

BUSINESS SYSTEMS AND ANALYTICS, CERTIFICATE

Program Description

The business certificate programs from La Salle University are specially designed to help students quickly build the career-advancing professional competencies that make you stand out to prospective employers. Our flexible academic calendar and multiple start dates per year allow students to continue working while pursuing professional goals. All courses are taught by respected faculty with industry connections and all credits earned through the graduate certificate program can be applied to a La Salle MBA degree.

La Salle University provides an innovative course structure that enables students to develop and strengthen the leadership skills and functional knowledge necessary for the advancement of their current careers and life goals. It is a platform where experienced people from diverse professional backgrounds come together to connect, collaborate and learn.

We offer courses in a flexible format, which provides working professionals with greater flexibility and convenience as they move through the program. We have developed a learning experience that leverages the latest teaching and learning technologies to deliver an environment to deepen our students' understanding of business and markets, and improve their decision making skills. With the Lasallian emphasis on the value and impact of personalized interactions among professors and classmates, our students are fully engaged in their education.

La Salle's graduate programs teach our students the application of the latest business and analytical thinking and facilitates the development of their professional and people-oriented skills. In the virtual classroom, our faculty stress the interaction of theoretical knowledge with practical experience and shared ideas. They also challenge our graduate students to maximize their "natural" resources for success. Our professors are committed to the Lasallian tradition of teaching, which means being accessible, focusing on the individual, and contributing to a sense of community.

La Salle understands the lifestyles of its graduate students and is committed to making sure it is as easy as possible to register for courses, meet with a professor or take a semester off, if necessary.

The School of Business and the Graduate Certificate Programs are accredited by the most prestigious worldwide business school accrediting organization AACSB International, the Association to Advance Collegiate Schools of Business.

Mission

School of Business' Mission

Experiential and engaged learning is at the heart of everything we do. We provide excellence in business education through the integration of current business concepts with diverse experiential learning opportunities. As a Catholic Lasallian university, we are committed to the principle that all knowledge is practical and empowering, filled with the capacity to transform lives. Anchored by a foundation which affirms the value of both liberal arts and professional studies, our students are

prepared to lead engaged and fulfilling lives marked by a commitment to the common good.

Graduate Business Certificate Program Mission

La Salle University's Graduate Business Certificate Programs enable students to develop and strengthen the leadership skills and functional knowledge necessary for the advancement of their current careers and life goals. It is a program where experienced people from diverse professional backgrounds come together to connect, collaborate and learn.

Program Specific Information

Business education has been part of the La Salle curriculum since its founding in 1863. The School of Business, one of three schools in the University, was established in 1955, and its MBA program began in 1976.

As a business school in a Catholic, Lasallian University, students are taught fundamental business knowledge and skills within an ethical framework which emphasizes the primacy and value of human dignity.

Accreditation

The Business School is accredited by the Association to Advance Collegiate Schools of Business (AACSB International) which establishes standards designed to ensure excellence. Less than 5 percent of the world's business schools are accredited by AACSB. As an AACSB-accredited business school, the Dean's office and faculty use continuous quality-improvement processes to ensure that the many offerings of the School of Business are of the highest quality.

Admission Deadlines

There are no set deadlines. However, we recommend that all application documents be received by August 15, December 15, and April 15 for the fall, spring, and summer terms, respectively.

Contact the graduate business office if you have any questions at gradbusiness@lasalle.edu.

Admission Requirements

Students must have completed the Graduate Business Foundation Certificate to be eligible for the Business Systems and Analytics Graduate Certificate.

The Graduate Admission Committee evaluates each applicant's interest, aptitude, professional experience and prior academic success to assess his/her potential for achievement in graduate business studies.

