Frontier
INSTITUTE of
TECHNOLOGY

CATALOG

Academic Curriculum & Student Information

January 1, 2026 - December 31, 2026

Frontier Institute provides this catalog in electronic format to all applicants prior to signing an enrollment agreement. As a prospective student, you are encouraged to review this catalog before signing an enrollment agreement. You are also encouraged to review the School Performance Fact Sheet, which must be provided to you before signing an enrollment agreement. Both the catalog and School Performance Fact Sheets are available at the Frontier Institute website. Frontier Institute shall provide this school catalog to any person upon request.

Frontier Institute reserves the right to make changes to the provisions of this catalog and its rules and procedures at any time, with or without notice, subject to licensing requirements. This catalog is neither a contract nor an offer to contract but merely an outline of the programs currently offered by the institution and its policies.

Go to www.frontiertech.edu or more information.

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Frontier Institute
140 E Broadway Ave #25, Jackson, WY 83001
Phone & Fax (307) 264-2843
www.frontiertech.edu

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Mission

The mission of Frontier Institute is to develop, inspire, and empower leaders to effect global and community transformation by delivering accessible, rigorous, and practical distance education in the areas of leadership, management, entrepreneurship, and technology.

About Frontier Institute

Frontier Institute of Technology was founded in 2024 and is a private, non-profit institution accredited by the Distance Education Accrediting Commission. The Distance Education Accrediting Commission is recognized by the U.S. Department of Education as an institutional accrediting agency and by the Council for Higher Education Accreditation (CHEA).

Frontier Institute of Technology prepares students to build, lead, question, and think critically in an era shaped by disruptive technologies. The institution's programs are centered around team projects, AI-native workflows, and entrepreneurship as core elements of how students work, learn, and solve urgent, complex human problems – not around traditional curricula delivered through conventional methods.

The institution is committed to helping students pursue ambitious academic and career goals while cultivating the ethical judgment that AI-augmented work demands. As technology grows more powerful, the need for social responsibility, principled leadership, and independent critical thinking grows with it. These values are integrated across every program the institution offers.

Frontier strives to serve meritorious students from a broad range of geographic, ethnic, and socioeconomic backgrounds. The institution recruits and retains faculty and staff who possess not only exceptional technical expertise, but a commitment to mentoring and coaching talent prepared for the challenges of the 21st century. In its recruitment and retention of students, faculty, and staff, Frontier Institute of Technology maintains openness to all qualified persons and fosters academic freedom and diversity within the context of its core values: innovation, technology, and mentorship in service of human-centered problem solving.

Location and Facilities

The institution is headquartered at 140 E Broadway #25, Jackson, WY 83001. While all instruction is provided online, its facility functions as its administrative headquarters, featuring an office, a conference room, etc.

Hours of Operation

The institution is open Monday through Thursday, 9:00AM to 5:00PM and Friday 9:00AM to 2:00PM (Mountain Time).

Accreditation and Approvals

Distance Education Accrediting Commission

Frontier Institute is accredited by the Distance Education Accrediting Commission (DEAC).

The Distance Education Accrediting Commission is listed by the U.S. Department of Education as a recognized accrediting agency. The Distance Education Accrediting Commission is recognized by the Council for Higher Education Accreditation (CHEA).

1101 17th Street NW, Suite 808, Washington, DC 20036
Tel: (202) 234-5100
Fax: (202) 332-1386
info@deac.org
www.deac.org

Wyoming Department of Education

Frontier Institute is authorized to establish a physical presence and offer educational services to students in Wyoming by the Wyoming Department of Education.

Leadership

Board of Directors

The responsibility of the Board of Directors is to appoint the President and review and approve the annual budget, strategic plan, and institutional policies of Frontier Institute.

J. Eric Wright, MBA
Andrew Powell, MBA

William R. Cockayne, Ph.D.

Administration

Dr. Nathan Breitling, President
Dr. Kimberly Bogle-Jubinville, Chief Academic Officer & Registrar
Sharon O'Donnell, Chief Growth Officer
Dr. Keith Wade, Director of Graduate Programs
Dr. Gwen Britton, Director of Undergraduate Programs
Ilona Kreynis, VP of Finance

Board of Advisors

Frontier Institute values the input and oversight of independent leaders and practitioners. To ensure consistent input and review of the curriculum and outcomes of its programs, Frontier Institute maintains a Board of Advisors for each group of programs. The current Board of Advisors members for the Master of Leadership and Management program are Byron Chung, MBA, Anthony Duran, and Vishal Shah, Ph.D. The current Board of Advisors members for the undergraduate programs are Julien Barbier, Dr. Jaco Jansen van Rensburg, and Fred Swaniker.

Faculty

Faculty at Frontier Institute are selected for their subject matter expertise, their innovative teaching techniques, and their ability to integrate theory and practice. The faculty of the institution have deep research and extensive practical experience in their respective areas, and have diverse personal, professional, and academic backgrounds.

Lista Atiento Abutto, B.Sc., Jomo Kenyatta University of Agriculture and Technology; M.B.A., Quantic School of Business and Technology.
- Area of Focus: Business, Data Analytics

Bosede F. Akinbolusere, B.Sc., University of Nigeria; M.A., Makerere University
- Area of Focus: Gender Analysis & Economics

Chris Barnett, B.Sc., University of Cape Town; M.S., University of Cape Town; Ph.D., University of Cape Town.
- Area of Focus: Data Science, Scientific Computing

Sarah Blewett, B.Sc., University of KwaZulu-Natal; M.Sc., University of KwaZulu-Natal.
- Area of Focus: Computer Science, Data Science, Software Engineering

Chad J. Brache, B.Sc., University of Cape Town; M.Sc., University of Cape Town.
- Area of Focus: Pure Mathematics, Data Science

Stefan Coetzee, B.Sc., University of the Free State; B.Sc., University of Pretoria; M.Sc., University of Pretoria; Ph.D., University of Pretoria.
- Area of Focus: Computational Chemistry, Data Science

Monique Coombes, B.Ed, Cape Peninsula University of Technology; B.Ed., Stellenbosch University; M.Ed., Cape Peninsula University of Technology.
- Area of Focus: Writing and Composition

Jeremiah Essuman, B.A., University of Ghana; M.Phil. University of Ghana.
- Area of Focus: English Language, Literature, and Communications

Erishia Gabier, M.Sc., Universitat Pompeu Fabra and ISGlobal.
- Area of Focus: Data Science, Biomedical Analysis and Research

Audrine Iradukunda, B.A.B.M., Southern New Hampshire University; M.D.P., Regis University.
- Area of Focus: Business, Social Entrepreneurship, Sustainable Development

Tineyi Madungwe, B.Com., University of South Africa; M.B.A., National University of Science and Technology; M.S., University of Kent.
- Area of Focus: Business, Data Analytics

Victor K. Muposhi, B.S., Bindura University; M.S., Bindura University; Ph.D. Chinhoyi University of Technology.
- Area of Focus: Conservation Biology, Wildlife Management

Kelly Ng-Lun, B.B.A., York University; M.B.A., York University.
- Area of Focus: Business

Edward Opoku, B.A., University of Waterloo, Pg.C., Glasgow Caledonian University Mauritius.
- Area of Focus: Entrepreneurship, Business, Cybersecurity

Shreyasi, B.Tech., College of Engineering, Roorkee, India; M.S., University of Oklahoma.
- Area of Focus: Data Science

Sixbert Sangwa, B.S., University of Rwanda; B.Div., Christian Leaders College; M.Min., Ballsbridge University; M.B.A., University of South Wales; M.A., The Open University; D.B.A., Team Impact Christian University; Ph.D., Team Impact Christian University; D.B.A., Universidad Empresarial de Costa Rica; Ph.D., Ballsbridge University; M.T.S., Nations University.
- Area of Focus: Business, Leadership, Management, Ministry, Theology

Rob Shah, CPA, B.S., Arizona State University, M.B.A., Keller Graduate School of Management, PH.D., Northcentral University.

- Area of Focus: Business, General Management

Geoffrey VanderPal, B.S., Columbia College, M.B.A., Webster University, D.B.A., Nova Southeastern University, CFP®, CTP®, PMP®, SHRM-CP, CHRM-SCP – Professor, Author, and Entrepreneur.

- Area of Focus: Business, Contract Management, Project Management

Keith Wade, B.A., Oakland University, M.B.A., University of Detroit-Mercy, Ph.D., Argosy University – Consultant.

- Area of Focus: Supply Chain Management, General Management

Regina Williams, B.S., Ohio University; M.A., Ohio University; M.A.M., Columbia College - Chicago; M.S., Purdue Global.

- Area of Focus: Media Arts, Communication, Instructional Design and Technology

Student Services

Frontier Institute offers academic advising, including course requirement reviews, course scheduling, registration assistance, course sequencing advising, and other related requests for student assistance. Placement assistance is not offered.

Online Library Services

Frontier Institute is a member of the Library and Information Resources Network (LIRN). LIRN provides a core library collection with access to:

- Gale Cengage: Over 40 databases including Academic OneFile, Business Collection, Business Economics and Theory Collection, Business Insights: Global, Computer Database, Gale Ready Reference Shelf, Gale Virtual Reference Library, Global Issues in Context, Information Science and Library Issues Collection, InfoTrac Newsstand, LegalTrac, Military and Intelligence Database, and the Student Resources in Context.
- ProQuest Central: Access to several databases with 13,000+ full-text scholarly journals; 6,500+ full-text magazines and trade journals; 2,300+ full-text newspapers; 385,000+ market and industry reports.
- EBook Central: Provides students with an instant, multidisciplinary library of eBooks from authoritative publishers.
- Additional Internet Resources:

- ProQuest Dissertation and Theses: Contains over 5 million citations and 3 million full-text works from thousands of universities.
- ABI/Inform: Access to thousands of full-text journals, dissertations, working papers, and key business and economics periodicals.
- IBISWorld: Provides market research on thousands of industries worldwide to research involving case studies or business sector analysis.
- Directory of Open Access Journals: Access to full text, quality controlled scientific and scholarly journals, covering all subjects and many languages.
- ERIC: A comprehensive, easy-to-use full-text database of education research and information.

Access to the online library services is 24 hours per day, 7 days a week. A qualified librarian is available for any research needs.

Career Services

Frontier Institute does not offer career services. It does not guarantee job placement, advancement, continued employment, or level of income or wage rate upon program/course completion or graduation.

Department Contact Information

Physical Address (UPS, FedEx)
Frontier Institute
140 E Broadway, # 25
Jackson, WY 83001

PO Box (for USPS)
Frontier Institute
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Hours of Operation (Mountain Time)
9:00 AM to 5:00 PM M-Th
9:00 AM to 2:00 PM Fri

OFFICE OF THE PRESIDENT

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Chief Academic Officer & Registrar
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- Curriculum Questions
- Academic Governance

Dr. Keith Wade
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- Curriculum Questions
- Grade Disputes
- Instructor Issues
- Program Changes

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- Curriculum Questions
- Grade Disputes
- Instructor Issues
- Program Changes

ENROLLMENT & STUDENT SERVICES

Registrar
Chief Growth Officer
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registrar@frontiertech.edu

- Admission Requirements
- Transfer Credit
- Application Status
- Course Evaluations
- Exam Requests
- Graduation Requirements
- Leave of Absence
- Proctoring

Graduate School

Master of Leadership and Management

Today's management environment is exceptionally turbulent. Resources are scarce, technology advances rapidly, requirements and perceived needs change quickly, the global marketplace is very competitive, and the laws and regulations are becoming more numerous and more complex.

Today's managers, both in industry and government, must have two essential elements to respond effectively to the changing environment. The first is a personal value system appropriate to the problems and human expectations of the times. The second is the ability to understand and interpret basic leadership and management disciplines and technological, environmental, and political trends to achieve organizational and societal goals.

Frontier Institute serves as an institution of higher learning for persons engaged in the areas of leadership, management, and business. The function of the institution is to define and provide the education for successful participation in those fields. Students may take individual courses as their needs dictate, or they may participate in the institution's degree programs.

Frontier Institute offers a rigorous and intellectually demanding program leading to a Master of Leadership and Management (MLM) degree. The institution's programs are completely structured, extensively researched and documented educational programs, organized and conducted by a professional faculty with an extensive practical and theoretical background. These rigorous programs produce a management education of substance, quality, and considerable market value.

The programs of the institution provide a choice of plans for the educational development of managers based on the needs and obvious career channels of the individual firm or agency and the industry. This approach is designed to reduce the waste of scarce educational time and dollars in attendance at random courses and seminars. The program is organized so that individual managers can be the principal determinants as to what happens to them educationally, within the parameters of the needs of their organization and industry, so that their education will have meaning to all three.

Instructional Modality and Materials

The MLM program features an online, self-paced modality, providing a high-quality and convenient method of pursuing a graduate degree. This distance education program is designed for the adult who has family, job, and community responsibilities.

Courses can start each month, and are offered in 16-week terms. Students engage with the material and interact with faculty via the institution's learning management system. Student work is typically

graded within 72 hours of submission, and results are available immediately within the Learning Management System.

