

DATA ANALYTICS

Overview

The Data Analytics programs at Laredo College prepare students with the technical knowledge, analytical skills, and practical experience needed to collect, manage, analyze, and communicate data in support of informed decision-making across a wide range of industries. Beginning with the Associate of Applied Science (AAS) in Data Analytics and continuing through the Bachelor of Applied Technology (BAT) in Data Analytics, students develop progressively advanced competencies in programming, database management, statistics, data visualization, artificial intelligence, cloud computing, data engineering, and emerging analytical technologies.

The curriculum emphasizes hands-on, project-based learning through laboratory activities, real-world datasets, applied projects, and a comprehensive capstone experience. Students gain experience using industry-relevant software and analytical tools while strengthening their technical proficiency, analytical reasoning, problem-solving, ethical decision-making, project management, leadership, and professional communication skills.

The Associate of Applied Science (AAS) in Data Analytics provides the technical foundation for entry-level careers in data analytics, business intelligence, reporting, and related technology fields, and serves as a seamless pathway to the Bachelor of Applied Technology (BAT) in Data Analytics. The BAT is a degree-completion program that builds upon students' technical education through advanced upper-division coursework, preparing graduates to analyze complex data, develop data-driven solutions, and support organizational decision-making across business, healthcare, government, education, manufacturing, and other industries.

Graduates are prepared for careers in data analytics, business intelligence, data engineering, data architecture, technology consulting, and other data-focused professions. The programs equip students with the technical, analytical, and professional competencies needed to adapt to evolving technologies and meet the growing demand for data-informed decision-making in today's workforce.

The Bachelor of Applied Technology in Data Analytics consists of 120 semester credit hours (SCH), including:

- **Core Curriculum (42 SCH)** – General Education courses required by the Texas Higher Education Coordinating Board and Laredo College.
- **Technical Specialty Coursework (30 SCH)** – Technical coursework completed through an approved Associate of Applied Science (AAS) degree or approved certificate pathway.
- **Prescribed Lower-Division Coursework (18 SCH)** – Foundational coursework in programming and related disciplines that prepares students for upper-division study in data analytics.
- **Upper-Division Major Coursework (30 SCH)** – Advanced coursework in data analytics that develops specialized technical knowledge, analytical reasoning, leadership, and professional competencies through applied learning experiences.

Approved Technical Pathways

The Bachelor of Applied Technology (BAT) in Data Analytics is designed as a degree-completion program for students who have completed an approved technical associate degree or certificate. Approved technical pathways provide students with the foundational technical knowledge upon which the upper-division curriculum is built.

Students who have successfully completed one of the following programs are eligible to receive up to 30 semester credit hours (SCH) of technical specialty coursework toward the Bachelor of Applied Technology in Data Analytics:

Cloud Computing, Associate of Applied Science (<https://catalog.laredo.edu/degree-programs-certificates/workforce-education/computer-information-systems/cloud-computing-associate-applied-science/>)

Network Administration, Certificate II (<https://catalog.laredo.edu/degree-programs-certificates/workforce-education/computer-information-systems/network-administrator-certificateII/>)

Information Assurance, Associate of Applied Science (<https://catalog.laredo.edu/degree-programs-certificates/workforce-education/cybersecurity-institute/cyber-defense-associate-applied-science/>)

Data Analytics, Associate of Applied Science (<https://catalog.laredo.edu/degree-programs-certificates/workforce-education/data-analytics/aas-data-analytics/>)

Students who have completed other technical associate degree or certificate programs from Laredo College or another accredited institution may also be considered for admission. Coursework will be evaluated on a case-by-case basis by the Program Director to determine transferability and identify any additional lower-division coursework required for admission into the program.

Progression Requirements

Students enrolled in the Bachelor of Applied Technology (BAT) in Data Analytics are expected to make satisfactory academic progress toward degree completion.

To progress through the program, students must:

- Successfully complete all prescribed Pre-BAT coursework before admission into the Upper-Level BAT curriculum.
- Complete all Texas Success Initiative (TSI) requirements prior to entering the Upper-Level BAT curriculum.
- Maintain a cumulative grade point average (GPA) of at least 2.5.
- Earn a grade of B or better in each upper-division BAT course. Students earning a grade below a B must repeat the course before progressing in the program.
- Complete all degree requirements in accordance with the approved degree plan.

Failure to meet these progression requirements may delay admission into the Upper-Level BAT curriculum or graduation from the program.

Withdrawal

Students who withdraw from the Bachelor of Applied Technology (BAT) in Data Analytics are subject to all Laredo College policies and procedures governing course withdrawal.

Students who withdraw from an upper-division BAT course should consult with the Program Director before reenrolling, as course sequencing and cohort scheduling may delay progress toward degree completion.

Continuation

Students admitted to the Upper-Level BAT curriculum are expected to maintain continuous enrollment in accordance with the approved degree plan.

Students who interrupt enrollment for one or more semesters must consult with the Program Director before returning to the program. Readmission to the Upper-Level BAT curriculum may be subject to course availability, curriculum changes, and satisfaction of current program requirements.

Attendance

Regular attendance and active participation are essential to student success in the Bachelor of Applied Technology (BAT) in Data Analytics.

Students are expected to comply with the attendance requirements established by each course instructor and with all Laredo College attendance policies. Excessive absences or failure to actively participate in course activities may affect academic performance and progression within the program.

Program Contact Information

For additional information regarding the Bachelor of Applied Technology in Data Analytics, contact the Computer Science & Technology Department.

Computer Science & Technology Department

Laredo College | Fort McIntosh Campus

D.D. Hachar Vocational Building

Phone: (956) 721-5317

Email: BATData@laredo.edu

Degrees & Certificates

Data Analytics, Bachelor of Applied Technology (<https://catalog.laredo.edu/degree-programs-certificates/workforce-education/data-analytics/bat-data-analytics/>)

Data Analytics, Associate of Applied Science (<https://catalog.laredo.edu/degree-programs-certificates/workforce-education/data-analytics/aas-data-analytics/>)

Admission Requirements

Students seeking admission to Laredo College must submit an electronic admissions application through ApplyTexas and all required supporting documentation in accordance with the Laredo College General Policy for Admission.

Applicants to the Bachelor of Applied Technology (BAT) in Data Analytics must:

- Complete the Laredo College admissions process.
- Submit official transcripts from all previously attended colleges and universities.

- Meet all institutional admission requirements established by Laredo College.
- Submit the Bachelor of Applied Technology in Data Analytics Program Entry Application.

Program Admission Criteria

The Bachelor of Applied Technology (BAT) in Data Analytics is a degree-completion program designed for students who have completed, or are completing, the program's 30 semester credit hours of Technical Specialty Requirements.

Students may satisfy the Technical Specialty Requirements through one of the following pathways:

- Completion of an approved Associate of Applied Science (AAS) degree;
- Completion of an approved technical certificate; or
- Completion of approved technical coursework from one or more qualifying technical programs as a Pre-BAT student.

Students who are not pursuing an approved technical degree or certificate may be admitted as Pre-BAT students to complete the required Technical Specialty Requirements prior to admission into the Upper-Level BAT curriculum.

Admission Requirements

Applicants seeking admission into the Upper-Level BAT curriculum must:

- Be fully admitted to Laredo College.
- Submit a completed Bachelor of Applied Technology in Data Analytics Program Entry Application.
- Complete the required 30 semester credit hours of Technical Specialty Requirements.
- Complete all prescribed lower-division coursework identified in the degree plan.
- Complete all Texas Success Initiative (TSI) requirements.