FLORIDA UNIVERSITY SOUTHEAST

SCHOOL OF INFORMATION TECHNOLOGY

MASTER OF SCIENCE IN INFORMATION TECHNOLOGY (MSIT)

2025 Program

Florida University Southeast (FUSE) is a research university licensed by the Florida Department of Education, Commission for Independent Schools

1375 Gateway Blvd, Suite 38
Boynton Beach, FL 33426 USA

561-440-0253
info@myfuse1.education
www.myfuse.education

Contents

2025

www.myfuse.education | 561-440-0253
info@myfuse1.education

Message from the FUSE Academic Team

The Florida University Southeast (FUSE) School of Computing and Data Science would like to welcome you to explore the Master of Information Technology (MSIT) program. As a mission-driven institution, FUSE is committed to equipping students with the technical expertise, strategic thinking, and ethical mindset needed to excel in today's fast-evolving digital landscape. Our MSIT program has been thoughtfully designed to integrate foundational knowledge with cutting-edge technologies, preparing professionals to lead innovation and transformation across IT domains.

Developed and taught by industry-experienced faculty, this fully online 18-month graduate program empowers students to:

* Design and manage scalable, secure IT infrastructures aligned with organizational goals.
* Analyze and interpret data to drive strategic business decisions and digital transformation.
* Develop software systems using modern engineering principles, tools, and practices.
* Ensure cybersecurity and information assurance through risk-based approaches and compliance strategies.

Why a Master of Information Technology?

Empower your career with a future-ready IT degree built on hands-on learning and industry relevance. Lead and innovate in areas such as cloud computing, data analytics, systems architecture, and cybersecurity. Learn from experienced technologists and researchers committed to your academic and professional success. Position yourself for leadership in the digital economy.

PROFESSIONAL DEGREE

Earn a credential that opens doors to advanced roles in technology and business.

INDUSTRY-RELEVANT TOPICS

Explore data analytics, cloud infrastructure, cybersecurity, and full-stack development.

TAILORED TO YOUR NEEDS WITH SPECIALIZATION TRACKS

Choose from Infrastructure and Networking, Information Assurance, Data Science and Business Analytics, and Software Engineering.

TECHNOLOGY-DRIVEN LEADERSHIP

Build the expertise to drive IT strategy, manage innovation, and lead cross-functional teams in digital environments.

For more information on this program, please visit www.myFUSE.education or contact us at info@myFUSE1.education.

Program Schedule

FUSE graduate programs are thoughtfully designed to accommodate the busy schedules of working professionals. Delivered fully online, each program follows a flexible, eight-week time-boxed format that allows students to concentrate on one course at a time while managing personal and professional responsibilities. The curriculum is organized into three progressive levels.

Foundational Courses: Fulfill university-wide academic requirements and prepare students for graduate-level study.

Core Courses: Establish essential knowledge and skills within the discipline to ensure a strong academic and professional foundation.

Specialization Track Courses: Enable students to focus on one of the areas of expertise offered within the program, aligning with their career goals. This structured yet adaptable approach ensures that students receive a comprehensive, career-focused education without compromising flexibility.