Before an applicant will be evaluated, he/she must submit the following information:

- Application (Online)
- Official transcripts from the college/university from which a bachelor's degree was earned, and, if applicable, Master's degree. Applicants will be notified additional transcripts must be submitted for advising purposes.
- Test scores from the Graduate Management Admission Test (GMAT), or, with permission of the Director, the Graduate Record Examination (GRE). ***Based on prior academic and/or professional success, the admission requirement to take the GMAT/GRE may be waived or deferred. Please see the section below "Waiver of GMAT or GRE".***
- Professional resume

Waiver of GMAT or GRE Requirement

Applicants that have earned a master's degree or higher from a program accredited in its discipline will be waived from the GMAT or GRE exam requirement. Additionally, applicants with an undergraduate business degree from an AACSB-accredited program who have a minimum overall grade point average of 3.2 or above are not required to complete the GMAT or GRE exam for admission into the program.

The GMAT (or GRE) may be waived for additional applicants at the discretion of the Admission Committee upon reviewing an applicant's overall profile.

The GMAT/GRE may be deferred and eventually waived if an applicant has graduated with a 3.0 GPA in any undergraduate discipline and has at least 2 years of business experience. These students are eligible to take up to 12 credits in the program. If the student achieves a B- or better in each course and an overall GPA of 3.3, the GMAT/GRE will be waived. Students that qualify for a GMAT waiver may not be eligible for financial aid loans until they are fully (regularly) accepted to the program.

Admission Process

Students can begin the admissions process by completing an application on our website here (<https://www.lasalle.edu/apply-to-la-salle/>).

All documents should be sent to the following:

Office of Graduate Enrollment
La Salle University- Box 826
1900 W. Olney Avenue
Philadelphia, PA 19141
215.951.1100/ Fax 215.951.1462
grad@lasalle.edu

Because each applicant's background and profile is unique, the Admission Committee does not establish specific quantitative minimum requirements for admission; the admission committee's decisions are based on evaluating many factors to determine a student's potential for success in a graduate business program.

Please refer to the University's Nondiscrimination Policy in the General Reference section of this catalog. Admission is based solely upon an applicant's qualifications.

Transfer of Credit

Course credit may not be transferred into graduate certificate programs.

Degree or Certificate Earned

Certificate in Business Systems & Analytics

Required for Program Completion

- Courses
 - 4 Courses
- Credits
 - 12 Credit Hours
- GPA
 - 3.0

Student Learning Outcomes

Learning Goal 1: To use analytic methods and information systems tools and technologies to drive effective and data-driven solutions to business problems and decisions.

- Learning Outcome 1.1: Students should be able to perform data analysis using various analytical techniques, interpret results to solve business problems and make informed business decisions.
- Learning Outcome 1.2: Students should be able to use data management tools and technologies to improve organizational support of data-driven solutions to business problems and decisions.
- Learning Outcome 1.3: Students should be able to formulate problems and develop data-driven solutions to business problems and decisions using information systems and analytics tools and technologies.
- Learning Outcome 1.4: Students should be able to identify, formulate, and solve optimization problems, and perform sensitivity analysis and simulation to examine alternative scenarios.

Learning Goal 2: To effectively communicate the results of analytic solutions to business problems and decisions.

- Learning Outcome 2.1: Students should be able to effectively convey, through oral and written communication, the results of analytical solutions to business problems and decisions.
- Learning Outcome 2.2: Students should be able to perform exploratory analysis and design effective reports, visualizations, and dashboards.
- Learning Outcome 2.3: Students should be able to apply data visualization best practices.

Learning Goal 3: To use analytics tools and technologies for effective functional business decision making.

- Learning Outcome 3.1: Students should be able to utilize accounting analytics methods and technologies for financial and managerial accounting problem solving and decision making.
- Learning Outcome 3.2: Students should be able to use financial analytics tools and techniques in business decision making.
- Learning Outcome 3.3: Students should be able to apply marketing analytics tools and metrics to investigate the impact of marketing activities and strategies on business productivity.

Tuition and Fees

Students may find the tuition and fee schedule on the Financial Aid website (<http://www.lasalle.edu/financialaid/undergraduate-tuition-and-fees/>).

Tuition Assistance

There are loan programs available for graduate students. Information about financial aid and the application forms may be obtained from Student Financial Services (<https://www.lasalle.edu/financialaid/>), La Salle University, Philadelphia, PA 19141 or by calling 215.951.1070.