Course materials are structured progressively, such that learning moves from the simple to the more complex, with review exercises and low-stakes assessments offered frequently to ensure that students can easily absorb the material. Additionally, several case studies and exercises are assigned in each course, illustrating actual, real-world problems. The major objectives of the cases and exercises are to encourage the student to engage in independent thinking, apply their learning to real-world situations, and assist in developing skills in using the knowledge imparted in the course.

See also Technology and Equipment Requirements.

Purpose of the Program

This program provides a broad-based education in leadership and management principles and practices that will enable working professionals to navigate the ever-changing world of complex organizations. The program combines the traditional approaches of leadership and management with the emerging ideas necessary for leading organizations in the 21st century.

The program provides a holistic perspective to the fields of leadership and management. Certain courses explore more specialized areas such as organizational development, behavior and change management, cross-cultural management, leading innovation, negotiation and conflict management, and team building. Other courses provide a detailed knowledge of the quantitative and qualitative tools for research, critical thinking, and decision-making.

The MLM program is designed to produce superior leaders with a management background and increased skills for today's marketplace.

Program Learning Outcomes

The overall objectives of this program are for the student to be able to:

- Analyze and interpret key concepts, theories, and practices in management and leadership, integrating knowledge from diverse disciplines.
- Evaluate and apply ethical principles in communication, decision-making, and leadership, fostering integrity and authenticity in organizational settings.
- Synthesize strategies that promote creativity, adaptability, and change, while effectively navigating conflict and negotiation in diverse organizational environments.
- Design and conduct rigorous business research and critically assess organizational behaviors and human resource strategies to enhance team dynamics and performance.
- Integrate cross-cultural management practices and critical thinking in leadership roles, promoting inclusivity and informed decision-making.

Program Length

The Master of Leadership and Management requires the completion of 36 credits. The degree program is typically completed in three (3) years. This duration may vary depending on individual course load and any prior credits transferred. The time limit for completing the degree program is seven (7) years.

Degree Requirements

The Master of Leadership and Management program is organized into a curriculum of leadership and management courses that stress the core principles and practices as well as new approaches to leading and managing any organization.

The student must complete a total of twelve (12) courses totaling a minimum of 36 semester credits and then complete a program Comprehensive Examination or complete an approved Final Project within seven years of enrollment in the program.

The courses may all be taken through distance education. Please see the Tuition and Fees section for course fees or visit Frontier Institute's website at www.frontiertech.edu.

Master of Leadership and Management

- BUS 602 - Essentials of Management
- BUS 607 - Communications and Ethics
- LDR 611 - Leading Creativity and Innovation
- BUS 612 - Leadership Principles and Practices
- PMP 636 - Negotiation and Conflict Resolution
- BUS 653 - Business Research Methods
- BUS 659 - Organizational Behavior and Human Resources
- LDR 668 - Cross-Cultural Management
- LDR 669 - Critical Thinking and Decision Analysis
- LDR 670 - Organizational Theory, Design and Change
- PMP 671 - Building and Managing Project Teams
- LDR 676 - Advanced Approaches in Leadership

– Comprehensive Examination or institution-approved Final Project is required.
– Each course is 3 semester units.
– Program requires completion of 36 semester units.

Comprehensive Exams and Final Projects

In partial fulfillment of their degree requirements, Frontier Institute Master of Leadership and Management degree candidates must complete a Final Project or Comprehensive Exam.

The Comprehensive Examination requires students to rigorously review their entire course of study, while the final project requires students to combine their academic experience with their life and business experience and successfully develop and implement a new effort in a real business situation. Both the Comprehensive Examination and the project provide students with outstanding learning experiences from which to expand and apply their professional skills. The project, however, can be a more rigorous and demanding undertaking.

The Comprehensive Examination takes an average of 60 hours to complete. Frontier Institute requires that the exam be completed within 50 days of the student's receipt of the examination package. In comparison, acceptable final projects tend to take comparatively more time and commitment to complete due to the necessary planning, research, development, writing, and review process. Students have 120 days to complete the project, not including final review.

Comprehensive Exams

Students who approach their date of graduation will be contacted in advance to prepare for and schedule their Comprehensive Exam. Comprehensive Exams may consist of multiple-choice questions, essays, and multiple case studies unique to the student's program of study.

Comprehensive Exam Learning Outcomes

By completing a Comprehensive Exam in fulfillment of an Frontier Institute Master's Degree, students will be able to:

1. Demonstrate their structured knowledge of leadership, management, and/or program management principles and practices.
2. Analyze real-world scenarios, applying knowledge in skill to solve real problems commonly encountered in leadership, management, or project management.
3. Evaluate the organizational impact of multiple techniques used in leadership, management, or project management.

Final Projects

The final project, as defined by Frontier Institute, is the development, implementation, documentation, and analysis of a new business undertaking. Examples might be the development of a business plan for a new business unit, the development and implementation of a contract analysis and negotiating position, the development of a program or project plan, or the development and implementation of a new business process. Projects are limited only by the innovation and resources of individual students.

All project proposals must pass Frontier Institute's review process.

Final Project Learning Outcomes

By completing a Final Project in fulfillment of an Frontier Institute Master's Degree, students will be able to:

1. Apply their structured knowledge of leadership, management, and/or program management principles and practices to a real-world business problem;
2. Demonstrate the role that research, critical analysis, and quantitative business skills play in the evolving business environment; and
3. Create a cogent, well-supported business proposal that reflects a deep understanding and awareness of today's competitive marketplace.

Project Proposal

The first step in the project approval process is the project proposal. Degree candidates must petition the Director of Graduate Programs (keith@elmwoodinstitute.org) for project approval in writing. This communication should contain a short description of the project.

The Associate Director of Academic Operations will forward the student's request to the Director of Education, who will appoint a Faculty Advisor for the project. The faculty advisor will review the request and recommend to the CAO approval of the topic, or request additional information on the topic.

Within 21 days of being notified, candidates must submit a detailed project proposal outlining the project to the Faculty Advisor. Project proposals must include a detailed explanation of the project to include:

Purpose of the Project
This element is the basis for the project and outlines what the project intends to accomplish and its business purpose.

Background of the Project
This element covers why the project is important in the short-term or long-term success of the business or government organization. What goals can be expected to be reached?

Research
What needs to be known? How will the information be obtained? What methods will be used?

Schedule
What milestones must be reached? At what milestone will the project be implemented or completed?

Results and Benefits
What specific results and benefits are anticipated? How will they be measured?

If the project is assigned as part of the student's regular business activities or will become part of a business at which the student is employed, a letter from the candidate's immediate supervisor approving the effort is required.

Projects that do not directly affect a current business activity may require a defense by the student as to the importance of the project as related to the education of the student or to the body of knowledge of the project's subject area.

Project Guidelines

Although all projects are unique, they will include some required elements. Each project will be designed in conjunction with the faculty advisor and must meet the approval of the evaluation committee.

A sample outline for the project report is furnished below. Also, the student is referred to the "Presenting Insights and Findings: Written and Oral Reports" in the BUS 653 Business Research Methods. An additional source is the "Research Project Guide" on the Oxford University website at: https://fdslive.oup.com/www.oup.com/orc/resources/xedition/brymanbrm4exe/student/project_guide/index.htm

Project Report (Sample Outline)

The body of the project report should be between 30 and 50 pages in length. A sample outline is presented below:

- Title Page
- Executive Summary
- Table of Contents
- List of Figures
- List of Tables
- Introduction
    - Purpose of project
    - Describe the problem
    - Why is this analysis appropriate?
    - Importance of the problem
    - The scope of the review
    - How the results of the review will be applied
    - Identify the research questions you hope to answer
- Methodology
    - Identify the method used to identify and locate sources
    - Explain the rationale used for selecting the sources to analyze
    - Explain the procedures to be used for analyzing the sources
    - Identify the criteria for evaluating the information found
- Analysis and Discussion (general points to consider)
    - Present evidence and ideas from sources
    - Concepts are organized by subtopics
    - Sources are grouped by concepts instead of individual entities
    - Grouping may be related to research questions
    - Validity of sources is stated to support your ultimate answers to your questions
    - Cite each of your statements by placing the number(s) identifying the reference(s) that support your statement
- Conclusions and Recommendations
    - Identify and synthesize findings

    - Systematically answer your research questions
    - Provide recommendations for:
        - Future research
        - Applications
        - Policies and procedures
        - Program revisions
        - Other warranted situations
- References
    - List each of your references using APA format (https://apastyle.apa.org/)
    - Number each of your references so you can cite your evidence in the Analysis and Discussion section.

Project Schedule

Like all business endeavors, the project must have a realistic schedule that also dovetails with the 120-day project schedule. Projects needing greater time periods may be too extensive for the educational goals of the student and Frontier.

The schedule, with major milestones, must be submitted to the faculty advisor within 21 days of the project's approval. Each part of the project – each milestone, each project chapter, or each section – must be submitted to the faculty advisor for approval as they are completed. Students may, of course, continue project work while the advisor is reviewing the project submissions. Each project section will not be considered finished until the section has been approved by the faculty advisor.

It may be that there will be faculty changes or suggestions that will be returned to students for evaluation and revision. Where appropriate, these changes must be instituted before the section is considered complete. All project sections must be completed before the project can be considered completed and credit earned. Following successful completion of the project, the student may petition for the awarding of the degree.

The difficulty of a project often leads to students underestimating the amount of time needed to complete it. In certain instances, students may petition for additional time to complete the project. Such requests are not granted automatically, and students must prove that the additional time is needed due to business situations, rather than a lack of planning or underestimation of resources by the student.

The goal of Frontier Institute is not to force students to conform to a specific schedule for completion, but rather to avoid projects stretching out to unmanageable lengths. That is why Frontier forces a realistic evaluation of projects prior to approval.

Submission of Copies

Following completion of the project, the student is required to submit the project in a professional format. The final document will be archived in Frontier Institute's records. Frontier reserves the right to cite and quote from the final document.

Faculty Advisor

Since all projects are unique, much project design and structure will be developed with the faculty advisor. Students will be able to communicate with their advisor by email, telephone, or video call.

Questions

Any questions concerning the final project should be addressed to the Director of Graduate Programs at keith@elmwoodinstitute.org +1 (307) 264-2843.

Frontier Institute of Technology

Frontier Institute of Technology is a higher education institution designed to prepare technology leaders, entrepreneurs, and problem-solvers. The Institute's academic model is built around an Entrepreneurial Technology Core that combines foundational general education with applied technical learning, venture development, and the responsible use of artificial intelligence and other disruptive technologies. Through this interdisciplinary approach, students develop competencies in critical thinking, communication, quantitative reasoning, ethical decision-making, and entrepreneurial leadership alongside deep technical expertise.

Experiential learning is central to the Frontier model. Students engage in a sequence of Venture Labs – hands-on innovation studios where ideas are developed, tested, and refined. Across the program, students move through stages of opportunity discovery, product design, market validation, and venture growth. By graduation, students are expected to have participated in the creation and launch of at least two venture initiatives, gaining practical experience building technology-enabled solutions that respond to real-world challenges.

Learning at Frontier balances applied work, academic theory, and community engagement. Students spend a substantial portion of their time building projects, testing ideas, and solving real problems, supported by the theoretical foundations needed to guide informed decision-making. Partnerships with industry extend this model beyond the classroom. Students have opportunities to participate in apprenticeships, internships, and collaborative projects with technology organizations, startups, and mission-driven enterprises. Industry partners, coaches, and mentors contribute directly to the learning experience – guiding projects, providing real-world feedback, and helping students develop professional networks and career pathways.

Through this integrated approach, Frontier Institute of Technology prepares graduates not only for careers in technology and data-driven industries, but for leadership roles in building innovative organizations, launching new ventures, and shaping the responsible application of technology in a rapidly changing world.

Programs Offered for Undergraduate Admission

- Bachelor of Science in Data Science
- Bachelor of Science in Software Engineering

Instructional Modality

The undergraduate programs are structured to be delivered online via 16-week semesters. The programs are designed to be taken in a full-time, year-round manner, allowing the student to earn a bachelor's degree in three (3) years.

Coursework is delivered online, and includes asynchronous learning activities, synchronous class sessions and office hours, peer activities and reviews, and multiple forms of instructional feedback. Students have access to all learning and community resources via the institution's innovative technology platform.

Bachelor of Science in Data Science

Purpose of the Program

Students in the Bachelor of Science in Data Science program gain hands-on experience in applying data science skills to develop innovative solutions. They become proficient in using tools such as SQL, Power BI, and Python, enabling them to extract insights, apply cutting-edge analyses, and make data-driven decisions. Students have the opportunity to apply their skills in real-world scenarios, combining data analysis with entrepreneurial thinking.

The program is grounded in the principles of ethical data practices and leadership, emphasizing the ability to create opportunities that leverage data for positive impact. This comprehensive approach ensures that graduates are well-versed in data manipulation, analysis, and visualization, possessing the skills to address complex challenges in today's data-driven world.