<table>
<tr><th colspan="4">MSIT Cohort Schedule</th></tr>
<tr><th colspan="2">SEMESTER 1</th><th colspan="2">SEMESTER 1</th></tr>
<tr><th>Term 1 (6 Cr Hrs.)</th><th>Term 2 (6 Cr Hrs.)</th><th>Term 3 (6 Cr Hrs.)</th><th>Term 4 (6 Cr Hrs.)</th></tr>
<tr><td>MSIT 500 Comm. & Leadership - (3 Cr)</td><td>MSIT 501 Foundations of IT - (3 Cr)</td><td>MSIT 600 Enterprise Architecture - (3 Cr)</td><td>MSIT 602 Database Mgt System (3Cr)</td></tr>
<tr><td rowspan="4">MSIT 502 Project Management in IT - (3 Cr)</td><td rowspan="4">MSIT 503 Agile Tools & Techniques - (3 Cr)</td><td rowspan="4">MSIT 601 Dev-Sec-Ops - (3 Cr)</td><td>MSIT 701 Blockchain (3Cr)</td></tr>
<tr><td>MSIT 720 Cybersec. (3 Cr)</td></tr>
<tr><td>MSIT 740 Infrastructure & Networking – (3 Cr)</td></tr>
<tr><td>MSIT 760 Progr. Lang. & Dev. Lifecycle- (3 Cr)</td></tr>
<tr><th colspan="4">SEMESTER 3</th></tr>
<tr><th colspan="2">Term 5 (6 Cr Hrs.)</th><th colspan="2">Term 6 (3 Cr Hrs.)</th></tr>
<tr><td colspan="2">MSIT 702 Data Science - (3 Cr Hrs.)
MSIT 703 Data Analysis & Mgt (Python, r) - (3 Cr)</td><td colspan="2">MSIT 719 Capstone Project (BIDA) - (3 Cr)</td></tr>
<tr><td colspan="2">MSIT 721 Cert., Accr. & Oper. of Enter Sys. (3Cr) MSIT 722 Network Security, Cybercrime & Forensic Science (3Cr)</td><td colspan="2">MSIT 739 Capstone Project (IA) - (3 Cr)</td></tr>
<tr><td colspan="2">MSIT 741 Wireless & Cloud Computing - (3 Cr)
MSIT 742 Network Mgt, Sec., Policy, & Operation - (3Cr)</td><td colspan="2">MSIT 759 Capstone Project (NI) - (3 Cr)</td></tr>
<tr><td colspan="2">MSIT 761 Architecture of Web, Mobil & Open Source (3Cr)
MSIT 762 Enterprise Applications - (3 Cr Hrs.)</td><td colspan="2">MSIT 779 Capstone Project (SE) - (3 Cr Hrs.)</td></tr>
<tr><th colspan="4">COLOR KEY</th></tr>
<tr><td colspan="2">Foundation Courses</td><td colspan="2">Information Assurance Track</td></tr>
<tr><td colspan="2">Core Courses</td><td colspan="2">Network and Infrastructure Track</td></tr>
<tr><td colspan="2">Business Intelligence and Data Analysis Track</td><td colspan="2">Software Engineering Track</td></tr>
</table>

Program Description

Why FUSE's Master of Information Technology Degree?

Our graduate programs in Master of Information technology with four specializations is tailored to working professionals and taught by scholar practitioners who mange systems, infrastructure, and software development projects in private and public sectors. The curriculum encompasses nine core credits, 15 credits of electives, and a six-credit capstone or thesis.

1. **Competitive Enrollment**
   Admission requirements include a bachelor's degree from an accredited school and a 3.0 GPA.
2. **Asynchronous Delivery**
   This entirely online program provides flexibility to students by working with their schedules.
3. **Quality and Affordable**
   All courses are developed by subject matter experts (SME) combining both academic rigorous and professional relevance.

Specializations in the Master of Science in Information Technology (MSIS)

Data Analytics and Business Intelligence (DA & BI)

Students apply BI and DA tools and techniques to interpret and analyze data sets. Students practice the skills needed to work with stakeholders and understand the framework for making business decisions.

Information Assurance (IA)

Students will learn to integrate and apply the various knowledge areas of information assurance, namely cyber intelligence, computer forensics, network security, malware analysis, and cybersecurity management, into one capstone project.

Telecommunication/Infrastructure

Students are expected to identify and resolve problems in a technical and business context. This research-based program requires students to create decision criteria to resolve business issues, while taking into account cost constraints, resource constraints, and technical requirements.

Software Engineering

Students will apply the knowledge areas of software engineering into one capstone project. Students apply their research on enterprise development using various programming languages and open source software architecture when submitting their final projects.