M.S. Academic Standing and Graduation Requirements

Every student in La Salle University's M.S. program is required to maintain a cumulative scholastic average of 3.0, which translates to an overall G.P.A. equivalent to a B (a B- average is not sufficient). A student whose academic performance falls below this standard is subject to academic

review by the Program Manager, and may be required to withdraw from the program, revise his/her course of study or repeat specific classes.

A student with a cumulative grade point average below 3.0 is automatically in academic jeopardy whether or not he/she receives written notification of this status, and regardless of the number of credits earned. Students with a G.P.A. below 3.0 should consult with the Program Manager to ascertain any potential actions to improve academic success within the program.

To graduate from the M.S. in Business Analytics Program at La Salle, a student must have:

- A minimum of a 3.0 G.P.A. overall within the M.S. curriculum, and,
- No more than two grades of “below” a B- in all courses.

Should a student complete all required courses, but fall below a 3.0 cumulative GPA, he/she will not be eligible to graduate.

Academic Requirements

Students must complete 12 credits to complete the Certificate in Business Systems & Analytics at La Salle University.

Business Perspective

The **Business Perspective** course is designed to develop a general understanding and acquire core competencies in business analytics before taking more advanced and technical courses.

Data Perspective

The **Data Perspective** courses are designed to teach students the role of data in business analytics by studying data warehousing, data mining, simulation, and optimization. The students also learn to communicate the practical implications of quantitative analyses effectively through data visualizing and dashboarding.

Systems Perspective

The **Systems Perspective** courses are designed to teach students the problem-solving methodology that employs computer programming and scripting. Emphasis is placed on identifying the capabilities and limitations of statistical computing languages for big data. Students will learn skills to solve big data problems by designing the solution logic and formal representation of program specifications using selected high-level languages. The students also learn about systems analysis and structured analysis, and design methodology for complex business systems.

| Code | Title | Credits |
|------------------------------|---|---------|
| Business Perspective | | |
| MBA 693 | Business Analytics for Informed and Effective Decision Making | 3 |
| Data Perspective | | |
| BSA 720 | Data Warehousing and Data Mining | 3 |
| Select one of the following: | | 3 |
| BSA 730 | Optimization and Simulation | |
| BSA 740 | Data Visualization | |
| Systems Perspective | | |
| Select one of the following: | | 3 |
| BSA 700 | Business Applications Programming | |

BSA 710 Systems Analysis and Database Design

Total Credits

12

Course Sequence

A student's course sequence and timing will be based upon the university's course schedules for each academic year. Upon acceptance to the program, students will receive a Model Roster with the course requirements and a recommended course sequence to complete their graduate certificate.

Students must complete the Graduate Business Foundation Certificate before progressing in the Business, Systems, and Analytics Certificate program.

The online courses are offered in 8-week terms, five times per year. The terms begin in August, October, January, March, and May. New students can enroll in any of the five-starts.

We offer each accounting course in a fully online format while only some of the accounting courses are offered in an on campus format.

- MBA 693 is generally offered every term.
- BSA 720 is only offered fully online and on campus during the Fall I terms.
- BSA 725 is only offered fully online during the Fall II terms.
- BSA 740 is offered fully online and on campus during the Spring I terms.
- BSA 710 is offered fully online and on campus during the Spring II terms.
- BSA 730 and BSA 700 are offered fully online and on campus during the Summer terms.

The course schedule listed above is subject to change each academic year.

Course Descriptions

MBA 693 Business Analytics for Informed and Effective Decision Making
This course introduces students to the growing field of business analytics. Business analytics is the use of data, information technology, statistical analysis, and quantitative methods and models to support effective organizational problem solving and informed decision making. The course includes methods, tools, and techniques for summarizing and visualizing historical data, which is relevant to descriptive analytics – the use of data to find out what has happened in the past or is currently happening; methods, tools, and techniques for extracting information from existing data in order to determine patterns, which is relevant to predictive analytics – the use of data to find out what will happen in the future; and methods, tools, and techniques for optimization, which is relevant to prescriptive analytics - the use of data to determine the best course of action in the future.

