

BELLARMINE UNIVERSITY
IN VERITATIS AMORE

SCHOOL OF CONTINUING AND PROFESSIONAL STUDIES

Master of Science in Applied Information Technology Program

The Master of Science in Applied Information Technology (MAIT) is designed to prepare students for a career in Information Technology (IT). The MAIT program consists of a wide range of core courses which emphasize technical, administrative, and communication skills vital to success in the IT professions. There are three tracks in the program which allow students to specialize in corporate IT, security, or web development. Within each track there are three principal thematic areas:

1. Information technology foundations and tools (technical emphasis)
2. Systems engineering and project management (administrative emphasis)
3. Individual, group, and organization success factors (communication skills emphasis)

Most organizations, whether for-profit or not-for-profit, use information technology to meet its operational and strategic needs. While the first two themes focus on the design and development of IT projects, the third theme complements the more technical program elements by developing the student's ability to better understand the needs of the organization and its users. Students gain sensitivity to the human and cultural factors operating within an organization. This knowledge will facilitate the effective and efficient application of information technology. The sensitivity to the non-technology factors are developed through extensive project experiences incorporating oral, written and presentation skills both within the IT department and between the IT department and non-IT departments. Interpersonal skills, both individual and group, are emphasized in order to better prepare the student for a successful career.

In order to provide students with some flexibility in their coursework, the student can select a specialization or track where four courses are specifically designated to provide more detailed study in that specialty area.

A cohort model is employed in which all students within a specialty take the same courses each semester thereby progressing through the entire program together. The program has a fixed sequence and there are no electives. Since students work collaboratively on a significant IT project, the cohort model enables them to develop stronger interpersonal skills. This is the recommended method for students to get the most out of their studies.

The program is called "accelerated" since two or three courses are taken each semester and the student can complete the program in about 20 months. Some students, however, find the accelerated program challenging and prefer to "unaccelerate". These students must contact the program director to have a custom schedule approved.

REQUIREMENTS FOR ADMISSION

All applicants must submit the following:

1. A completed graduate application form.
2. A non-refundable application fee of \$25 is required from all prospective students (except BU alums).
3. An official and acceptable GRE or GMAT score.
4. Two letters of recommendation (included in packet). In general, recommendations from persons who are able to evaluate either academic or professional potential are the most valuable.
5. Current Resume.
6. If your undergraduate degree is from an international institution, you were born outside the United States, or English is your second language, you will be required to submit an official TOEFLiBT (internet-based test) score and receive a total score of 80 or higher. We will also consider an equivalent score on the IELTS or MELAB tests. The Admission, Progression and Graduation Committee reserves the right to require a TOEFL score from any applicant.
7. Final official transcript(s) from each college or university attended should be mailed to the Office of Graduate Admission and not be marked "Issued to Student".
8. If any transcripts or undergraduate degree(s) are from an international institution you must provide an official copy of a third party course by course credential evaluation. The following organizations offer this service and information regarding processes and fees are available at: www.aacrao.org, www.wes.org and www.ece.org. The Office of Graduate Admission reserves the right to request a certified copy of the original transcript(s).
9. An undergraduate GPA of 2.75 (on a 4.0 scale) or significant work experience in information technology.

INTERNATIONAL APPLICANTS

Please complete steps one through five under Requirements for Admission in addition to these steps:

U.S. law requires financial statements from a bank or other financial institution certifying the student's ability to fund the cost of attendance for one academic year minus the amount of any scholarship dollars received. Figures should be in U.S. dollars and must be certified as an official document by the bank or financial institution. A sponsor may be used if the sponsor attaches a signed affidavit stating that he/she will financially support the student until completion of a degree at Bellarmine University. If a sponsor is used, the sponsor's bank statement should accompany the letter. **The amount that would need to be shown by program is \$30,856.** This amount includes tuition and fees associated with the program and an average cost for living expenses, books, supplies, health insurance, transportation and personal expenses.

REQUIREMENTS FOR DEGREE

Requirements for the MAIT Degree:

1. Completion of 36-39 hours of graduate credit in MAIT courses as specified in the curriculum below, 24 hours of which must be earned at Bellarmine University.
2. Students with any of the following prerequisites are not required to take AIT. 501, Introduction to IT and Computer Science, and will graduate with 36 hours of coursework.
 - a. Undergraduate degree in computer science or information systems
 - b. Undergraduate degree in a highly technical field such as engineering
 - c. Significant work experience in information technology
3. Maintenance of a cumulative grade point average of 3.0 on a 4.0 scale throughout the program.
4. Completion of all degree work within six years from date of entry

PROGRAM OUTCOMES

Upon completion of the MAIT program, graduates will have:

1. developed the technical knowledge and skills to prepare for a career in IT
2. gained the knowledge to facilitate the effective and efficient application of information technology
3. gained sensitivity to the challenges and impacts of globalization on a local organization's planning and operations
4. acquired oral and written communication skills to describe and articulate their position on a wide range of technically oriented issues affecting their employer
5. refined their skills to perform in team environments, resolve conflicts, provide motivation to others, establish team goals and provide direction

TUITION AND FEES

Tuition: \$580 per credit hour (36-39 hours)

Fees: \$35 per class

Approximate cost: \$23,075

PROGRAM DETAILS

Prerequisite course (3 hrs.)

