understanding how organisms acquire and remember information in order to better interact with their environment. The field of learning established psychology as an empirical branch of natural science, and was the dominant field of psychology for most of the 20th century. This course will introduce students to approaches to learning, learning theories, basic learning phenomena, and the importance of learning to the field of psychology as a whole. The ultimate goal of this class is to provide students with an advanced understanding of the basic learning paradigms and theories, and to identify epistemological virtues from learning that can be applied to all psychological disciplines.

Restrictions: Enrollment is limited to Graduate level students.

PSYC 5313 Cognition

Credits: 3 (3-0-0)

This seminar course will examine the disciplines of cognitive science and cognitive psychology, with primary attention to the three predominant metaphors and models of the mind: the mind as a computer, the mind as a neural network, and the mind as a brain.

Restrictions: Enrollment is limited to Graduate level students.

PSYC 5314 Social Psychology

Credits: 3 (3-0-0)

This seminar provides a broad overview of social psychology, both classic and current. The field is far too broad for meaningful comprehensive coverage, so selected topics will be addressed in a two-tiered format. First, foundational material will address such basic topics as the processes of attitude change; social influences on conformity, compliance, and obedience; the self and the pursuit of self-esteem; person perception and attribution; stereotyping and prejudice; attraction and mate selection; and group influences on performance.

Restrictions: Enrollment is limited to Graduate level students.

PSYC 5315 Motivation and Emotion

Credits: 3 (3-0-0)

Motivation and emotion are processes that initiate and direct behavior. This course will introduce students to the concepts and theories of motivation and drives, as well as the influence of positive and negative emotional states. The ultimate goal of this class is to provide students

Restrictions: Enrollment is limited to Graduate level students.

PSYC 5316 History and Systems

Credits: 3 (3-0-0)

A comparative and critical study is made of a number of viewpoints in psychology from early experimental psychology to the contemporary field and organismic theories. This class will include a general review of the history of psychology, but will mainly focus on the development and evolution of theories both within and across different content areas of psychology. It will also provide you with an opportunity to read some original source material.

Restrictions: Enrollment is limited to Graduate level students.

PSYC 5317 Psychological Assessment

Credits: 3 (3-0-0)

This course is a broad introduction to the field of psychological assessment, including an understanding of the conceptual issues underlying different approaches to testing and assessment. Surveys the major types of tests used in the field of assessment and addresses the development of the most commonly used instruments. The course also is designed to provide a framework for the development of skills related to assessment practice. Attention will be given to issues of measurement, identifying appropriate sources of diagnostic information, reliability, validity, identifying and selecting empirically supported test instruments, conducting the assessment process in an ethical manner, interpreting norm references and criterion-referenced test scores.

Restrictions: Enrollment is limited to Graduate level students.

PSYC 5320 Special Graduate Topics in Psychology

Credits: 3 (3-0-0)

This course is designed to allow the program to add a specialized course that fits the needs and requirements of the cohort of graduate students but will not be a permanent elective course topic. Special topics courses allow the students and faculty to explore current new topics in the scientific field, to focus specialized training on a particular psychological subfield, and/or provide specialized training in a unique subfield/topic that is currently not an elective.

Restrictions: Enrollment is limited to Graduate level students.

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Overview

The master program in cyber security aims to prepare graduates for the highly demanding market of cyber security and related fields. We aim to integrate knowledge and skills from cyber security with data science and software engineering and leverage those different disciplines in our department. The curriculum for the master program in cyber security is interdisciplinary in nature within areas relating to cyber security, such as data analytics, software engineering, and computer forensics. This curriculum will draw on various courses that will be used to provide context for the traditionally required methodological, quantitative, and theoretical courses. The program will meet the high demands for cyber security at the state and national levels.

Admission Requirements

A student must be admitted to Graduate Studies and to a specific program in order to take graduate level courses. Admission to the Master of Science in Cyber Security requires a baccalaureate degree from a regionally accredited institution.

The Master of Science in Cyber Security requires 30 credit hours that includes 9 hours of core courses and 21 credit hours of elective courses. Graduation requires 30 credit hours. Students can choose a thesis or non-thesis options.

International applicants must submit a satisfactory GMAT and TOEFL score in order to be considered for admission.

The Cyber Security applicants must submit (1) curriculum vitae or resume, (2) one-page essay on student's aspirations and the reason student wants to complete the MS-CSEC program, (3) One letter of recommendation.