Program Learning Outcomes

The learning outcomes of the program are for each student to be able to:

- Apply entrepreneurial thinking, leadership, and data science skills to identify, analyze, and address global challenges and opportunities, leading self and others toward innovative solutions.
- Illustrate the process of new venture creation.
- Apply quantitative methods to analyze and solve complex problems.
- Apply critical and ethical thinking across different domains of knowledge, demonstrating strong written, oral, and technology based communication skills.
- Demonstrate proficiency in data manipulation, statistics, and data modeling using tools such as SQL, Power BI, and Python.
- Showcase the ability to clean, analyze, and visualize data effectively, and construct efficient data-driven models.
- Create a portfolio that showcases career-ready work, reflecting current knowledge and practice in data science.

Program Length

The Bachelor of Science in Data Science requires the completion of 120 credits. The degree program is designed to be taken in a full-time, year-round manner, allowing it to be completed in three (3) years. However, this duration may vary depending on individual course progression and any prior credits transferred. The time limit for completing the degree program is eight (8) years.

Degree Requirements

The Bachelor of Science in Data Science is comprised of three content areas: general education courses (38 semester credits); data science and software engineering courses (55 semester credits); and entrepreneurship courses (27 semester credits). Students must successfully complete all required courses with a passing grade.

Bachelor of Science in Data Science

Data Science/Software Engineering Courses

- AWS 400 - AWS Cloud Computing
- DS 100 - Introduction to Data Science
- DS 110 - Preparing Data
- DS 120 - SQL for Data Science
- DS 130 - Data Visualization
- DS 200 - Python for Data Scientists I
- DS 210 - Python for Data Scientists II
- DS 300 - Techniques for Regression Analysis
- DS 320 - Natural Language Processing and Classification
- DS 400 - Unsupervised Learning Methods
- DS 440 - Portfolio Review
- SE 101 - Introduction to Computing
- SE 102 - Foundations of Linux and Version Control

Entrepreneurship Courses

- BUS 200 - Business Finance
- ENT 100 - Foundations of Entrepreneurship
- ENT 110 - Introduction to Venture Creation
- ENT 300 - Ethics and Technology
- ENT 310 - Leadership and Management
- ENT 400 - Special Topics

General Education Courses

- ART 200 - Principles of Design & Media
- COM 148 - Communication for Impact
- PE 101 - Intro to Personal Effectiveness
- PE 301 - Applied Personal Effectiveness
- PE 401 - Personal Effectiveness for Career Readiness
- QNT 101 - College Algebra
- QNT 102 - Statistics
- QNT 105 - Foundations of Data Analysis and Decision Making
- SCI 200 - Introduction to Climatology, Ecology, and Human Impact
- SS 200 - Introduction to Sociology: Gender Inequality, Women Empowerment, and Education
- SS 300 - Consumerism in Society
- SS 360 - Research Methods in Social Sciences
- WR 100 - Fundamentals of Effective Communication
- WR 300 - Advanced Business Communication

– The number of credits per course varies between 1-12 credits.
– Program requires completion of 120 semester units.

Final Project

As part of students' fulfillment of their degree requirements, they are required to assemble and defend a portfolio of work in DS 440 Portfolio Review. The learning outcomes for this are to: Present, reflect, and iterate on a portfolio of data science challenges and solutions which demonstrate career readiness.

Create a resume that demonstrates career readiness.
Exhibit entry-level readiness by completing tasks related to SQL database management, Python data analysis using Pandas, data visualization with Power BI, database manipulation, data analysis, and the creation of insightful visualizations.

Exhibit entry-level career readiness by demonstrating machine learning proficiency, emphasizing regression, classification, interpretation of model parameters, evaluation metrics, and the application of algorithms, including linear regression, logistic regression, decision trees, random forests, and support vector machines.

Bachelor of Science in Software Engineering

Purpose of the Program

Students in the Bachelor of Science in Software Engineering program gain hands-on experience in applying software engineering skills to develop innovative solutions. They become proficient in using tools such as Git, C, Python, SQL, and JavaScript, enabling them to engineer solutions for development challenges. Students have the opportunity to specialize in either front-end or back-end development.

The program is grounded in the principles of entrepreneurial thinking and leadership, emphasizing the ability to create opportunities that leverage technology for positive impact. Students analyze and solve complex problems using advanced quantitative methods, supported by a strong foundation in critical and ethical thinking. This comprehensive approach ensures that graduates are well-versed across different domains of knowledge and possess exceptional communication skills, whether written, oral, or technology-based.

Program Learning Outcomes

The learning outcomes of the program are for each student to be able to:

- Apply entrepreneurial thinking, leadership, and software engineering skills to identify, analyze, and address global challenges and opportunities, leading self and others toward innovative solutions.
- Illustrate the process of new venture creation.
- Apply quantitative methods to analyze and solve complex problems.
- Apply critical and ethical thinking across different domains of knowledge, demonstrating strong written, oral, and technology based communication skills.
- Problem solve, model, and analyze system capabilities using tools such as Git, C, Python, SQL, and JavaScript.
- Engineer solutions to common problems in front-end or back-end development.
- Create a portfolio that showcases career-ready work, reflecting current knowledge and practice in software engineering.

Program Length

The Bachelor of Science in Software Engineering requires the completion of 120 credits. The degree program is designed to be taken in a full-time, year-round manner, allowing it to be completed in three (3) years. However, this duration may vary depending on individual course progression and any prior credits transferred. The time limit for completing the degree program is eight (8) years.

Degree Requirements

The Bachelor of Science in Software Engineering is comprised of four content areas: general education courses (38 semester credits); software engineering core courses (54 semester credits); software engineering frontend specialization (11 semester credits) OR backend specialization (11 semester credits) courses; and entrepreneurship courses (18 semester credits).

Students must successfully complete all required courses with a passing grade and a minimum GPA of 2.0.

Bachelor of Science in Software Engineering

Software Engineering Courses

- SE 101 - Introduction to Computing
- SE 102 - Foundations of Linux and Version Control
- SE 103 - Essential Tools and Mindsets for Software Engineers
- SE 200 - C Programming I
- SE 201 - Data Structures and Algorithms I
- SE 202 - High Level Programming I
- SE 203 - Application of Programming Concepts I
- SE 300 - High Level Programming II
- SE 301 - Storage & Databases
- SE 302 - Application of Programming Concepts II
- SE 303 - Integrated Software Engineering Project
- SE 304 – Low Level Programming II
- SE 305 - Data Structures & Algorithms II
- SE 306 - Networking
- SE 400 - Technical Interview Preparation
- SE 410 - Portfolio Project

Backend/Frontend Specialization Courses

- SE 401 - Modern JavaScript for Frontend
- SE 402 - Advanced HTML & CSS
- SE 403 - Frontend Framework
- SE 404 - Advanced Frontend Concepts
- SE 405 - Modern JavaScript for Backend
- SE 406 - Advanced Backend Concepts
- SE 407 - Advanced Storage Concepts
- SE 408 - Authentication & Authorization

General Education Courses

- ART 200 - Principles of Design & Media
- COM 148 - Communication for Impact
- PE 101 - Intro to Personal Effectiveness
- PE 301 - Applied Personal Effectiveness
- PE 401 - Personal Effectiveness for Career Readiness
- QNT 101 - College Algebra
- QNT 102 - Statistics
- SCI 200 - Introduction to Climatology, Ecology, and Human Impact
- SS 200 - Introduction to Sociology: Gender Inequality, Women Empowerment, and Education
- SS 300 - Consumerism in Society
- SS 360 - Research Methods in Social Sciences
- WR 100 - Fundamentals of Effective Communication
- WR 300 - Advanced Business Communication

Entrepreneurship Courses

- BUS 200 - Business Finance
- ENT 100 - Foundations of Entrepreneurship
- ENT 110 - Introduction to Venture Creation

– *The number of credits per course varies between 1-12 credits.*
– *Program requires completion of 120 semester units.*

Final Project

As part of students' fulfillment of their degree requirements, they are required to complete a final project in SE 410 Portfolio Project. The outcomes of this final project are for students to:

Demonstrate career readiness by producing a final web application project, defining project scope, objectives, and timelines using project management tools (e.g., Trello, Kanban boards) to organize and track progress effectively.

Apply technical knowledge in front-end or back-end development to build a fully functional web application. Utilize problem-solving skills to address challenges encountered during the development process.

Exhibit proficiency in using Git and GitHub for version control, showcasing best practices in committing changes, branching, merging, and resolving conflicts. Collaborate on code with team members through pull requests and code reviews.

Develop and deliver a comprehensive presentation that effectively communicates the project's purpose, architecture, technologies used, and key functionalities. Articulate challenges faced, solutions implemented, and lessons learned throughout the project development cycle.

Reflect on the portfolio project experience to identify strengths, areas for improvement, and strategies for ongoing learning and development in software engineering. Plan for future enhancements to the project or new projects that build upon the skills and knowledge gained.

Academic Calendar

Frontier Institute operates on a 16-week term-based structure across both the graduate program and the undergraduate programs. While graduate and undergraduate programs share this common framework, they differ in pedagogy and implementation to reflect the unique mission and learning design of each program.

Graduate Academic Calendar

Frontier Institute utilizes a flexible, overlapping term-based structure. Students may enroll in a term at the beginning of each month. Each term is 16 weeks in length, although students have access to course materials and faculty during the week after the course ends. Students may enroll in one to four courses per term (3 to 12 semester credits). Students have access to all course materials and faculty during the week after the term ends.

Term	Term Start Date	Add/Drop Deadline	Last Date to withdraw with a W	Term End Date
January 2026	1/1/2026	1/8/2026	3/25/2026	4/22/2026
February 2026	2/1/2026	2/8/2026	4/25/2026	5/23/2026
March 2026	3/1/2026	3/8/2026	5/23/2026	6/20/2026
April 2026	4/1/2026	4/8/2026	6/23/2026	7/21/2026
May 2026	5/1/2026	5/8/2026	7/23/2026	8/20/2026
June 2026	6/1/2026	6/8/2026	8/23/2026	9/20/2026
July 2026	7/1/2026	7/8/2026	9/22/2026	10/20/2026
August 2026	8/1/2026	8/8/2026	10/23/2026	11/20/2026
September 2026	9/1/2026	9/8/2026	11/23/2026	12/21/2026
October 2026	10/1/2026	10/8/2026	12/23/2026	1/20/2027
November 2026	11/1/2026	11/8/2026	1/23/2027	2/20/2027
December 2026	12/1/2026	12/8/2026	2/22/2027	3/22/2027

Undergraduate Academic Calendar

Term	Semester Start Date	Add/Drop Deadline	Last Date to withdraw with a W	Semester End Date
Spring 2026	1/5/2026	1/18/2026	4/12/2026	4/26/2026
Summer 2026	5/4/2026	5/17/2026	8/9/2026	8/23/2026
Fall 2026	8/31/2026	9/13/2026	12/6/2026	12/20/2026
Spring 2027	1/4/2027	1/17/2027	4/11/2027	4/25/2027
Summer 2027	5/3/2027	5/16/2027	8/8/2027	8/22/2027
Fall 2027	8/30/2027	9/12/2027	12/5/2027	12/19/2027
Spring 2028	1/28/2028	1/16/2028	4/9/2028	4/23/2028
Summer 2028	5/8/2028	5/21/2028	8/6/2028	8/202028
Fall 2028	8/28/2028	9/10/2028	12/3/2028	12/17/2028

Official Holidays

All offices are closed on:

- Martin Luther King Jr. Day
- President's Day
- Memorial Day
- Juneteenth
- Independence Day
- Labor Day
- Thanksgiving Day and the Friday following Thanksgiving
- Christmas Eve through the first business day after New Year's Day.

Students still have access to the Learning Management System and their coursework during holidays.

Admissions

Statement of Non-Discrimination

Frontier Institute admits students of any race, color, religion, sex, age, national and ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to the students of

the institution. It does not discriminate on the basis of race, color, religion, sex, age, handicap, disability, marital status, national and ethnic origin, nor any other characteristic protected under applicable federal, state, or local law in administration of its educational policies, admission policies, and other school administered programs.

Admission Requirements

Graduate Degree Requirements

To be admitted into a Master's degree program, students must hold a Bachelor's degree from an institution accredited by an institutional accrediting agency recognized by the United States Department of Education, or its international equivalent. Three years of work experience is recommended, but not required.

Frontier Institute is dedicated to providing an exceptional educational experience through a selective enrollment process. The institution carefully reviews each application to ensure a match between its program and the needs of its students. This process aims to cultivate a community of learners who are committed to academic excellence and personal growth. As a result, Frontier does not accept every applicant, but rather strives to build a diverse and motivated student body that will thrive within the school environment.

Undergraduate Degree Requirements

To be admitted into an undergraduate degree program, students must hold a high school diploma or its equivalent (such as a GED or international equivalent). The institution understands that obtaining proof of having earned a high school diploma can be difficult, particularly in the international context. Accordingly, undergraduate program applicants may self-certify, confirming they have earned a high school diploma or its recognized equivalent, subject to also meeting alternate minimum standards of prior education, skills, and training, including credit for prior learning.

Official Transcripts

Official transcripts must be sent directly from colleges or universities. Electronically-issued transcripts and other documentation can be sent to admissions@frontiertech.edu.