A prerequisite course is required of all MAIT students who do not have an undergraduate degree in computer science or information systems or a highly technical undergraduate degree such as engineering or significant work experience in IT.

AIT. 501 Introduction to IT and Computer Science (3)

Core Courses (24 hrs.)

The following core courses are required of all MAIT majors, regardless of specialization.

AIT. 510 Web Development Using PHP and MySQL (3)

AIT. 520 Java 2 Programming (3)

AIT. 521 IT Project Management (3)

AIT. 524 Systems Analysis and Design (3)

AIT. 525 Interpersonal Communications and Graphic Design (3)

AIT. 526 Networks and Communication Infrastructure (3)

AIT. 530 IT Systems Project (3)

AIT. 540 IT Security (3)

Corporate Specialization Courses (12 hrs.)

AIT. 522 Business Foundations (3)

AIT. 528 Negotiations and Organizational Change (3)

AIT. 531 IT Planning and Service Management Using ITIL (3)

AIT. 544 Database Management (3)

Security Specialization Courses (12 hrs.)

AIT. 542 Network Security Concepts (3)

AIT. 544 Database Management (3)

AIT. 546 Security Risk Management (3)

AIT. 548 Wireless Network Security (3)

Web Development Specialization Courses (12 hrs.)

ART. 548 Digital Color Imaging (3)

AIT. 552 2D Digital Animation Techniques (3)

MUST 554 Audio Technology & Soundtrack Design (3)

AIT. 556 Basics of 3D Animation (3)

Some students may have substantial experience with the content area presented in a course. In this case the student may get a "Pass" grade for the course by satisfying the portfolio option as described in the University catalog. Or, a student may instead substitute another course. The student should contact the MAIT program director for guidance concerning either of these options.

The MAIT program offers courses year-round, including the summer semester. The program consists of 36-39 graduate semester hours which includes a prerequisite introductory course. The courses are offered two nights per week (Monday and Wednesday or Tuesday and Thursday) from 6-10 p.m. The program is a fast paced and challenging way to revitalize your career or prepare for a new one in IT.

SUGGESTED SCHEDULE OF COURSES

SEMESTER	CORPORATE	SECURITY	WEB DEVELOPMENT
Summer	AIT. 501	AIT. 501	AIT. 501
	AIT. 520	AIT. 520	AIT. 520
	AIT. 525	AIT. 525	AIT. 525
Fall	AIT. 510	AIT. 510	AIT. 510
	AIT. 528	AIT. 540	ART. 548
Spring	AIT. 522	AIT. 524	AIT. 524
	AIT. 524	AIT. 526	AIT. 526
	AIT. 526	AIT. 542	AIT. 552
Summer	AIT. 521	AIT. 521	AIT. 521
	AIT. 544	AIT. 544	MUST 554
Fall	AIT. 530	AIT. 530	AIT. 530
	AIT. 531	AIT. 546	AIT. 540
	AIT. 540	AIT. 548	AIT. 556
Total of 39 Credit Hours			

CONTACT INFORMATION

Turner Wathen, Graduate Admission Officer
502.272.8245, fax 502.272.8002 or
jwathen@bellarmine.edu

Office of Graduate Admission
1.800.274.4723 x 8258, 502.272.7200, or
gradadmissions@bellarmine.edu

AIT. 501 Introduction to IT and Computer Science (3)

For students with little background in information technology, this course introduces both computer science theory and IT application. Topics covered in the area of computer science include programming, file structures and computer networks. In the area of IT, the course covers transaction-processing systems, management and decision support systems, e-commerce systems and the application of IT to the needs of the organization.

AIT. 510 Web Development Using PHP and MySQL (3)

This course introduces a variety of open-source techniques for developing web-based applications. The core technologies are the PHP programming language and the MySQL database management system. Upon completion of the course, students will be able to build professional quality, database driven websites.