Graduate Admissions Required Test Scores

Students with an undergraduate major in computer science or related fields with an average GPA of 3.0/4.0 or better on all prior advanced-level (junior, senior, and graduate) math and computer science-related work taken from an accredited institution. Students below an average GPA of 3.0 but greater than 2.5 may be granted conditional admission.

Entrance Exams Waived FALL 2023

9D-05

Texas A&M University-San Antonio Graduate Record Exam (GRE) code: 6712

Application Instructions

Complete the GradCAS application and submit the appropriate fees and required documentation. Request official e-transcripts from all US institutions attended to be sent to GradCAS through the GradCAS online order portal. If your institution does not have official e-transcripts available, they can be mailed to the GradCAS processing center.

GradCas Link: [Apply | GradCAS (liaisoncas.org)](https://liaisoncas.org)

For questions or assistance, email: Cyber@tamusa.edu

*Failure to list all colleges and universities on your application will delay processing for admission. **Official transcripts must be sent to GradCAS. ***Do not send transcripts to Texas A&M - San Antonio.

Credentialing reports of transcripts from all foreign institutions can be sent electronically through the World Education Services (WES) link in the Academic History section of the application or by mail if using another credentialing agency.

International applicants must demonstrate English proficiency by scoring a minimum TOEFL score of 550 (paper-based), 213 (computer-based) or 79 (Internet-based). The TOEFL school code is 6712.

Admission Deadlines

Fall 2023:

- Priority: 2/1/2023
- Regular: 5/20/2023
- Late: 7/15/2023

Curricula

Required MS Cyber Security Core Courses		9
CSEC 5310	Advanced Topics in Computer Forensics	3
CSEC 5321	Information Assurance and Risk Management	3
CSEC 5327	Advanced Information Security	3
Elective Courses		**21**
Select 21 credits of electives based on career goals/focus and approval by advisor.		
CSEC 5300	Research Seminar	3
CSEC 5304	Database Security	3
CSEC 5306	Computer Networks and Security	3
CSEC 5311	Big Data Analysis and Security	3
CSEC 5322	Identity Management and Access Control	3
CSEC 5323	Cryptography and Secure Communication	3
CSEC 5326	Security in Emerging Technologies	3
CSEC 5333	Programming for Cyber Security	3
CSEC 5350	Intrusion Detection and Hackers Exploits	3

CSEC 5380	Cyber incident response	3
Total Credits		**30**

This suggested plan of study is intended to be used as a guide in conjunction with the official degree requirements outlined in the catalog. While this plan demonstrates a course of study that covers four semesters, each student's academic path is unique, and your timeline may look different. Electives listed in the plan of study should be selected based on the student's career goals/focus and approved by their advisor.

First Year		
FIRST SEMESTER		**CREDITS**
CSEC 5310	Advanced Topics in Computer Forensics	3
CSEC 5321	Information Assurance and Risk Management	3
CSEC 5327	Advanced Information Security	3
	Credits	**9**
SECOND SEMESTER		
Elective		3
Elective		3
Elective		3
	Credits	**9**
THIRD SEMESTER		
Elective		3
	Credits	**3**

Elective		3
Elective		3
Elective		3
	Credits	**9**
	Total Credits	**30**

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CSEC 5300 Research Seminar

Credits: 3 (3-0-0)

This course is focused on developing a student's research skills. Students will be guided through research of peer-reviewed journal articles and research methodologies as they relate to the field of cyber security. The instructor will guide students through a written review of research methodologies and current practices.

Restrictions:

CSEC 5304 Database Security

Credits: 3 (3-0-0)

This course focuses on the protection of data at rest. The course covers subjects in databases and DBMS related to security. Examples of subjects include: DB access control and identity management, DB architecture, password policies, DB auditing, privileges, and roles administration.

Restrictions:

CSEC 5306 Computer Networks and Security

Credits: 3 (3-0-0)

This course will cover advanced topics in computer networks, such as, wireless networks, cloud and Big Data networks. Students will gather knowledge on the vulnerabilities in different types of networks, detection methods, and "state-of-the-art" techniques to prevent them. Other subjects include: Wireless, mobile and cloud network vulnerabilities and detection methods, defense techniques, moving target techniques and network access controls.

Restrictions:

CSEC 5310 Advanced Topics in Computer Forensics

Credits: 3 (3-0-0)

This course is an overview of the methods and tools utilized for collecting and preserving electronic digital evidence for the computer forensic process. Topics include the forensic examination, analysis, and report writing; and preparing for courtroom testimony about the forensic results.