BSA 700 Business Applications Programming

This course is designed to introduce students to the principles of business application programming for business analytics using selected high-level languages such as R, Python, and Hadoop. Emphasis is placed on identifying the capabilities and limitations of statistical computing languages for big data. Students will learn skills and techniques to solve big data problems through a series of steps that involve identification of problems, design of the solution logic, formal representation of program specifications, and implementation. The focus is on accessing data from multiple sources, manipulating different types of programming objects, performing character manipulation, and generating reports. Students will design and develop several computer programs throughout the term.

Prerequisite(s): MBA 693

BSA 710 Systems Analysis and Database Design

This course is about structured analysis and design methodology for complex business systems. Students become familiar and use Entity Relationship Diagrams, Data Structure Diagrams, Data Flow Diagrams, Data Dictionaries, and Process Specifications to develop Systems Specifications. These specifications are utilized as the blueprint to develop and implement relational databases, and explore the Structured Query Language (SQL) used to manipulate and operate the database.

Prerequisite(s): MBA 693

BSA 720 Data Warehousing and Data Mining

This course focuses on data warehousing and data mining in organizations. Topics covered in the course include: data warehousing and mediation techniques aimed at integrating distributed, heterogeneous data sources; data mining techniques such as rule-based learning, decision trees, association rule mining, and statistical analysis for discovery of patterns in the integrated data; and evaluation and interpretation of the mined patterns using visualization techniques.

Prerequisite(s): MBA 693

BSA 725 Healthcare Analytics

Today's healthcare organizations are under intense regulatory and financial pressures to improve quality, efficiency, patient safety, patient satisfaction, and positive outcomes. This course is concerned with the study of how descriptive, diagnostics, predictive, and prescriptive analytics tools and techniques can impact the overall performance of healthcare organizations. Students learn to extract, collect, analyze, visualize, and interpret data from patient health records, insurance claims, financial records, and tell a compelling and actionable story. Class exercises enable students to understand ways to improve the effectiveness and efficiency of healthcare organizations.

Prerequisite(s): MBA 693

BSA 730 Optimization and Simulation

This course introduces students to decision making and problem solving with simulation and optimization tools and techniques. Students learn to formulate and construct a decision model with spreadsheets and use the optimization tools, Monte Carlo simulation, and sensitivity analysis to generate and interpret solutions. The course covers different types of optimization and simulation models, including linear programming, sensitivity analysis, integer linear programming, goal programming, multiple objective optimization, simulation modeling, and queuing theory.

Prerequisite(s): MBA 693

BSA 740 Data Visualization

One of the skills that characterize great business data analysts is the ability to communicate practical implications of quantitative analyses to any kind of audience member. In this course, students will learn how to visualize data, tell a story, and explore data by reviewing the core principles of data visualizing and dashboarding. The course aims to focus on effective and high impact visualizations of common data analyses to help them convey conclusions directly and clearly. Students will be able to get practiced in designing and persuasively presenting business "data stories" that use these visualizations, helping stakeholders make decisions and take action based on their business data capitalizing on design principles. Prerequisite(s): MBA 693

Faculty

Dean: Cary A. Caro, Ph.D.

Associate Dean: Michael Moll, M.B.A.

Assistant Dean, Graduate Business Programs: Nicole Blair, M.B.A., M.S.

Professors: Ambrose, Borkowski, Cooper, Fornaciari, Jiang, Tavana, Wentzel

Associate Professors: Chia, Kennedy, Lafond, Leaub, Pierce, Reardon, Szabat, Ugras

Assistant Professors: Adams, Bruce, Coyle, DiPietro, Dynan, Otto, Radetskii

Program Contact Information

Graduate Business Office

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(215) 438-6676

Staff Contact Information

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If you have any questions regarding the Graduate Business Certificate programs, please contact: gradbusiness@lasalle.edu