AIT. 520 Java II Programming (3)

This is an introductory course in object-oriented programming using the Java Language. The basics of computer programming and the Java language are covered including data types, control structures, methods, arrays, recursion, event-driven programming and Java class libraries. The course satisfies many of the objectives of the Sun Certified Java Programmer (SCJP) Certification from Sun Microsystems.

AIT. 521 IT Project Management (3)

This course covers project management fundamentals including project estimating, planning, budgeting, scheduling, risk management, monitoring, and controlling. Emphasis will be placed on standards-based techniques and “best practices” from the Project Management Institute.

AIT. 522 Business Foundations (3)

This course presents a functional view of the organization from the perspective of senior management. Foundational topics from marketing, management, finance, accounting, human resources, law and strategic planning are covered to enable the student to better understand the goals and challenges of an organization. In addition, the student is introduced to Enterprise Resource Planning (ERP) concepts. The students will study the role that ERP systems play in an organization. The effects of ERP on the decision-making environment of the organization will be discussed.

AIT. 524 Systems Analysis and Design (3)

A critical part of most system development efforts is understanding the context in which the application is conceived and developed. The goal of this course is to provide a solid foundation of the tools and techniques employed during the preliminary investigation and systems analysis phase of an IT project. Topics covered include requirements discovery, data modeling, process modeling, feasibility analysis, object-oriented analysis and creation of the systems analysis proposal. The application of the skills developed in this course is reinforced with a capstone project in AIT. 530.

AIT. 525 Professional Communications (3)

Effective communication with users, customers, vendors and IT professionals is critical to insure successful system identification, design and implementation. This course focuses on building effective communication skills. Topics covered include verbal communication, nonverbal communication, listening and critical thinking, intercultural communication, proposal and report writing, skillful questioning, interviewing for information gathering, interviewing for persuasion, interviewing with a learning perspective and creating effective presentations including visually pleasing and persuasive graphic elements.

AIT. 526 Networks and Communication Infrastructure (3)

This course covers data communications and networks including the OSI model, enterprise operating system technologies, protocols, topologies, data transmission, data integrity and data security. The course topics satisfy many of the objectives of the CompTIA Network+ Certification.

AIT. 528 Negotiations & Organizational Change (3)

This course extends the topics covered in AIT. 525 by focusing on group process and the challenges of effective communication. Topics covered include the dynamics of small group discussion, group leadership, conflict and problem solving. Negotiating skills including strategizing, planning, tactics, leverage and ethics are also covered in the course. Since information systems often lead to radical changes in organizational processes, this course will also examine how effective communications can facilitate changes in organizational culture necessary for the adoption of the new systems.

AIT. 530 IT Systems Project (3)

This course is the capstone course for the MAIT program. The focus of this course is on the programming, component integration, implementation and operation of the information system project begun in AIT. 524.

AIT. 531 IT Strategic Planning and IT Service Management Using ITIL (3)

This course examines the role of information systems to the success of an organization, identifying ways in which IT can be aligned with organizational strategy and providing competitive advantage. A critical aspect of any IT organization is its ability to provide the necessary business support, allowing the business to reach its goals. Traditionally, this definition of an IT organization has been understood but lacked an appropriate delivery mechanism to actually present, monitor and measure the service delivered. This course provides background on two compatible frameworks: IT Service Management (ITSM) as defined by the best practice library, ITIL, and Balanced Scorecards (BSC). Topics covered include the basics of the Balanced Scorecard and the 10 Management processes and supporting function within Service Management.

AIT. 540 IT Security (3)

As more and more organizations become dependent on information systems, the demand for accurate, reliable, and 24/7/365 system availability has become the norm. Designing and insuring systems that can endure and survive attack is the primary focus of the course. Physical and operating security will be explored at the network, operating system, DBMS, application and data layer. Protecting systems from internal as well as external threats and natural disasters will be covered in the course. The course is designed to cover the common body of knowledge concepts and topics defined by the International Information Systems Security Certification Consortium for the CISSP certification exam.

AIT. 542 Network Security Concepts (3)

This course explores security terms, definitions, and issues that face industries today. This course will examine how the concept of security, and being secure, integrates into the overall enterprise mission. The importance of user involvement, security training, ethics, trust, and informed management will be explored. This course will help graduates understand the technology underlying security and information assurance models. (Prerequisite: AIT. 540)

AIT. 544 Database Management (3)

This course covers disk, file, and file system structure. A variety of data-access techniques are covered including hashing and B+ tree indices. Query evaluation algorithms and query optimization are studied. The fundamentals of transaction processing including concurrency control are addressed. The influence of the underlying computer system, the computer-system architecture, is discussed including centralized, client-server, parallel and distributed systems.