Paper-based transcripts and records should be sent to:

Physical Address (for UPS, FedEx)
Frontier Institute - Transcript Office
140 E Broadway, # 25
Jackson, WY 83001

PO Box (for USPS)
Frontier Institute - Transcript Office
PO Box 804
Jackson, WY 83001

Foreign Educational Credentials

An applicant who has completed university-level courses in a foreign country must have their educational credentials evaluated and sent to Frontier Institute. The evaluation must also include the original transcript. If the transcript is not in English, a translation must be provided. Three reputable foreign credential evaluation service providers are suggested below.

World Education Services (WES – http://www.wes.org/)
Educational Credentials Evaluators, Inc. (ECE – http://www.ece.org/)
International Education Research Foundation (IERF – http://www.ierf.org/)

Note that while Frontier Institute accepts students from foreign countries, it does not currently provide visa services. It provides enrollment verification services upon request at no charge.

Proof of English Proficiency

Frontier Institute courses are offered in English. Proof of English proficiency from students for whom English is not their native language is required. Students who have earned at least 30 credits from an internationally recognized college or university in which English was the language of instruction may have this requirement waived. In this instance, an average grade of C or higher is required for undergraduate admissions, while an average grade of B or higher is required for graduate admissions. English language services, including instruction such as ESL, is not provided.

English Language Proficiency Test	Minimum Scores
TOEFL iBT - https://www.ets.org/toefl.html How to Submit: Select Frontier Institute or Designated Institution Code D845	Undergraduate: 61 Graduate: 71
IELTS - https://www.ielts.org How to Submit: Account Name: Frontier Institute Address: Admissions and Registrar 140 E Broadway # 25 Jackson, WY 83001 Score Delivery: E-Delivery	Undergraduate: 6.0 Graduate: 6.5
Duolingo - https://englishtest.duolingo.com/applicants	Undergraduate: 95

English Language Proficiency Test	Minimum Scores
How to Submit: See: https://englishtest.duolingo.com/applicants	Graduate: 100
Pearson Test of English (PTE) - https://www.pearsonpte.com/ How to Submit: 1. Select Frontier Institute as an official test score recipient from PTE's database of institutions. OR 2. Send your Score Report Code to admissions@frontiertech.edu	Undergraduate: 44 Graduate: 50

Technology and Equipment Requirements

Master of Leadership and Management

To fulfill the requirements of the Frontier Institute course curriculum, all students are required to have access to an internet-enabled device with a web browser, an email account, a word-processing program, and a spreadsheet program. Microsoft Office or Google Suite is sufficient.

Undergraduate Programs

To fulfill the requirements of the Bachelor of Science degree programs, all students are required to have access to an internet-enabled laptop. Windows 7 is recommended (Windows 7 minimum), although macOS running Parallels for Windows will suffice. A minimum processor speed of 2 GHz, 4 GB of RAM, and 125 GB of SSD is required.

Admissions Policies

Application Instructions for Admission

The application may be found on the Frontier Institute website at www.frontiertech.edu. Frontier Institute is not an open-enrollment institution. After submitting an application, applicants are assessed on their motivation, goals, and research interests via a questionnaire or interview.

Accommodations for Students with Disabilities

Applicants and prospective or current students with disabilities who require adjustments and/or auxiliary aids throughout the admissions process, and/or throughout their studies, should contact the Admissions Department (admissions@frontiertech.edu) for assistance. It is the student's responsibility to request accommodations and to provide current and supporting documentation from a medical doctor or clinician explaining the nature and limitations of their disability. Frontier Institute will work

with the person to make reasonable accommodations and adjustments to enable him/her to fully participate in the admissions process and educational programs.

Transfer Credit

Students may receive transfer credits for courses completed at other accredited educational institutions. Approval for specific courses will be determined individually, based on the breadth, scope, organization, and quality of the coursework in relation to the courses required by Frontier Institute. Applicants seeking such evaluations must provide official transcripts from the transferring institution. The transfer credit is solely at the discretion of Frontier Institute, as course content and instructional quality can vary between institutions.

Frontier will consider transfer credit earned at institutions of higher education outside of the United States that are recognized by the Ministry of Education or equivalent authorizing agency, provided that such credits have been earned through university-level coursework and are presented with equivalent grades of "A," "B," or "C." Such credit must be evaluated by an international transcript evaluation service unless they are earned at an institution that is accredited by a U.S. Department of Education or CHEA-recognized accreditor. The Office of Admissions and/or the Office of the Registrar will make the final determination of the award and applicability of any international credit. A certified course-by-course evaluation from an organization recognized by Frontier is required for all post-secondary level studies completed outside of the United States at institutions that are not accredited, or if the transcript is not in English. GPA and degree equivalencies must be included with your course-by-course evaluation. All fees charged by translators or external evaluators must be paid by the student. Recognized transcript evaluation organizations include:

- Educational Credential Evaluators (ECE)
- World Education Services (WES)
- SpanTran: The Evaluation Company
- International Education Evaluations, LLC (IEE)
- Or any company recognized by the National Association of Credential Evaluation Services (NACES)

Only grades of C or higher will be considered for undergraduate credit; or B or higher for graduate credit. Transfer credits that are recognized and accepted by Frontier Institute are not factored into the calculation of the student's grade point average.

No more than 75% of the credits required for a bachelor's degree may be fulfilled via transfer credit; while no more than 50% of the credits required for a Master's degree may be fulfilled via transfer credit.

Experiential Credit/Credit for Prior Learning

Frontier Institute does not accept credit for prior learning or experiential credit except through established partners. Credit must come from a recognized, accredited institution or from a provider with whom Frontier Institute has an articulation agreement.

First Term Registration

Undergraduate

A newly accepted student at the Frontier Institute is automatically enrolled in their first semester once their enrollment agreement is processed. A student must withdraw prior to the last day of the Drop/Add period or they will be charged for the semester and will need to follow the institutional withdraw policy.

Graduate

A newly accepted graduate student at Frontier Institute must enroll in their first term within 90 days of acceptance. A student is subject to unenrollment from the institution if they do not meet this requirement.

Conditional Admission and Term Registration Policy

Applicants unable to provide final official documents during the application process may be granted conditional admission. Under this status, applicants are permitted to register for one term of coursework while completing their application requirements. Enrollment in subsequent terms will not be allowed until all missing documentation has been submitted and verified.

Student Verification

Students are required to submit a government-issued photo ID as part of their application. The photo ID will only be used to verify identity throughout the program. All students are issued a student ID number.

Notice Regarding Transferability of Credits Earned at Frontier Institute

The transferability of credits you earn at Frontier Institute is at the complete discretion of an institution to which you may seek to transfer. Acceptance or recognition of the degree you earn is also at the complete discretion of the institution to which you may seek to transfer. If the credits or degree that you earn at Frontier Institute are not accepted at the institution to which you seek to transfer, you may be required to repeat some or all of your coursework at that institution. For this reason, you should make certain that your attendance at Frontier Institute will meet your educational goals. This may include contacting an institution to which you may seek to transfer after attending Frontier Institute to determine if your credits or degree will transfer or be recognized.

Academic Policies

Academic Load

Undergraduate

Undergraduate students must maintain a full-time course load per semester. A full-time undergraduate course load is 10 or more semester credits per term. Any exceptions to the full-time status of a student must be approved in advance of the semester start date by the Program Director and Chief Academic Officer.

Each semester is 16 weeks in length.

Graduate

Students may take between one and four courses per term (3 to 12 semester credits). A full-time course load is considered three or more courses (9+ semester credits) per term; a part-time course load is considered two or fewer courses (6 or fewer semester credits) per term. Because of the significant workload associated with graduate-level courses, students should consult with the Director of Admissions and Student Achievement *before* registering for more than three (3) courses in a term.

Each term is 16 weeks in length. Students have access to all course materials and faculty during the week after the term ends.

Credit Hour Definition

Frontier Institute utilizes the commonly accepted definition of semester credits (also referred to as "units") to measure its academic courses and programs. One semester credit is the equivalent of 15 hours of academic engagement and 30 hours of preparation. Accordingly, each 3-unit course offered by Frontier Institute is normally achieved via 45 hours of academic engagement and 90 hours of preparation.

Grading Policy

Undergraduate

The course grade is the weighted average of the individual course module assignments, quizzes, midterm examinations, projects, final papers, and/or final examinations as determined by the course syllabus. Frontier Institute calculates grades numerically, which are then converted to final letter grades. The minimum passing grade for each undergraduate course is 65% (D).

Grades	Quality Points

A (90-100%)	A = 4.0
B (80-89%)	B = 3.0
C (70-79%)	C = 2.0
D (65-69%)	D = 1.0
F (Below 0-64%)	F = 0.0

Graduate

The course grade is the weighted average of the individual course module assignments, quizzes, midterm examinations, projects, final papers, and/or final examinations as determined by the course syllabus. In most courses, the lesson examinations (which may include a project) are worth approximately 80%, while the final examination is worth approximately 20%. Frontier Institute calculates grades numerically, which are then converted to final letter grades. Students must receive a minimum grade of 80% for each course.

Grades	Quality Points
A (90-100%)	A = 4.0
B (80-89%)	B = 3.0
F (Below 80%)	F = 0.0

Students may view their grades at any time by logging into the Learning Management System.

Grade of "W" (Withdraw)

Undergraduate

Undergraduate students may be issued a grade of W (Withdraw) if they withdraw before midnight of the last day of Week 9 of the term (see Academic Calendar). The grade of W does not factor into the calculation of a student's GPA.

Graduate

Graduate students may be issued a grade of W (Withdraw) if they withdraw by midnight of the last day of Week 12 of the term (see Academic Calendar). The grade of W does not factor into the calculation of a student's GPA.

Grade of "F/I" (Fail/Incomplete)

Undergraduate

Undergraduate students who withdraw after the Week 9 deadline will receive the grade of F/I (Fail/Incomplete). The grade of F/I is worth zero quality points and does factor into a student's GPA.
Grade of "I" (Incomplete) – Undergraduate

A grade of I (Incomplete) may be granted, under rare circumstances, only if a student has attempted at least 60% the coursework, can provide a serious and compelling reason for an extension of the regular semester length, can mathematically pass the course with a satisfactory grade on any outstanding assignment(s), and is not on academic probation.

Students must request the "Incomplete" from the course instructor and the Chief Academic Officer of Frontier prior to attempting the final summative assignment of the course, who will jointly determine if an incomplete grade is warranted. Students may then be allowed up to 30 days from the end of the semester to resolve an incomplete, after which time the grade will be calculated based on the total points earned.

Graduate

Students who withdraw after the Week 12 deadline will receive the grade of F/I (Fail/Incomplete). The grade of F/I is worth zero quality points and does factor into a student's GPA.

Grade of "I" (Incomplete)

A grade of I (Incomplete) may be granted, under rare circumstances, only if a student has attempted at least 60% of points for graded coursework, can provide a serious and compelling reason for an extension of the regular term length, can mathematically pass the course with a satisfactory grade on any outstanding assignment(s), and is not on academic probation.

Students must request the "Incomplete" from the course instructor and Director of Admissions and Student Achievement prior to attempting the final summative assignment of the course, who will jointly determine if an incomplete grade is warranted. Students may be allowed up to 21 days from the end of the term to resolve an incomplete, after which time the grade will be calculated based on the total points earned. A student is allowed only one attempt on a final project or final exam within the incomplete period.

Repeating Courses

A student may choose to repeat a course if they have received a non-passing grade or if it is necessary to raise their GPA to meet the Frontier Institute's Scholastic Standing policy. When a student repeats a course and receives a higher grade, the higher of the grades will be used for calculating the GPA. Repeated courses are subject to tuition as calculated at the per-credit rate for the student's program, as detailed in the Enrollment Agreement.

Registration and Adding/Dropping of Courses

Undergraduate

Undergraduate students will be automatically registered each semester in Frontier's Learning Management System. Undergraduate students may withdraw from all classes prior to the fourteenth day of the semester (see Academic Calendar) without incurring charges or a grade of W.

To drop courses after the Add/Drop deadline, or to withdraw from the University, undergraduate students must contact the Registrar at registrar@frontiertech.edu.

Graduate

Students may self-register in Frontier Institute's Learning Management System, or may be registered by the institution's Registrar. Students are free to add and drop classes prior to the seventh day of the term (see Academic Calendar).

To drop a class after this deadline, or to withdraw from Frontier Institute, students must contact the Registrar at registrar@frontiertech.edu.

Proctoring

Frontier Institute requires proctored quizzes and examinations at regular intervals throughout its programs. Proctors may not be a past or present family member, a work subordinate, a current/previous student of Frontier Institute, or related to a current/previous student of FrontierInstitute.

Before taking a proctored quiz or examination, both students and proctors electronically attest that they do not have a relationship that would call into question the proctor's impartiality. The proctor must additionally electronically submit a Proctor Attestation Form, including a copy of both their and the student's government-issued photo identification.

Administrative Withdrawal and Attendance Policies

Frontier Institute may administratively withdraw a student from a course from the beginning of week two through the end of week twelve if the student shows no submitted assignments in the course for 30 consecutive calendar days. Students who are administratively withdrawn may appeal within 14 days of their withdrawal. Appeals should be directed to appeals@frontiertech.edu. Upon approval, students will be reinstated in the course and must demonstrate continued progress. Students who are administratively withdrawn shall be subject to the Tuition Refund Policy.