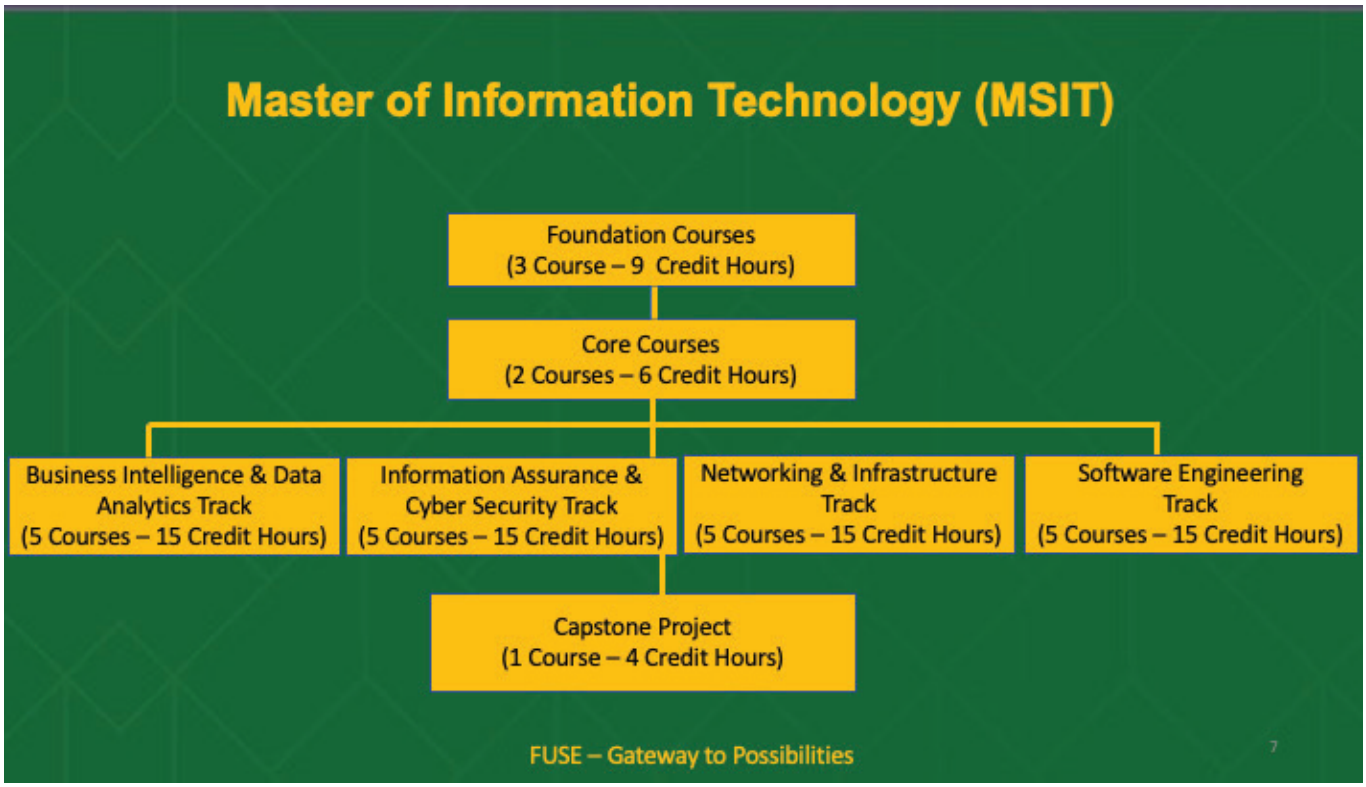
Graduate Certificates

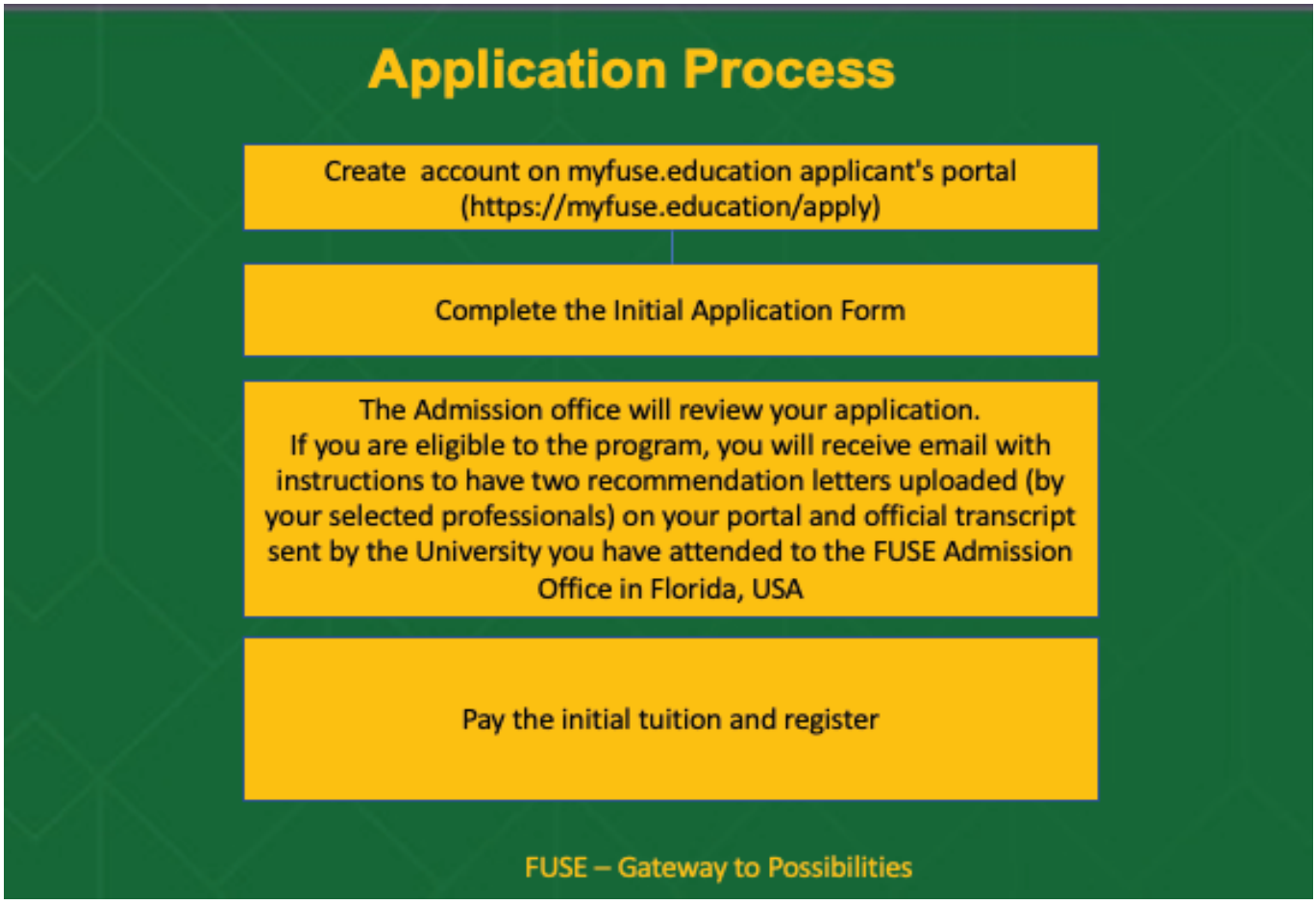
The online graduate certificate offers practical experience in various aspects of software design and implementation, while providing comprehensive academic knowledge about the current state of information technology.

IT Project Management

Students will learn the core elements of IT project management, including stakeholder engagement, team performance, adaptive planning, continuous improvement, problem detection, and regulation. The mindset required to apply agile principles and utilize adaptive tools and techniques is also presented.

Program Description





Course Descriptions

MSIT Foundation Courses

MSIT 500 Communication and Leadership in IT (3 credits)
Project managers spend over 90% of their time communicating with project stakeholders. This course provides the key concepts, techniques, methods, modes, and media for optimize communication in varied circumstances.

MSIT 501 Foundations of Information Technology (3 credits)
This course presents the foundational elements of Information Technology, including how information is processed, retrieved, and stored. Students engage with practical concepts used by IT professionals for programming and managing operating systems. Coursework is centered on applying knowledge to databases, applications, and programs.

MSIT 502 Project Management in Information Technology (3 credits)
This course presents the foundational elements of project management, including the process groups, knowledge areas, and project life cycle. The foundational tools and techniques for managing projects and programs will be discussed.

MSIT 503 Agile Principles, Tools and Techniques (3 credits)