AIT. 546 Security Risk Management (3)

This course reviews the human factors and managing information systems risk. Network Security is considered as much of a people problem as a technical problem. Risk in information systems is heavily influenced by human factors. This class will discuss the general methodologies for security risk assessment and security test and evaluation, including the interviews and documentation research necessary. The student will be provided a 'key risk' exercise to provide a hands-on case study to review current controls, planned controls and steps for remediation. By completing this course, graduates will demonstrate mastery of: the fundamental attributes of information that must be protected; technical defenses; human factors supporting technical defenses; detection and response technologies and processes; and the tools necessary to integrate security into the corporate culture. (Prerequisite: AIT. 540)

AIT. 548 Wireless Network Security (3)

Emphasizing wireless computing security, this course addresses how to secure mobile wireless computing devices and applications, and wireless network security as it impacts those portable computing devices. Wireless network security is discussed as it pertains to decisions on which network security works best with particular applications loaded into wireless computing devices. The course covers security of CMRS and PCS (Cellular Mobile Radio Service and Personal Communications Service), CMRS and PCS second, third and fourth generations (2G, 3G and 4G), laptops equipped with Wireless Network Interface Cards (WNICs), Personal Digital Assistants (PDAs), Bluetooth and Zigbee devices, and Radio Frequency Identity (RFID) devices. (Prerequisite: AIT. 540)

AIT. 552 2D Digital Animation Techniques (3)

This project-based course introduces the student to a method of creating digital instructional packages from the ground up. The course will introduce the student to the larger task of creating an interactive program designed to impart skill sets or units of knowledge to the intended user. State-of-the-art 2D animation software will be used by the student to create animations that will be contained within a web-based program that will use graphics and a user interface to teach the user specific skills. Those skills, the interface design, and all the animation elements will be designed by the student and presented as a complete package at the end of the course, as if it were a contracted professional job. This course and the project will combine the skills of instructional design, web development, design skills, and art content creation. (Prerequisite: ART. 548 or permission of department chair)

AIT. 556 Basics of 3D Digital Animation (3)

This course is designed to teach the student the basic elements of 3D Graphics, Art and Animation on a computer. 3-Dimensional graphics have been a powerful tool in engineering, architecture, entertainment, and graphic design fields for decades, and have become an integral part of information technology and content creation. The essential basics of 3-D graphics will be covered in this course, which include Modeling, Shading, and Animation. The student will learn the underlying structure of 3-D graphics, and how to create, manipulate, render, and animate polygonal geometry. With these fundamentals it will be easy to start a solid groundwork towards a full understanding of all aspects involved in commercial animation for careers in Graphic Design, Animation, Multimedia Development, Web Design, Entertainment, Architecture, Engineering, and many other career paths. (Prerequisite: AIT. 552 or permission of department chair)

AIT. 590 Internship, this course is offered pass/fail only (1-3)

AIT. 591 Co-operative Education Experience, this course is offered pass/fail only (0)

AIT. 691 Special Topics in Applied Information Technology (1)

AIT. 692 Special Topics in Applied Information Technology (2)

AIT. 693 Special Topics in Applied Information Technology (3)

Master of Science in Applied Information Technology

This application is for: Summer of 20 ____ Fall of 20 ____

I am applying for: Corporate Specialization Security Specialization

Web Development Specialization

PERSONAL DATA

Name _____
LAST FIRST MIDDLE MAIDEN

Preferred Name _____ Social Security Number _____ Gender _____

Permanent Address _____
STREET ADDRESS

CITY COUNTY STATE/PROVINCE ZIP CODE COUNTRY

Home Phone (____) _____ Work Number (____) _____ Extension _____

Cell Phone (____) _____ Email Address _____

Date of Birth _____ Place of Birth _____
CITY STATE/PROVINCE

Citizenship U.S. Permanent U.S. Resident Non U.S. Citizen

If you are not a U.S. citizen, what is your country of citizenship? _____

What is your current country of residence? _____

Is English your first language? Yes No

If no, what is your first language? _____

Are you Hispanic or Latino? Yes No

In addition, select one or more of the following racial categories to describe yourself:

American Indian or Alaskan Native Asian Black or African American

Native Hawaiian or Other Pacific Islander White

Current Employer _____ Present Position _____

Address of Employer _____
STREET ADDRESS CITY STATE/PROVINCE ZIP CODE

Will tuition be subsidized by your employer? Yes No

Will you be applying for aid with the Veterans Administration? Yes No

Where did you hear about Bellarmine's MAIT Program? _____

What factor had the most influence over your decision to apply for Graduate Admission here? _____

EDUCATIONAL DATA

Please list all colleges and/or universities you have attended.

