Master of Science in Information Systems and Technology

The Master of Science in Information Systems Technology (MSIST) prepares students for leadership positions in the areas of (1) cyber security, and (2) business intelligence and information systems technology. The main objective is to graduate students who have the ability to identify and solve business problems, manage organizational risk, secure and manage computer network systems, ensure business continuity, design and implement data warehouses, and use business intelligence tools to collect, integrate, analyze, and mine big data for the purpose of supporting managerial decision making at all control levels - front-line, managerial, and strategic. Graduates of both concentrations are able to use their analytics knowledge to fully exploit the opportunities provided by big data, i.e. nurture data-based, evidence driven organizations. Specific positions for the cyber security concentration include: information security analyst, security manager, forensics manager, computer network analyst, database administrator, and computer network architect. Specific positions for the business intelligence and information systems technology concentration include management analyst, business intelligence analyst, computer system analyst, business continuity planner, research analyst, IT project manager, and business application manager. The cyber security and business intelligence and information technology concentrations can also lead to strategic positions such as Chief Information Officer, Chief Information Security Officer, Chief Analytics Officer, Chief Data Officer, or Chief Business Architect. The program is open to all qualified students with a post-baccalaureate degree (major or minor) from an accredited college or university in any field. Students must have a keen interest in pursuing careers in cyber security, business intelligence, data analytics, and information systems technology.

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A bachelor's degree (major or minor) from an accredited college or university;
2. Attained a minimum of a 3.0 GPA in the last 60 semester (90 quarter) units of course work (Applicants with a GPA between 2.5 and 2.99 will be considered for admission by the program as an exception);
3. If the Bachelor degree was not taught principally in English, then you must take the TOEFL or IELTS (score of 6) or complete Level 6 of CSUSB's ESL program and have official scores sent to the CSUSB Graduate Admissions Office;
4. Submission of official transcripts in sealed envelopes from all institutions attended to CSUSB Graduate Admissions Office. CSUSB students are not required to submit any CSUSB transcripts. If your transcript is not in English, then you must also send a certified literal English translation of the transcripts along with the official original-language transcripts with proof of degree to: CSUSB Graduate Admissions Office, 5500 University Parkway, San Bernardino, CA 92407;
5. Submission of an acceptable Graduate Management Admission (GMAT) or Graduate Record Exam (GRE) score by deadline for the term in which the applicant wishes to enroll. If test result is not submitted on time, admission status will be unclassified post-baccalaureate unless the GMAT or GRE requirement has been waived. Send GMAT or GRE score to MSIST Program Coordinator, Information and Decision Sciences Department, 5500 University Parkway, San Bernardino, CA 92407. Check with the MIST Program Coordinator for the current acceptable GMAT or GRE minimum score requirements;
6. An applicant may request waiver of the GMAT or GRE upon proof of completion of graduate work (e.g., J.D., Ph.D., M.D., etc.) from an accredited U.S. college or university, or upon meeting other GMAT or GRE waiver criteria as set by the MSIST Program Coordinator;
7. Submission of a 200 – 250 word statement that demonstrates academic motivation, reasons for wishing to pursue the MSIST at CSUSB, and personal qualifications that will contribute to the successful completion of the program. Although work experience is not required, at least two years of professional work experience will make an application more competitive. Any letters of recommendation or a résumé are optional. Send Statement of Purpose to: MSIST Program Coordinator, Information and Decision Sciences Department, 5500 University Parkway, San Bernardino, CA 92407;
8. Additional requirement for international students: International students must also submit a completed affidavit of financial support form. International students should follow all instructions of the application procedures and submit all necessary documentation as listed on the International Admissions website: http://international.csusb.edu/admissions.aspx;

Students who meet all entrance requirements may be admitted to the program in a conditionally classified status until the Foundation Course requirements are met. Once students meet the minimum passing level of "B" for each of the two foundation courses (IST 6110 & IST 6030) they will be advanced to classified graduate standing in the program. Conditionally classified students cannot enroll in the other 6000-level core courses (with the exception of IST 6090 if taken concurrently) unless they have written consent from the MSIST Program Coordinator.