The dynamic and complex organizational setting necessities change on the way projects and IT products are supported. The change in workforce, the introduction of globalization and virtualization influenced the industry to evolve. To address this demand in the mid 1980s the Agile System Development and Project Management principles were introduced. In the last 30 years this methodology has evolved to become the mainstream principle and technique.

MSIT Core Courses

MSIT 600 Enterprise Architecture (3 credits)
This course outlines the fundamental principles of enterprise architecture and how organizations utilize these concepts to accomplish business goals. Students explore how enterprise architecture interfaces with the information system architecture, business architecture, and technology architecture. Students investigate situational cases studies to understand and implement enterprise architecture using the architectural development method.

MSIT 601 System Analysis and Design with Development, Security, and Operations (Dev-Sec-Ops) Environments (3 credits)
This course imparts an overview of the knowledge, tools, and techniques needed to solve business issues as a business analyst. Students analyze case studies and apply the processes of system analysis and design to identify solutions to problems faced in the industry. The course covers the design and development of information systems taking into consideration the latest trends in working with development- security, and operation environments (DevSecOps). From the elicitation and initial modeling of requirements/user stories, to selecting the right development framework; from completing the systems requirement specifications (SRS) to working on wireframe and demos; from identifying the delivery methods, to coordinating the security and deployment steps, this course provides students with a step-by-step process to the systems developments, deployment and support lifecycle.