Scholastic Standing Policy

To ensure academic success and uphold the standards of academic integrity, this policy outlines the levels of scholastic standing, triggers for intervention (including academic integrity violations), and the appeal process available to students. See also Academic Integrity Policy.

Scholastic Standing Levels - Undergraduate

Good Academic Standing

Undergraduate students with a cumulative GPA of 2.0 or higher and no violations of academic integrity are in good academic standing.

Scholastic Warning (SW)

Issued when an undergraduate student's semester GPA is below a 2.0 and their cumulative GPA is above a 2.0, or when there is a minor academic integrity violation. Students may register for courses, but are advised to seek academic support. Students who are on scholastic warning for consecutive semester, will be on Academic Probation the next semester, if their semester GPA remains below a 2.0.

Academic Probation (AP)

Undergraduate students are placed on probation if their semester OR cumulative GPA remains below 2.0 for a second consecutive semester or if a significant or additional minor academic integrity violation occurs. A student must raise their cumulative GPA to 2.0 within two semesters and/or comply with all academic integrity sanctions to achieve 'good academic standing'.
Students on AP are subject to registration holds and must follow an academic recovery plan.

Academic Suspension (AS)

Undergraduate students are suspended from SET if their GPA (semester or cumulative) remains below a 2.0 for a third consecutive semester or a second significant or third minor academic integrity violation occurs. Students on academic suspension may not continue to enroll in courses and are required to complete an academic plan to enroll in a subsequent academic semester.

Academic Dismissal (AD)

Students may be dismissed if they fail to meet GPA requirements during their period of Academic Probation, violate the Maximum Timeframe, or in the case of severe or repeated academic integrity violations. Dismissal recommendations are reviewed by the Scholastic Standing Committee (SSC) and submitted for final approval by the President.

Scholastic Standing Levels - Graduate

Good Academic Standing

Graduate students with a cumulative GPA of 3.0 or higher and no violations of academic integrity are in good academic standing.

Scholastic Warning (SW)

Issued when a graduate student's term GPA is below a 3.0 and their cumulative GPA is above a 3.0, or when there is a minor academic integrity violation. Students may register for courses, but are advised to seek academic support.

Academic Probation (AP)

Graduate students are placed on probation if their GPA remains below 3.0 for a second consecutive term or if a significant or additional minor academic integrity violation occurs. A student must raise their cumulative GPA to 3.0 within two terms and/or comply with all academic integrity sanctions. Students on AP are subject to registration holds and must follow an academic recovery plan.

Academic Dismissal (AD)

Students may be dismissed if they fail to meet GPA requirements during their period of Academic Probation, violate the Maximum Timeframe, or in the case of severe or repeated academic integrity violations. Dismissal recommendations are reviewed by the Scholastic Standing Committee (SSC) and submitted for final approval by the President.

Academic Integrity & Scholastic Standing

Violations of the Academic Integrity Policy—including plagiarism, cheating, or submitting work that is not one's own—are considered serious offenses and will be reviewed under the Scholastic Standing Policy. The consequences vary depending on the severity and frequency of the violation. A first-time or minor offense may lead to a Scholastic Warning, while major or repeated violations can result in Academic Probation or Dismissal.

Maximum Timeframe

Students must show regular progress toward completion of their degree program. Regular progress is achieved by successfully completing at least two courses per 12 months of enrollment. Graduate students enrolled in a 36-credit degree program must complete their program within seven (7) years. Undergraduate students enrolled in a 120-credit degree program must complete their program within eight (8) years. Students not showing any academic progress for a period of 12 months are subject to Academic Dismissal from Frontier.

Leave of Absence

Students may receive a leave of absence by contacting the Director of Programs and stating the reason for their request and the expected date of return. All leaves of absence must be approved by the institution in advance. Students are exempt from the institution's Scholastic Standing policy while on Leave of Absence.

Appeal Process

Students have the right to appeal decisions related to Scholastic Warnings, Academic Probations, and Academic Dismissals.

To initiate an appeal, the student must submit a written appeal letter to the Registrar within 10 business days of receiving the notification. This letter should clearly outline the basis for the appeal and include any relevant supporting documentation. The CAO will then review the appeal and may consult with faculty members or the Scholastic Standing Committee (SSC) as necessary. If the appeal is not resolved by the SSC or if it involves Academic Dismissal, the case will be forwarded to the President for final review. The decision of the President is final.

All appeal decisions will be communicated to the student in writing within 15 business days of submission.

Scholastic Standing Committee

The Scholastic Standing Committee (SSC) is responsible for reviewing and making determinations regarding students' academic progress, probation, and dismissal status in accordance with the university's academic policies.

Chaired by the Registrar, the committee includes the Chief Academic Officer and designated Faculty/Staff Representatives. The committee convenes at specific points throughout the academic year to review students whose academic standing warrants formal evaluation due to low GPA, unsatisfactory academic progress, or violations of academic integrity.

The committee reviews documentation, academic history, and student appeals, and recommends actions such as Scholastic Warning, Academic Probation, Academic Dismissal, or Reinstatement. Its work ensures a fair, consistent, and academically sound process for addressing student performance concerns.

All students have the right to appeal decisions related to their academic standing. The President serves as the final decision-maker in all appeal cases, ensuring institutional oversight and a comprehensive review of each student's circumstances. The ED reviews appeal materials submitted after the committee's decision and issues a final determination that is not subject to further review.

The Registrar maintains official records of all decisions and communicates outcomes to the appropriate stakeholders.

Academic Integrity Policy

Frontier Institute is committed to fostering a culture of academic honesty, integrity, and responsibility. Academic integrity is a cornerstone of meaningful learning and scholarly achievement. All students, regardless of residency or learning modality, are expected to uphold the highest standards of ethical academic behavior.

Definition of Academic Integrity

Academic integrity refers to the commitment to honest, responsible scholarship. This includes completing one's own academic work, appropriately acknowledging the contributions of others, and adhering to course-specific expectations and institutional standards.

Expectations

All students are expected to:

- Complete and submit their own original work;
- Cite all sources accurately and appropriately;
- Follow the guidelines and expectations outlined by faculty and the institution;
- Use only authorized resources when completing assessments or assignments;
- Refrain from engaging in or facilitating dishonest academic practices.

Violations of Academic Integrity

Academic integrity violations are serious offenses and include, but are not limited to:

- Cheating and Academic Misconduct: Using unauthorized materials, information, or assistance to gain an unfair advantage.

  Examples include:
  - Copying from another student or using unauthorized notes or devices during an exam;
  - Submitting another person's work as one's own;
  - Tampering with grades, exams, or academic records;
  - Offering or accepting bribes or favors related to academic work.

- Plagiarism & Self-Plagiarism: Presenting another individual's ideas, words, or work as one's own without appropriate credit, or submitting one's own previous work for multiple assignments or courses without explicit permission from the instructor(s).

  Examples include:
  - Copying and pasting from sources without citation;

  - Submitting purchased or borrowed work;
  - Paraphrasing without acknowledging the original source.

- Fabrication or Falsification: Inventing, altering, or misrepresenting data, results, or academic documentation.

  Examples include:
  - Falsifying research data or lab results;
  - Misrepresenting attendance or participation
  - Changing or modifying grades or academic records

- Misuse of Artificial Intelligence (AI): Using AI tools to complete assignments or exams without the instructor's permission.

  Examples include:
  - Submitting AI-generated content as original work;
  - Failing to disclose AI-assisted work when required.

- Facilitation of Academic Dishonesty: Assisting or attempting to assist others in violating academic integrity standards.

  Examples include:
  - Sharing test content or answers;
  - Completing assignments or assessments on behalf of another student.

- Other Violations
  - Purchasing or selling academic work ("contract cheating");
  - Impersonating another student;
  - Disrupting or sabotaging another student's work;
  - Making false reports of academic misconduct.

Consequences

Violations of this policy will result in disciplinary action. Depending on the severity and nature of the offense, consequences may include:

- A failing grade on the assignment or in the course;
- Academic probation;
- Suspension or dismissal from the institution.

All reported cases will be reviewed in accordance with Frontier Institute's academic integrity and student code of conduct procedures. Repeated or egregious violations may result in permanent separation from the institution.

Student Responsibility

It is the student's responsibility to understand and comply with this policy. Students who are unsure whether an action constitutes a violation should consult their instructor or academic advisor before submitting their work.

Student Code of Conduct

Students at Frontier Institute are expected to adhere to high standards of ethics in the pursuit of their education. As a condition of enrollment, students agree to:

- Conduct themselves with professionalism, courtesy, and respect for others in all dealings with the Frontier Institute staff, faculty, and other students.
- Observe the institutional policies and rules on submitting work, taking examinations, and conducting research.
- Adhere to Frontier's Academic Integrity Policy.
- Adhere to all required proctoring requirements.
- Never improperly use, destroy, forge, or alter Frontier Institute's documents, transcripts, or other records.
- Never divulge their online username or password.
- Always report any violations of this Code of Conduct to the Director of Education and report any evidence of cheating, plagiarism, or improper conduct on the part of any student of Frontier Institute when they have direct knowledge of these activities.

Statement - Use of Artificial Intelligence in Academic Programs

Frontier Institute recognizes the growing role of artificial intelligence (AI) in education, industry, and society. As part of our commitment to preparing students for success in an evolving global environment, the appropriate and ethical use of AI tools and technologies is integrated across academic programs and courses.

AI may be used to support instruction, enhance learning experiences, and develop relevant workforce competencies. Students may encounter AI in various forms, including learning platforms, writing assistants, coding tools, and data analysis systems. Faculty are encouraged to incorporate AI thoughtfully to promote innovation, critical thinking, and digital literacy.

Ethical Use of AI and Academic Integrity

While AI is a powerful tool, it must be used responsibly. Students are expected to follow academic integrity guidelines, which include disclosing the use of AI where required and using AI tools only in ways permitted by the instructor or course policies.

Unauthorized or undisclosed use of AI may be considered a violation of the Academic Integrity Policy and subject to disciplinary action. For details, please refer to the Academic Integrity Policy outlined in this catalog and the Student Handbook.

Frontier Institute is committed to helping students and faculty navigate the ethical implications of AI through guidance, training, and ongoing dialogue.

Student Records and Privacy

Frontier Institute maintains permanent records, including transcripts, for each student. To request an official transcript, students may contact the Registrar at registrar@frontiertech.edu. Official transcripts require a processing fee.

Frontier Institute protects the privacy rights of its students. Student education records are held confidential in accordance with the Family Educational Rights and Privacy Act (FERPA) and Frontier's best practices. Written student consent is required for access and release of student records information. Students may inspect and review their educational records upon written request to the Registrar at registrar@frontiertech.edu. Should a student find, upon review, records that are inaccurate or misleading, the student may request that errors be corrected. If a difference of opinion exists regarding the existence of errors, a student may ask that a meeting be held to resolve the matter. Each student's file will contain the student's records, including a transcript of grades earned. Transcripts will only be released to the student upon receipt of a written request bearing the student's signature or digital equivalent.

Student Complaints and Grievances

If any student has a complaint, grievance, or dispute with the Frontier Institute's procedures, policies, or decisions, the student has the right to seek a satisfactory resolution.

First, the student should discuss the matter directly with the instructor or a Frontier Institute staff member. The instructor or staff member will attempt to resolve the matter professionally and in good faith. If the matter cannot be settled at this level, the second step is for the student to file a written complaint to Frontier Institute Student Services, 140 E Broadway #25, Jackson, WY 83001, or at studentservices@frontiertech.edu. The complaint should include a description of the specific allegations and the desired remedy, accompanied by any necessary documentation. Student Services can, if necessary, submit the complaint to Frontier's President for final resolution. Student Services or the President will issue a formal reply to the student within ten working days.

Additionally, a complaint can be filed with Frontier Institute's accrediting agency, the Distance Education Accrediting Commission (DEAC), through the DEAC website (http://www.deac.org/Student-Center/Complaint-Process.aspx) or 1101 17th Street NW, Suite 808, Washington, DC 20036.

For students residing outside of California and Georgia, there may be additional resources for filing grievances/complaints. Please see the State Higher Education Executive Officers Association website:

http://www.sheeo.org/sheeo_surveys/.

Tuition and Fees

Students who enroll at Frontier Institute assume responsibility for the payment of all tuition and fees in accordance with the policies set forth below.

Undergraduate Degree Tuition

Undergraduate students are charged a flat-rate tuition on a per-term basis. Each term is 16 weeks in length. Standard tuition is $1,333 per term. Tuition must be paid by the end of Week 2, or students may be withdrawn from their coursework.

Bachelor of Science in Data Science (120 credits)
Tuition: $1,333 per term (full-time course load required) or $100 per credit with prior approval only Total estimated charges[1] (120 credits, 9 terms): $12,000

Bachelor of Science in Software Engineering (120 credits)
Tuition: $1,333 per term (full-time course load required) or $100 per credit with prior approval only Total estimated charges[1] (120 credits, 9 terms): $12,000

Total estimated charges below are based on on-time completion of the program. Actual costs may vary due to transfer credit or repeated courses.

Graduate Degree Tuition and Fees

Graduate students are charged tuition on a per-term basis. Each term is 16 weeks in length.