Advancement to Candidacy

To be advanced to candidacy, a student must have:

1. Achieved fully classified standing;
2. Completed, at least 18 semester units of applicable graduate-level course work at the university, with a minimum grade point average of 3.0 ("B");
3. Completed an approved graduate program plan in consultation with an MSIST adviser;
4. Prior to advancement to candidacy, must have selected one of these concentrations (in consultation with a faculty adviser). Concentrations are available in (1) Cyber Security, and (2) Business Intelligence and Information Systems Technology.
5. Secured approval of the MSIST program coordinator of the Department of Information and Decision Sciences.

Requirements for Graduation

1. A minimum of 36 semester units of acceptable graduate-level work, consistent with the program plan (with a grade point average of 3.0), with at least 26 units completed at the university, and at least 26 semester units of 5000-6000-level course work;
2. Successful completion of the required foundation, core, and concentration courses as outlined in the program curriculum section;

3. After advancement to candidacy, students must compile an MSIST Portfolio and complete a culminating experience project course (3 units). Only students who are currently classified, have completed the required foundation and core courses, have been advanced to candidacy, have obtained approval of the MSIST program coordinator, have grades of "B" (3.0) or better, no "incomplete" grades, and are not on probation may do the project or compile an MSIST Portfolio;
   a. **IST 6960 MSIST Culminating Project (3 Units):** In consultation with a faculty adviser, complete and defend a written project based on his or her concentration before a committee of graduate faculty. The graduation writing requirement is met upon successful completion of IST 6960;
   b. **IST 6980 MSIST Portfolio (0 units)** : Successful completion of IST 6980 (MSIST Portfolio) includes compilation and submission of a portfolio of course work. The portfolio includes a reflective essay showing how the portfolio demonstrates accomplishment of the essential goals for the program. Students register for this 0-unit course after advancement to candidacy and completion of 27 units of coursework;
4. Any additional general requirements not cited above but listed on the university bulletin.
5. A "no credit" (NC) designation will be entered on the student's transcript if he/she fails the IST 6960 Culminating Project course. Students who do not receive a passing grade on the first attempt must petition the college's MIST Program Coordinator for permission to retake the culminating experience.

Degree Requirements (36 units)

The 36 units Master of Science in Information System Technology degree program begins with two foundation courses IST 6110 and IST 6030 (6 units) which are provided to develop the students' analytical, and fundamental programming skills critical to the success in the program.

Five core courses (15 units) are required for all MSIST students to develop a deeper understanding of IST and business issues. This is followed with specialized (12 units) career track courses for Cyber Security or Business Intelligence and Information Technology through electives. Prior to advancement to candidacy, a student must select one of the two career tracks. The specific courses a student will take will be chosen by the student in consultation with an assigned faculty career track mentor. Similarly, selection of the student's MSIST Culminating Experience Project topic (3 units) will be decided by the student in consultation with an assigned faculty career track mentor.

Foundation Courses (6)		
IST 6110	Foundations of Analytics and Big Data	3
IST 6030	Foundations of Business Systems	3
Core Courses (15)		
IST 6090	Information Systems and Technology Management	3
IST 6450	Systems Analysis, Design and Implementation	3
IST 6470	Database Management and Policies	3
IST 6480	Information Networking Systems and Security	3
IST 6890	Enterprise Architecture Planning, Strategy, Security and Policy	3
Culminating Experience (3)		**3**
Concentration (12)		
Students must satisfy the requirements of one of the concentrations listed below.		12
Total Units		**36**

Culminating Experience (3 units)

IST 6960	MSIST Culminating Project	3
IST 6980	MSIST Portfolio	0
Total Units		**3**

Concentrations (12 units)

Cyber Security Career Track Concentration

(Program Code: ISTC)

IST 5250	Incident Handling and Cyber Investigation	3
IST 6700	Cybersecurity Policy and Risk Management	3
IST 6720	Cyber Defense and Vulnerability Analysis	3
IST 6730	Cybersecurity Theory and Practice	3
Total Units		**12**

Business Intelligence and Analytics Concentration

(Program Code: ISBI)

IST 6620	Business Analytics and Decision Making	3
IST 6670	Data Warehousing and Business Intelligence	3
IST 6680	Business Applications Using Web Technologies	3
Three units chosen from the following:		3
MKTG 6400	Advanced Marketing Research	
IST 5930	Seminar in Information Systems and Technology	
Total Units		**12**