INSTITUTION	LOCATION	DATES ATTENDED	DEGREE RECEIVED	GPA
<hr/>				
<hr/>				

PROFESSIONAL/COMMUNITY ACTIVITIES

List memberships and/or community activities within which you are or have been involved. Please attach resume.

ORGANIZATION/GROUP	TITLE	CITY/STATE	DATES
<hr/>			
<hr/>			

ESSAY

The following question is to be typewritten on a separate page. Please be sure to include your name on any separate pages you submit with your application. The Admission Committee would like to stress the importance of this essay. Please provide a thoughtful response. The essay should not exceed one 8.5" by 11" page.

- What are your long-term career aspirations? How will a Bellarmine MAIT help you accomplish them?

BACKGROUND DATA

Have you ever been dismissed from a college or university for disciplinary reasons, or been sanctioned by a disciplinary board? Yes No

If yes, from where? _____

A release will be mailed to you. You must sign and complete the form and mail it back to the Office of Admission at Bellarmine University one month prior to the first week of classes. This form will be mailed to your current Dean of Students asking for an explanation of the sanction and circumstances.

Have you ever been convicted of a felony? Yes No

If you answered yes to either of the last two questions, please explain on a separate sheet of paper how you were held accountable (i.e., outcomes, sanctions), when the incident occurred and any additional information you wish to provide. Please note that we may need to request additional information.

SIGNATURE OF APPLICANT

I declare that the information provided on this form is true, correct and complete. Bellarmine University has my permission to verify information by obtaining documents as needed. I understand that providing false information may result in Bellarmine University revoking my status as an accepted or enrolled student. Also, I grant Bellarmine University or its appointee(s) permission to post my personal and academic information on Bellarmine's secured, password protected intranet and student portal.

Signature _____ Date _____

Bellarmino University admits qualified students of any age, sex, sexual orientation, race, color, religion, or national and ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school. It does not discriminate on the basis of age, sex, sexual orientation, race, disability, color, religion, or national and ethnic origin in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other school administered programs. Bellarmine University is an Affirmative Action-Equal Opportunity employer.

RECOMMENDATION FORM: MASTER OF SCIENCE IN APPLIED INFORMATION TECHNOLOGY

APPLICANT: Fill in the information requested below and forward one form with a stamped, addressed envelope to each respondent. Under the provisions of the Family Educational Rights and Privacy act, you have the right—if you enroll at Bellarmine University—to review your educational records. The Act further provides that you may waive your right to see recommendations for admission. By signing below, you waive any right of access that I may have to this recommendation form. **Two recommendations are required with your application.**

Name of Applicant _____

Signature _____ Date _____

RESPONDENT: The individual whose name appears above is applying for admission to Bellarmine University’s Master of Applied Information Technology Program. Evaluations of the applicant’s potential are required as part of the application procedure and this individual requests that you write on his/her behalf. A standard format is provided for your use, but you may choose to write a letter instead of using the form. It would be appreciated if you would respond as early as possible so that consideration of the application will not be delayed.

Name of Respondent _____ Title _____

Institution or Agency _____

Signature _____ Date _____

Rate the applicant in the areas indicated below by checking 4-Outstanding, 3- Above Average, 2-Satisfactory, 1-Below Average, or Unable to comment.

	4	3	2	1	UNABLE TO COMMENT	DESCRIPTIVE COMMENTS
Intellectual Ability						
Critical Thinking Ability						
Problem Solving Ability						
Ability or Promise as a Leader						
Quality of Oral Communication						
Quality of Written Communication						
Motivation and Energy						
Organizational Ability						
Sense of Humor						
Emotional Maturity						
Ability to Meet Deadlines						
Ability to Work with Others						
Ability to Improve Student Achievement						
Professional Integrity						



How long have you known the candidate and in what capacity?

From the opposite side of this form, choose one or two of the candidate's outstanding characteristics and explain your rating.

From the opposite side of this form, choose the one area in which you think the candidate needs improvement and explain.

Identify at least two instances in which you have seen this candidate lead/guide/direct an adult group or a project and describe your assessment of the outcome of his/her efforts.

Indicate the strength of your overall endorsement of the applicant.

Highly recommended Recommended Recommended with reservations Not recommended

A faculty member from Bellarmine's School of Education may contact you via phone for further information. If you agree to such a conversation, please list your preferred phone number and indicate the best time to call.

Phone _____ Best time to call Morning Afternoon Evening

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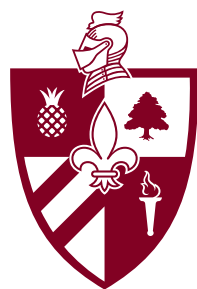
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