- Standard tuition is $50 per credit hour ($150 per course).
- Fee(s):
    - $50 Tech-Fee per semester
    - $150 Graduate Fee (includes Comprehensive Exam or Project)

Total estimated charges, assuming on-time completion of the program, are $2,550. Actual costs may vary due to transfer credit or repeated courses.

[1] Total charges may vary based on repeated courses, transfer of credit or advanced standing, and/or time to completion.

Withdrawals and Refunds

After the add/drop period of 7 days from the first day of the term, during which the student may cancel their enrollment agreement or adjust the number of courses for which they are registered, the student may withdraw from Frontier Institute and receive a pro rata refund if they have completed 60% or less of the term.

For purposes of determining a refund, a student shall be considered to have withdrawn from an educational program when he or she withdraws or is deemed withdrawn in accordance with the withdrawal policy stated in this institution's catalog. Students who withdraw or are administratively withdrawn will receive a refund of tuition according to the following table:

Week of Withdrawal	Tuition Refund
Week 1	100%
Week 2	100%
Week 3	88%
Week 4	81%
Week 5	75%
Week 6	69%
Week 7	62%
Week 8	56%

Week of Withdrawal	Tuition Refund
Week 9	50%
Week 10	43%
Week 11	0%
Week 12	0%
Week 13	0%
Week 14	0%
Week 15	0%
Week 16	0%

For example, if a graduate student who is registered for 6 units and paid $150 withdraws from the institution during their fifth week of the term, the student would receive a refund of $112.50:

$150.00	x	75% (Student withdraws during Week 5 of the term)	=	$112.50

If an undergraduate student is registered for a full-time course load and paid the flat rate tuition fee of $1,333, withdraws from the university during the fourth week of the term, the student would receive a refund of $973.09:

$1,333.00	x	75% (Student withdraws during Week 5 of the term)	=	$999.75

If the institution cancels or discontinues a course or education program, the school will make a full refund of all charges.

All refunds will be paid within 30 days of cancellation or withdrawal.

If the student has received federal student financial aid funds, the student is entitled to a refund of moneys not paid from federal student financial aid program funds. However, Frontier Institute does not participate in federal and state financial aid programs.

Student's Right to Cancel

Students have the right to cancel and obtain a refund of charges paid through attendance at the first class session, or the seventh day after enrollment, whichever is later.

If a student cancels their enrollment agreement, they may obtain a refund of 100% of charges paid, if notice of cancellation is made prior to midnight of the seventh day of the term. Cancellation is effective on the date the written notice is sent to the institution.

A cancellation may be effectuated by the student's written notice or by the student's conduct, including, but not necessarily limited to, a student's lack of attendance. Students wishing to cancel their enrollment agreement must be made in writing through email, mail, or fax to:

Physical Address (UPS, FedEx)
Frontier Institute - Attn Registrar
140 E Broadway, # 25
Jackson, WY 83001

PO Box (for USPS)
FrontierInstitute - Attn Registrar
PO Box 804
Jackson, WY 83001

Phone or Fax: (307) 264-2843
E-mail: registrar@frontiertech.edu

After the seventh day of enrollment of the term, a student may withdraw for a partial refund. See Withdrawals and Refunds. All refunds will be paid within 30 days of cancellation.

Student Loans

Frontier Institute does not offer student loans and does not participate in federal or state student financial aid programs. If a student obtains a loan to pay for an education program, the student will have the responsibility to repay the full amount of the loan plus interest, less the amount of any refund.

If the student is eligible for a loan guaranteed by the federal or state government and the student defaults on the loan, both of the following may occur:

- The federal or state government or a loan guarantee agency may take action against the student, including apply any income tax refund to which the person is entitled to reduce the balance owed on the loan.
- The student may not be eligible for any other federal student aid at another institution or other government assistance until the loan is paid.

If the student has received federal student financial aid funds, the student is entitled to a refund of the moneys not paid from federal student financial aid program funds. Frontier Institute does not participate in federal or state student aid programs.

Course Descriptions

Undergraduate Course Descriptions

ART 200 - Principles of Design & Media

Semester Units: 3
Prerequisite: WR-100
This course delves into the fundamental principles of design and their application within media contexts. Underlying the fusion of form and function where aesthetics converge with ethics and creativity intertwines with critical inquiry, this course ensures that students develop a nuanced understanding of the intricate interplay between design principles and contemporary media landscapes. Through practical exercises and real-world applications, students will develop the core competencies necessary upon which to build a solid foundation in design and media principles and applications.

AWS 400 - AWS Cloud Computing

Semester Units: 6
Prerequisite: None
This cloud computing course aims to equip students with the essential skills and knowledge to understand the fundamental concepts of the Amazon Web Service Cloud and apply them in real-world scenarios. Additionally, the course also covers fundamental Amazon Web Services (AWS) security concepts, including AWS access control, data encryption methods, and how to secure network access to AWS infrastructure. It will enable students to build skills and confidence while contributing to their organization's cloud initiatives.

BUS 200 - Business Finance

Semester Units: 3
Prerequisite: ENT 100
Through the integration of technical proficiency, critical thinking, and global awareness, this course equips students with a versatile set of skills to navigate intricate financial management challenges and contribute to organizational success. Going beyond mere technical finance matters, the curriculum fosters problem-solving abilities essential for addressing real-world financial dilemmas.

COM 148 - Communication for Impact

Semester Units: 3
Prerequisite: None

This course is designed to prepare students to not only use public speaking as an approach to deliver a message, but also to make a long-lasting impact and leave a powerful impression through their speech. Through study and speech assignments, students learn about concepts and models of communication, how to adapt a speech for different occasions and audiences, how to effectively support their ideas, how to apply their critical thinking skills in selecting and organizing materials in preparation for a speech, and how to utilize multimedia tools in presentations. Foundational to the process is learning how to maintain strong ethics in the preparation and delivery of impactful speeches and presentations.

DS 100 - Introduction to Data Science

Semester Units: 1
Prerequisite: None
This course challenges conventional thinking and equips students with essential skills for success in today's dynamic world. It fosters creativity, innovation, and problem-solving through critical evaluation of paradigms. Students learn data analysis, business strategies, and tools, and develop proficiency in methodologies like the EGAD Framework and Agile principles. Cultivating programmatic thinking and problem-solving skills prepares students for success in their professional endeavors.

DS 110 - Preparing Data

Semester Units: 3
Prerequisite: DS 100
Preparing Data is a course crafted to empower students with vital skills in data manipulation, analysis, and visualization using Google Sheets. Across multiple modules and immersive projects, participants will immerse themselves in data governance principles, delve into sophisticated spreadsheet functions, and acquire proficiency in recognizing data patterns and relationships. From grasping the pivotal significance of data integrity to navigating through advanced data visualization tools, this course adopts a thorough approach to honing the craft of data handling and analysis. By the course's conclusion, students will be well-equipped to make informed decisions and adeptly tackle real-world challenges.

DS 120 - SQL for Data Science

Semester Units: 5
Prerequisite: DS 110
In this course, students will enhance their SQL skills and delve deep into database management. This course covers a wide range of topics essential for database professionals and data analysts. From utilizing control flow functions and database keys to grasping set theory and database normalization, students will gain a solid overview of SQL fundamentals. Through hands-on exercises and practical examples, students will learn how to effectively use conditional logic for dynamic data retrieval and manipulation, establish relationships between tables using database keys, and optimize query

performance and readability with advanced SQL techniques like subqueries and Common Table Expressions (CTEs). Additionally, students will explore set theory in SQL databases, create SQL views for streamlining data access, and gain insights into various database systems, including NoSQL databases. By the end of the course, students will have the skills and expertise to handle complex database management tasks with confidence, making them a valuable asset in any data-driven organization.

DS 130 - Data Visualization

Semester Units: 6
Prerequisite: DS 120
This course teaches participants storytelling, communication, design, visualization, dashboards and reports for data. Participants will use Microsoft Power BI to build data models, create new features, and craft interactive dashboards and reports that will enable them to convey insights, provide actionable recommendations, foster collaboration, influence stakeholders, engage others in the data process, and build trust. It covers data modeling, DAX calculations, report and dashboard design, and data transformation techniques. The course covers the basics of importing, connecting, and managing data from various sources, executing complex calculations, and creating interactive reports and dashboards. It also covers Exploratory Data Analysis (EDA), analyzing data patterns and identifying trends. The course emphasizes practical application and real-world scenarios, ensuring participants develop the skills and confidence to tackle data analysis challenges in their professional roles.

DS 200 - Python for Data Scientists I

Semester Units: 4
Prerequisite: DS 130
In this course, students will explore the versatile realm of Python programming, an essential language for various applications, from web development to data science. Python's readability and extensive libraries make it a powerful tool for both beginners and experienced developers. Throughout this course, students will delve into the core principles of Python, covering topics such as syntax, data structures, and control flow. By the end, students will be equipped with the skills to write efficient and scalable Python code for a wide range of purposes.

DS 210 - Python for Data Scientists II

Semester Units: 5
Corequisite: DS 200
Building on top of existing Python skills, this course covers essential topics in data science and software development, providing participants with a deep mastery of modularization, data manipulation, visualization, statistical analysis, and software testing. Through hands-on exercises, participants will master Python modules, NumPy for data manipulation, Pandas for data handling, Matplotlib for data visualization, and statistical methods for hypothesis testing. Additionally, they will learn about software testing concepts and techniques, including debugging, and develop proficiency

in creating, distributing, and version controlling Python packages using Git and GitHub. By the course's end, participants will possess the skills and knowledge needed to excel in Python programming for data science and software development.

DS 300 - Techniques for Regression Analysis Semester Units: 6

Prerequisite: DS 210 & QNT 102

This course offers a thorough exploration of regression analysis, starting from the fundamental principles of least squares to advanced techniques in model optimization and ensemble methods. Students will acquire expertise in modeling relationships between variables using least squares, describing the significance of the line of best fit in regression modeling. Extensive coverage of data preparation techniques such as test/train split and cross-validation ensures accurate model evaluation and generalization. The course delves into both simple and multiple linear regression, including multidimensional modeling and model evaluation through residual analysis. Additionally, participants will learn various methods for variable selection and model optimization, including regularization techniques like LASSO and Ridge regression. Decision tree algorithms, ensemble methods, and random forests will be thoroughly explored for predictive modeling. By the course's end, students will possess the skills to construct robust regression models, make informed predictions, and responsibly utilize cloud resources for scalable computing.

DS 320 - Natural Language Processing and Classification

Semester Units: 6

Prerequisite: DS 300

In this course, students will discover the essential tools and techniques for effective machine learning model development. Students will learn the importance of version control in managing code iterations and delve into ML platform tools for efficient experiment tracking, and gain advanced skills in the art of text preprocessing, including noise removal and feature extraction using N-grams and Bag of Words. Students will explain binary classification theory and implement logistic regression using sklearn and explore performance metrics like accuracy, precision, and recall, with a focus on handling class imbalance. Students will delve into feature selection and hyperparameter tuning for optimal model performance, explore a range of advanced classification models, and learn to fine-tune them using techniques like grid search. This course intends for students to be equipped to build, evaluate, and select the best classification models for their projects.

DS 400 - Unsupervised Learning Methods

Semester Units: 6

Prerequisite: DS 320

Unsupervised Learning Methods is an all-encompassing course aimed at providing students with a comprehensive outline of unsupervised learning methods and their practical applications. Through a combination of theoretical lectures, hands-on exercises, and real-world projects, students will explore key concepts such as dimensionality reduction, clustering, and recommender systems. The course

covers a wide range of topics, including principal component analysis (PCA), multidimensional scaling (MDS), t-distributed stochastic neighbor embedding (t-SNE), K-means clustering, hierarchical clustering, Gaussian mixture models (GMMs), and recommender systems, all of which are implemented using Python and popular machine learning libraries. By the course's end, students will have the skills to uncover hidden patterns and structures in unlabeled data, enabling them to extract valuable insights and make informed decisions in various domains.

DS 440 - Portfolio Review

Semester Units: 3
Prerequisite: None
This intensive course prepares students for careers in data science by covering SQL database management, Python data analysis using Pandas, and data visualization with Power BI. Students master techniques for manipulating databases, conducting advanced data analysis, and creating insightful visualizations. Emphasis is placed on evaluating machine learning proficiency, including regression, classification, model interpretation, and algorithm application such as linear regression, logistic regression, decision trees, random forests, and support vector machines. Through real-world data science challenges, students hone their problem-solving skills, culminating in the creation of a polished resume showcasing their readiness for the field. By the course's end, students emerge as skilled data practitioners with the expertise and portfolio necessary for success in the data science industry.

ENT 100 - Foundations of Entrepreneurship

Semester Units: 12
Prerequisite: None
This course is designed to give emerging leaders a holistic foundation to the knowledge, skills, behaviors, and values that underpin acts of innovation and entrepreneurship. Blending the development of emotional intelligence, entrepreneurial thinking, critical analysis, project management, effective communication, and technology literacy, the course serves as a survey to the sectors and practices of the 21st-century innovation economy.

ENT 110 - Introduction to Venture Creation

Semester Units: 3
Prerequisite: ENT 100
This course equips university students with a fundamental knowledge of the entrepreneurial journey and the necessary skills for launching and managing a successful business venture. Through engaging lectures, practice exercises, and real-world applications, students will identify and explore the skills needed to go through the venture creation process, from ideation to implementation.