Restrictions:

big data analytics and security. It will provide knowledge and practical experience on big data analytics tools and platforms including MapReduce, Hadoop, and Spark which leverage big data to solve current business problems. Moreover, this course will cover recent advanced techniques to secure big data while it is in rest (storage) and/or in motion (over networks).

Restrictions:

CSEC 5321 Information Assurance and Risk Management

Credits: 3 (3-0-0)

This course concentrates on security governance structure that organizations employ to manage risks. Various laws, regulations, and organizational objectives are typically mapped to organizational policies and translated into procedures, practices, standards, and guidelines. Topics covered include social engineering, risk assessment, recovery and response, enterprise security, and formal techniques and policies.

Restrictions:

CSEC 5322 Identity Management and Access Control

Credits: 3 (3-0-0)

This course covers subjects related to using access control techniques and mechanisms to appropriately address security requirements such as (CIAAA): confidentiality, integrity, authentication, authorization, and accountability. Main topics include access control principles, mechanisms, and techniques (e.g., ABAC, OBAC, RBAC) related to user identification and strategies for enabling stronger authentication, using Public-Key Infrastructure (PKI), and other enterprise identity management technologies, industry standards for enabling identity provisioning, single sign-on, and identity federation

Restrictions:

CSEC 5323 Cryptography and Secure Communication

Credits: 3 (3-0-0)

This course introduces the basic concepts of cryptography. Various cipher systems are presented including symmetric versus asymmetric encryption systems. The course focuses also on applications of cryptography in the different domains. Methods used to attack ciphers are also discussed. Different case studies of use of cryptographic methods in the different domains are presented as part of students labs and projects.

Credits: 3 (3-0-0)

This course will cover security aspects in one or more of state-of-the-art emerging technologies such as mobile computing, world wide web, online social networks, cloud computing, IoT, cyber physical systems, etc. Instructor can pick one or more of those technologies based on their research interests.

Restrictions:

CSEC 5327 Advanced Information Security

Credits: 3 (3-0-0)

This course examines the concepts, principles, and applications of computer security in the business environment including Privacy, Information Security, and Critical Infrastructure. This course explores the knowledge and skills needed to ensure security of information and information systems within organizations. It focuses on concepts and methods associated with security across several systems platforms, including internal and Internet-based systems. The course utilizes a world view to examine critical infrastructure concepts as well as techniques for assessing risk associated with accidental and intentional breaches of security in a global network. It introduces the associated issues of ethical uses of information and of privacy considerations.

Restrictions:

CSEC 5333 Programming for Cyber Security

Credits: 3 (3-0-0)

This course will Introduce Python programming language for information and cyber security applications. Students will learn the necessary theoretical background in the lecture and will learn writing Python codes in the lab for different subjects including: socket communication, web security and testing, penetration testing, ethical hacking tools and applications, encryption, operating system communication and APIs, etc.

Restrictions:

CSEC 5350 Intrusion Detection and Hackers Exploits

Credits: 3 (3-0-0)

This course explores the growing challenges of securing sensitive data networks, mobile devices and applications with different privacy controls to defend against malicious acts. Also, this

Restrictions:

CSEC 5370 Special Topics in Cyber Security
Credits: 3 (3-0-0)

Special topics related to cyber security determined by the instructor based on their research interests.

Restrictions:

CSEC 5380 Cyber incident response
Credits: 3 (3-0-0)

This course will cover different subjects related to the lifecycle of incident management including incident detection, reporting and handling. The course includes technical and non technical subjects. Examples of non-technical subjects: business impact analysis (BIA), a business continuity plan (BCP) and a disaster recovery plan (DRP). Examples of technical subjects: Tools related to incident detection and vulnerability assessment, attack types analysis, methods to analyze artifacts left on compromised systems, and different types of Indicators of Compromise (IoC).

Restrictions:

Miscellaneous Fees

College of Business Exit Exam Fee

The College of Business uses a third party, ETS, to administer the exit exams for two of its capstone courses: BUAD 4170 (4070) Business Capstone Lab and BUAD 5135 Business Capstone Lab. The current fees charged by the company are $27 and $31 respectively. ETS intends to increase those fees to $32.50 and $36 respectively. The fees charged to the students for these exams have been a pass-through charge with TAMUSA receiving no part of the fees charged to the student. Therefore, the fees charged to the students enrolled in these courses will increase to cover the change in cost from ETS.