ENT 300 - Ethics and Technology

Semester Units: 3

Prerequisite: None

This course teaches the philosophy, principles, conceptual tools, and moral vocabulary of ethics in technology in the 21st century. It covers the promise and impact of technology on individuals and organizations, the role of ethics in technology, including the responsibilities of individuals and organizations in the development of data, analytics, and AI, and the categorization and risk of ethical issues associated with technology. The course equips students to investigate and analyze the ethical dilemmas associated with data, analytics, and AI through an understanding of technological and algorithmic bias, privacy, discrimination and fairness, and the reliable measurement of accuracy. Emphasis is placed on fostering critical thinking and ethical decision-making skills to navigate the evolving landscape of technology in a responsible and socially conscious way.

ENT 310 - Leadership and Management

Semester Units: 3

Prerequisite: None

This course equips future technical professionals with the essential leadership and management skills needed to thrive in today's dynamic technology landscape. Through engaging learning materials, interactive exercises, and real-world case studies, students will explore crucial topics such as team dynamics, communication strategies, project management, and strategic thinking, specifically applied to technical areas like Software Engineering, Data Analytics, Salesforce, and AWS Cloud Computing. By the end of the course, students will be able to effectively lead, motivate, and collaborate with diverse teams to achieve successful outcomes in technical projects and endeavors.

ENT 400 - Special Topics

Semester Units: 3

Prerequisite: None

ENT 400 delves into special topics critical to the field of technology and entrepreneurship. Special Topics: Artificial Intelligence and Machine Learning will broaden and deepen knowledge and encourage critical thinking, research and understanding of upcoming and more advanced technologies while also providing necessary scope of the AI/ML Lifecycle. The course will explore cutting-edge research, methodologies, and technologies, and challenges students to critically analyze and implement solutions through hands-on coding exercises, case studies and a final capstone project.

PE 101 - Intro to Personal Effectiveness

Semester Units: 1

Prerequisite: None

This course guides students through the essential strategies for success in both academic and personal arenas. This course emphasizes the formulation of SMART goals, the application of ethical principles in

academic contexts, and the development of effective stress management techniques. Through a series of interactive assessments including reflective essays, personalized plans, and group discussions, students will gain the skills necessary to navigate and thrive within an academic environment, laying a solid foundation for future professional growth.

PE 301 - Applied Personal Effectiveness

Semester Units: 1
Prerequisite: PE-I01
This course is tailored for students beginning their transition from academia to the workforce, focusing on what it means to be an effective team member and contributor. This course delves into the interpersonal dynamics of the workplace, group and team behavior, digital literacy, and the significance of networking in career development. Through engaging assessments such as online discussions, case study analyses, and strategic planning exercises, students will learn to navigate workplace relationships, contribute positively to team dynamics, critically assess digital information, and utilize networking for professional growth. PE 301 equips students with the practical skills and insights needed to thrive in the professional world, fostering a smooth and successful transition from student to professional.

PE 401 - Personal Effectiveness for Career Readiness

Semester Units: 3
Prerequisite: PE-301
This course is designed to polish final-year students' readiness for the professional world, focusing on exhibiting the behaviors of a true professional. This course covers building a professional online identity, creating essential communication tools such as resumes and professional email addresses, mastering interview techniques, and understanding the significance of ongoing professional development. Through targeted assessments, including the creation of professional online profiles, resume and cover letter writing workshops, recorded mock interviews, and the development of a personal branding strategy, students will not only showcase their strengths and goals but also refine their ability to communicate professionally. The course culminates in the creation of a comprehensive professional development plan, ensuring students are prepared to embark on their career paths with confidence and a clear direction for their continued growth in their chosen fields.

QNT 101 - College Algebra

Semester Units: 3
Corequisite: QNT 100
This course is a foundational university course designed to equip undergraduates with essential algebraic skills necessary for success in higher-level mathematics, software engineering and data science disciplines. Delving into the core principles of algebra, this course provides a structured

learning experience that progresses through key concepts, from fundamental arithmetic to advanced functions and beyond.

QNT 102 - Statistics

Semester Units: 3
Corequisite: None. QNT 101
This course provides students with a foundational understanding of statistical concepts and techniques essential for data analysis across various disciplines. This course is designed to introduce students to the principles of descriptive and inferential statistics, enabling them to analyze and interpret data effectively. Through interactive learning experiences and practical applications, students develop the skills necessary to make informed decisions based on statistical evidence.

QNT 105 - Foundations of Data Analysis and Decision Making

Semester Units: 3
Prerequisite: QNT 102
This foundational university course in data analysis and decision making equips undergraduate students with the essential skills and mindset required to harness data for informed, logical, and data-driven decision-making. Through a blend of theory, hands-on exercises, and practical application, students will develop the core competencies needed to extract insights from data, test hypotheses, and solve complex problems. The course spans 135 hours, incorporating classroom instruction, individual and group assignments, and guided analytical projects.

SCI 200 - Introduction to Climatology, Ecology, and Human Impact

Semester Units: 3
Prerequisite: QNT 102
This course is designed to provide a comprehensive understanding of sustainability concepts and methodologies, essential for tackling the dual crises of climate change and biodiversity loss. The aim is to equip participants with the knowledge and skills necessary for effective sustainability efforts and to cultivate an appreciation for the complex interactions between climate change and ecosystem dynamics. By participating in this course, you will be prepared to contribute significantly to overcoming environmental challenges. You will also understand the crucial interplay between climate change and ecosystem dynamics, positioning you to play a vital role in our collective pursuit of a sustainable future.

SE 101 - Introduction to Computing

Semester Units: 3
Prerequisite: None

This course is an introductory course that provides students with a comprehensive foundation in software engineering, encompassing its core principles, significance, and practical applications. Through a combination of theoretical learning and hands-on exercises, students will delve into various aspects of software development, including basic computer architecture, version control systems, programming logic, and problem-solving techniques. By the end of the course, students will be equipped with the essential knowledge and skills to embark on further study and application in the field of software engineering.

SE 102 - Foundations of Linux and Version Control

Semester Units: 3
Prerequisite: None
This course provides comprehensive training in Linux command-line interfaces, shell scripting, and Git version control systems, emphasizing efficient system navigation, task automation, and project management while ensuring data integrity and security. Students apply Linux command-line operations, file permissions, and security mechanisms before advancing to Git version control, where they learn repository management and collaboration techniques. Practical exercises reinforce skills in project tracking, team collaboration, and code quality maintenance through advanced Git features and workflows.

SE 103 - Essential Tools and Mindsets for Software Engineers

Semester Units: 2
Prerequisite: None
This course equips students with essential software engineering tools for efficient code navigation and manipulation. Emphasis is placed on the significance of cultivating and sustaining a professional network, recognizing its pivotal role in career advancement within software engineering. Students also grasp the concepts of grit and growth mindsets, applying these principles to drive personal and professional growth in the field. Additionally, proficiency is attained in utilizing key communication and collaboration tools such as Discord, fostering effective team interaction and project management i in software engineering contexts.

SE 200 - C Programming I

Semester Units: 4
Prerequisite: SE 102
This course is essential for undergraduate learners seeking a solid foundation in low-level programming with the C language. By deep exposure and practice of fundamental concepts and advanced techniques such as memory management and dynamic allocation, students gain the skills necessary for developing efficient and robust software solutions. Through hands-on exercises and real-world applications, this course equips students with problem-solving abilities crucial for success in diverse computing environments, from software development to system programming and embedded

systems. By enrolling in Low Level Programming I, students will acquire the expertise needed to excel in their academic and professional pursuits within the field of computer science.

SE 201 - Data Structures and Algorithms I

Semester Units: 3
Prerequisite: SE 200 & QNT 101
Data Structures and Algorithms I is a foundational undergraduate course aimed at developing students' problem-solving skills and algorithmic thinking in computer science. Through a blend of theory and practical exercises, students will explore how to effectively utilize data structures to solve complex problems and understand the rationale behind choosing specific structures for efficiency and suitability. By applying algorithmic thinking to manipulate data within these structures, students will enhance their abilities in data organization and retrieval. This course is essential for learners aspiring to excel in fields like software development, data science, and artificial intelligence, providing a solid foundation for problem-solving and algorithmic principles crucial in these domains.

SE 202 - High Level Programming I

Semester Units: 5
Prerequisite: SE 200
This course covers essential programming concepts and software development practices. Students learn fundamental syntax, modular programming, object-oriented concepts, and test-driven development. Through hands-on exercises, they gain practical skills for building robust and maintainable code.

SE 203 - Application of Programming Concepts I

Semester Units: 3
Prerequisite: SE 202
This course offers a comprehensive journey in web application development, covering front-end and back-end practices, database integration, object-oriented programming principles, software testing fundamentals, and critical thinking. Students will learn to analyze problems, engineer solutions, and tackle real-world challenges, preparing them to navigate the complex landscape of web application development confidently.

SE 300 - High Level Programming II

Semester Units: 4
Prerequisite: SE 202
In this course, students will embark on an immersive journey into the realm of advanced web development, focusing on harnessing the power of JavaScript to create dynamic and interactive web

applications. Through a combination of theoretical understanding and hands-on practice, students will delve into various aspects of client-side web technologies, programming libraries, and best practices.

SE 301 - Storage and Databases

Semester Units: 3
Prerequisite: SE 202
Students will delve into the heart of data management in this course. Students will grasp the foundational principles of data storage, learning how relational databases organize, index, and retrieve data. Through practical exercises, they'll apply best practices in database design and management, ensuring data integrity, security, and efficient handling. With a focus on SQL, students will develop proficiency in crafting complex queries to extract, update, and organize data effectively. Armed with these skills, they'll analyze database data to generate insightful reports, empowering data-driven decision-making.

SE 302 - Application of Programming Concepts II

Semester Units: 4
Prerequisite: SE 203
Students begin to unlock the world of web application development in this intensive course. Students will design and implement applications with web frameworks, creating RESTful APIs, and crafting dynamic interfaces. They'll apply advanced programming principles to build complex, industry-standard applications. By course end, students will be equipped to develop scalable, maintainable, and high-performing web solutions.

SE 303 - Integrated Software Engineering Project

Semester Units: 4
Prerequisite: SE 300 or Permission of Instructor
This course guides students in executing a comprehensive project, integrating diverse software engineering skills. Students conduct research, develop a minimum viable product (MVP), and effectively communicate project details.

SE 304 – Low Level Programming II

Semester Units: 4
Prerequisite: SE 200
This course is designed to advance students' proficiency in C programming and software development through a comprehensive exploration of advanced topics and practical applications. By the end of the course, students will have mastered a range of advanced C programming constructs and techniques, equipping them with the skills necessary to develop complex and efficient software solutions.

SE 305 - Data Structures & Algorithms II

Semester Units: 2
Prerequisite: SE 201
In this course, students will embark on a comprehensive exploration of algorithmic analysis and design, focusing on synthesizing theoretical knowledge with practical problem-solving skills. Through a combination of theoretical lectures, hands-on exercises, and real-world applications, students will delve into the intricacies of algorithm performance evaluation, optimization, and application.

SE 306 - Networking

Semester Units: 1
Prerequisite: None
This course provides an introduction to essential networking concepts and tools. Through a combination of theoretical knowledge and hands-on exercises, students will gain a solid understanding of networking fundamentals, enabling them to troubleshoot network issues and design basic network configurations

SE 400 - Technical Interview Preparation

Semester Units: 3
Prerequisite: SE 305 or Permission of Instructor
This course focuses on applying advanced data structures and algorithms to solve intricate problems commonly encountered in technical interviews. Students will learn to break down coding problems, evaluate solution strategies based on factors like time and space complexity, and design innovative solutions. Emphasis is placed on clear communication of coding choices and thought processes, mirroring real interview scenarios. By the end of the course, students will be adept at translating theoretical knowledge into practical solutions, ready to excel in technical interviews.

SE 401 - Modern JavaScript for Frontend

Semester Units: 3
Prerequisite: SE 300
This course is designed to equip students with the essential skills and knowledge required to leverage modern JavaScript features effectively in web development projects. Through a combination of theoretical learning and practical application, students will explore advanced concepts and techniques to enhance their proficiency in JavaScript and TypeScript programming.

SE 402 - Advanced HTML & CSS

Semester Units: 2
Prerequisite: SE 302

In this course, students will acquire and apply advanced HTML concepts, browser developer tools for debugging and optimizing HTML and CSS, and advanced CSS techniques including Grid, Flexbox, animations, and preprocessors. Students will also learn responsive web design principles for seamless adaptation across devices.

SE 403 - Frontend Framework

Semester Units: 4
Prerequisite: SE 401
This course covers React fundamentals and advanced techniques for building interactive web applications. Students will learn JSX, components, and lifecycle methods, design reusable component architectures, and master state management with props, hooks, and Redux. Additionally, they will configure Webpack, implement styling approaches, and apply immutable data patterns for enhanced performance. By the course end, students will be proficient in building scalable React applications tailored to modern web development demands.

SE 404 - Advanced Frontend Concepts

Semester Units: 2
Prerequisite: SE 402
This course covers essential web development skills, including Markdown to HTML conversion, Flexbox layout design, web form development with client-side validation, web accessibility best practices, advanced CSS styling techniques, and Sass/SCSS proficiency. By course end, students will adeptly create modern, accessible, and visually engaging web applications.

SE 405 - Modern JavaScript for Backend

Semester Units: 3
Prerequisite: SE 300
This course covers modern JavaScript, including ES6 features like arrow functions and promises, essential for backend development. Students learn Node.js fundamentals, unit testing, and integrate concepts into real-world projects. By course end, students are proficient in backend development using JavaScript and Node.js.

SE 406 - Advanced Backend Concepts

Semester Units: 4
Prerequisite: SE 202
SE 406 Advanced Backend Concepts covers advanced Python backend development techniques. Students master variable annotations for code readability and type checking. They learn async programming, testing, pagination, caching, i18n, queuing systems, and file management for efficient backend operations. Through hands-on exercises, students gain practical skills for optimizing performance and scalability in backend applications

SE 407 - Advanced Storage Concepts

Semester Units: 2
Prerequisite: SE 301
In this course, students will apply MySQL for complex queries and optimization, and explore NoSQL concepts and Redis basics. Students will learn to select the right storage solutions for various applications based on data structure, scalability, and performance needs.

SE 408 - Authentication & Authorization

Semester Units: 2
Prerequisite: SE 405
In today's digital age, the security of personal data is of paramount importance. In this course, students will delve into the principles and best practices of handling personal data securely, encompassing data privacy laws, encryption techniques, and secure storage methods. Through theoretical lectures and practical exercises, students will develop a thorough understanding of safeguarding personal data against unauthorized access and breaches.

SE 410 - Portfolio Project

Semester Units: 5
Corequisite: SE 404 or SE 408
Prerequisite: SE 403 or SE 407
SE 410 Portfolio Project builds upon the knowledge and skill students have developed through the program, and culminates in a final project that demonstrates career readiness and technical proficiency. Blending web application development with project management principles, students will plan, execute, and present web projects effectively. They will master tools like Trello for project organization and apply technical skills in front-end or back-end development. Proficiency in Git/GitHub for version control and collaboration will be emphasized. Through project presentations and reflection, students will learn to communicate project details and identify areas for improvement, fostering ongoing learning and skill development in software engineering.

SS 200 - Introduction to Sociology: Gender Equality, Women Empowerment, and Education

Semester Units: 3
Prerequisite: WR-I00
This course provides students with an overview of the field of sociology, with a special focus on the issues of gender inequality, women's empowerment, and education through a sociological lens. Using theoretical frameworks, case studies, and analysis of historical and contemporary events, students will explore the intersection of gender and society, and the pivotal role of education in reducing gender disparities.

SS 300 - Consumerism in Society

Semester Units: 3
Prerequisite: WR-I00
This course explores the sociological aspects of consumerism and its profound impact on society. Students will examine the historical development of consumer culture, the social and economic forces that drive consumption, and the ways in which consumerism influences identity, social relationships, and inequality. Through critical analysis and interdisciplinary perspectives, the course will delve into the role of media and advertising, the ethical implications of consumption, and the social and environmental consequences of consumer habits. By engaging with diverse theoretical frameworks and empirical studies, students will gain a comprehensive understanding of consumerism's role in shaping contemporary social life.

SS 360 - Research Methods in Social Sciences

Semester Units: 3
Prerequisite: SS-200 or SS-300 and QNT 102
This course provides an overview of research practices in the social sciences, including critical analysis of research paradigms, ethical considerations, research design, both quantitative and qualitative methodologies, and dissemination of results. Learners will acquire and exhibit skills for both evaluating and generating original research.

WR 100 - Fundamentals of Effective Communication

Semester Units: 3
Prerequisite: None
This course is designed to prepare students to not only use public speaking as an approach to deliver a message, but also to make a long-lasting impact and leave a powerful impression through their speech. Through study and speech assignments, students learn about concepts and models of communication, how to adapt a speech for different occasions and audiences, how to effectively support their ideas, how to apply their critical thinking skills in selecting and organizing materials in preparation for a speech, and how to utilize multimedia tools in presentations. Foundational to the

process is learning how to maintain strong ethics in the preparation and delivery of impactful speeches and presentations.

WR 300 - Advanced Business Communication

Semester Units: 3
Prerequisite: WR-I00
This general education course is designed to provide students with a deep understanding of the complex and dynamic nature of communication within the corporate world. Through a combination of theoretical insights, practical skills, and a focus on developing a strategic mindset, students will acquire the advanced competencies necessary to excel in professional settings.

Graduate Course Descriptions

BUS 602 - Essentials of Management

Semester Units: 3
Prerequisite: None. Required to be taken in the first term for all students.

A demand for a new kind of manager has come to the forefront because business organizations are being challenged more than ever before to develop new resources and markets in a global economy. Whether a front line supervisor or the top executive of an enterprise, the functions of a manager are essentially the same. The manager must be able to make decisions and communicate these decisions to his organization. In order to do this, they must have the knowledge and ability to use today's most effective management techniques in a new and exciting era of technological change.

This course is designed to present the operational theory of management and furnish a framework of management organization. It is designed around the management functions of planning, organizing, staffing, directing and controlling. The objective of the course is to provide the student with a well-structured and varied knowledge of management disciplines.

The course covers: Management in a Global Environment – Managing Work and Organizations – Managing People in Organizations – Managing Production and Operations.

BUS 607 - Communication and Ethics

Semester Units: 3
Prerequisite/Corequisite: BUS 602

This is a three-part course. The first part covers all aspects of business communication. The second and third parts concentrate on business ethics.

Communication in business consists of different skill sets. The ability to communicate is essential to success in today's business environment. This part of the course is organized around the traditional content of a business communications course, including written and oral communication, global and multicultural issues, legal and ethical situations, and technology in communication.

The ethics part of the course presents a comprehensive review of current ethical issues from a global perspective of ethics. The course highlights both the positive and negative consequences of ethical behavior. The primary focus is to prevent potential ethical dilemmas that decision-makers may face in a number of different business areas.

LDR 611 - Leading Creativity and Innovation

Semester Units: 3
Prerequisite/Corequisite: BUS 602

Effective leaders embody the spirit of Creativity and Innovation. As a result, they use flexible and adaptive thinking to introduce change and innovation, instilling a vision and sense of purpose to a sometimes chaotic environment. The goal of this course is to provide leaders with the knowledge and tools which will enable them to add Creativity and Innovation as core competencies to their already developed skill sets. This course will influence leaders by deliberately facilitating creative change and enforcing a productive sense of focus in their role of developing science and technologies for organizational growth.

BUS 612 - Leadership - Principles and Practices

Semester Units: 3
Prerequisite/Corequisite: BUS 602

This course covers the concepts, principles and skills of leadership in a manner that is appropriate for both new and experienced leaders. A thorough assessment of advanced leadership skills, the role and function of leadership and the impact on individual organizations and society is presented. Various leadership models and their effectiveness are discussed. Topics include leadership variables, ethics, leadership principles and approaches, team leadership and critical issues in leadership.

PMP 636 - Negotiation and Conflict Resolution

Semester Units: 3
Prerequisite/Corequisite: BUS 602

Project managers exercise their negotiation skills every day. They negotiate with functional and other project managers within their own organization over time, scope, budget, schedules and change orders. Outside the organization they negotiate with customers, vendors, suppliers and subcontractors. Project managers negotiate during every phase of a project from the start-up, during performance, and right through the close-out.

This course provides the project manager the skills required to: negotiate schedules, change orders, estimates and contracts; resolve conflict; negotiate multi-party agreements; and build better teams. Strategy in negotiation is explored and the key role that planning and preparation play in a negotiation is emphasized. The dynamics of communication in negotiation are examined with special attention to the role of power and ethics.

The dynamics of negotiation that involves teams and groups is highlighted. Factors central to all negotiations as well as factors and dimensions strongly shaped by national and cultural style are also presented. Quite often negotiation strategies and tactics do not work the way they are intended to. Conflict resolution tactics are discussed which negotiators can use to help put derailed negotiations on track and keep a conflict from becoming increasingly destructive. Finally, the use of third parties to resolve breakdowns in negotiations is explored.

BUS 653 - Business Research Methods

Semester Units: 3
Prerequisite/Corequisite: None

This course is designed to provide a working knowledge of research methods and analytical techniques as they are used in business and government as tools for implementing a systematic approach to planning policies, programs and projects. It combines in one course the study of research methodology, the planning and design of research, and the management science tools that are used and the nature of decisions to which the research and analysis contribute. Modern decision theory which treats managerial problem solving as the selection of the best solution from a set of alternatives is emphasized. The course is not concerned with abstract statistical concepts but, rather, with the applicable techniques and their use in solving practical business problems.

In addition to providing a working knowledge of research methods and design, the course includes a brief, but thorough description of forty (40) tools of analysis with a description of the technique and its application. None of the techniques require sophisticated mathematical or computer implementation. Emphasis is placed on how the techniques are used and how to implement the results.

BUS 659 - Organizational Behavior and Human Resources

Semester Units: 3
Prerequisite/Corequisite: BUS 602

This course is based on the modern philosophies, research and practice concerning individual, interpersonal and organizational behavior. The course focuses on leadership techniques and on understanding and managing the behavior of individuals and groups, the human resources through which the manager gets things done; and on the organization design tools the manager can use to solve the series of major and recurring problems that occur in complex organizational life.

The course objectives are to provide the student with the skills to manage individual, interpersonal and group behavior, to develop the ability to diagram the causes of human problems in the work environment, and to develop judgmental skill in taking action to improve the motivation, effectiveness and satisfaction of working groups and individuals. The course considers a wide array of tools such as structural change, measurement systems, reward systems and educational methods for solving organizational problems.

LDR 668 - Cross-Cultural Management

Semester Units: 3
Prerequisite/Corequisite: BUS 602

This course focuses on the challenges and opportunities associated with organizational management and business strategy in the global environment. The course is intended to be a challenging advanced management course for the graduate business student. Students will gain a general overview of the process and effect of internationalization in contemporary business, along with an introduction to theories, concepts and skills relevant to managing effectively in today's global environment. Students will be challenged to integrate knowledge they have gained from other business core courses and apply their accumulated knowledge to business case studies. Students will engage in active research and analytical problem solving related to managing in the international environment and will be called upon to apply this theory in their work.

LDR 669 - Critical Thinking and Decision Analysis

Semester Units: 3
Prerequisite/Corequisite: BUS 602

The overall objective of this course is to improve the student's abilities in both critical thinking and decision-making. Critical thinking is the art of analyzing and evaluating thinking and argument with the purpose of improving it. Decision-making can be defined as the process of identifying alternatives, evaluating the alternatives, and choosing between the alternatives. Critical thinking and decision-making processes are intertwined. The critical thinking segment of this course provides a guide to the analysis, reconstruction, and evaluation of arguments designed to help students distinguish good reasoning from bad. The decision-making segment shows how decision analysis can

be applied so that decisions are more effective by providing numerous usable decision analysis approaches.

LDR 670 - Organizational Theory, Design and Change

Semester Units: 3
Prerequisite/Corequisite: BUS 602

This course explores how organizations understand and integrate with their environments. Theories are valuable and important because they help us explain and control our surroundings. Thus, organizational theory is important and valuable because it can explain how organizations view themselves and help us bring control to how they interact with their environment. When we design organizations, theory can bring a logical foundation to our design efforts. It can help us put in place mechanisms to control those organizations to meet their goals. Finally, this course will examine the constant need to understand and approach vital changes that must be made if organizations are to remain dynamic and vital. Change in organizations is the way they respond to, and shape, their environment. How will organizations take control of how and when they change? Students will be able to identify relevant organizational theories that will allow them to design effective organizations, and construct change strategies that can keep organizations viable in changing environments.

PMP 671 - Building and Managing Project Teams

Semester Units: 3
Prerequisite/Corequisite: BUS 602

Building and Managing Project Teams provides a comprehensive overview of project management with a focus on leadership, team building, and effective communication. The course explores organizational theory, the distinctions between management and leadership, and strategies for planning, risk management, and conflict resolution. Students will examine cultural diversity's impact on project teams and the integration of emerging technologies, such as AI, in modern project management. By combining theoretical frameworks with practical applications, students will develop the skills needed to lead and manage diverse teams in dynamic environments.

LDR 676 - Advanced Approaches in Leadership

Semester Units: 3
Prerequisite/Corequisite: BUS 602

Using empirical studies, interesting anecdotes, stories, and findings, this course will expand your knowledge of leadership, building upon the foundations you have already developed through experience and academic coursework. This course will enhance your understanding of leadership at the Personal, Interpersonal, Team and Organizational (PITO) levels, and the complex array of leader-follower-situation (LFS) variables that influence the process of leadership at each of these levels. It will guide you in critically evaluating the strengths and limitations of your own leadership style, as it applies to both personal and interpersonal leadership; while applying your understanding of the tools

and techniques used for developing your leadership skills, to include the Action-Observation-Reflection (A-O-R) model, and its utilization in journaling, mentoring, and evaluating case studies and personal experiences.