Course Descriptions

MSIT 602 Database Management Systems (Big Data/Enterprise Data Management) (3 credits)

his course provides a comprehensive introduction to the concepts and techniques of database management systems. The course covers the fundamentals of database design, data modeling, SQL, and database management, as well as the latest trends and technologies in the field. Students will learn how to design and implement databases, manipulate and query data, and understand the concepts and principles of database management systems.

Data Analysis and Business Intelligence (DA & BI) Track Courses

MSIT 701 Blockchain Architecture, Implementation, and Operation (3 credits)

This course provides a comprehensive introduction to the field of blockchain technology. The course is designed to help students understand the fundamentals of blockchain technology, including its history, key features, and potential uses. Students will also learn about the technical underpinnings of blockchain technology and the various types of blockchain architectures, as well as the technologies and tools used to implement blockchain solutions.

MSIT 702 Predictive Analysis and Data Science (3 Credits)

This course presents an overview of the knowledge, tools, and techniques required to analyze big data. Students explore the skills needed for importing and exporting, cleaning and fusing, modeling and visualizing, and analyzing and synthesizing datasets. Students analyze statistics, organize data, and interpret information to communicate business relevance.

MSIT 703 Tools and Techniques for Data Analysis and Management (Python, r) (3 credits)

This course provides students with a comprehensive understanding of the tools and techniques used in data management and analysis. Students will learn how to effectively collect, store, manipulate, and analyze data using different software tools and methodologies. The course covers seven modules that delve into various aspects of data management and analysis, including data acquisition, data cleaning, database management, data analysis, data visualization, and data governance. Throughout the course, students will gain hands-on experience with industry-standard software tools and develop critical skills for working with data in real-world scenarios.

MSIT 719 Capstone Project in Data Analytics and Business Intelligence (3 Credits)

This course requires students to integrate and apply the knowledge areas of business intelligence and data analytics, namely python, predictive analytics, and big data/enterprise database management, into one capstone project. Students are guided by an advisor from the beginning to the end of their projects.

Information Assurance (IA) Track Courses

MSIT 720 Cybersecurity Framework Strategies and Policy (3 credit)

This course provides students with a comprehensive understanding of the policy and strategic issues related to cybersecurity. The course covers the legal, regulatory, and technical aspects of cybersecurity, including risk management, incident response, and data privacy. Students will learn about the current state of cybersecurity and its future implications, as well as the role of governments, organizations, and individuals in protecting against cyber threats.

Course Descriptions

MSIT 721 Certification, Accreditation and Operation of Enterprise Systems (3 credits)
This comprehensive course provides in-depth knowledge and practical skills required for the certification, accreditation, and operation of enterprise systems. Utilizing the National Institute of Standards and Technology (NIST) 800 series documentation, the course covers the entire process from security categorization to the Authority to Operate (ATO) by the Chief Information Officer (CIO) or Chief Security Officer (CSO). Each module focuses on critical steps and controls necessary to ensure the security and compliance of enterprise systems.

MSIT 722 Network Security, Cybercrime and Forensic Science (3 credits)
This course provides a comprehensive understanding of cybercrime and forensic science in combating it. Students will explore various cybercrimes, such as hacking, identity theft, fraud, and cyberterrorism, along with the legal and ethical considerations of cybercrime investigations. The course covers cybercrime investigation techniques, digital evidence collection and preservation, forensic analysis, and the legal framework surrounding cybercrime. Students will gain practical skills in digital forensic analysis and learn network protection strategies, including encryption and securing connections.

MSIT 739 Capstone Project in Information Assurance (3 credits)
This course requires students to integrate and apply the various knowledge areas of information assurance, namely cyber intelligence, computer forensics, network security, malware analysis, and cybersecurity management, into one capstone project. Students are guided by an advisor from the beginning to the end of their projects.

Network and Infrastructure (NI) Track Courses

MSIT 740 Infrastructure and Networking Fundamentals (3 credits)
Today nearly 85% of IT support roles require a good understanding of networking concepts including network infrastructures, hardware, protocols, and services. This course covers the foundational concepts of information and Telecommunication ICT focusing on the networking Fundamentals. Students are expected to fully understand the foundational concepts of designing, implementing, and supporting various networking including local and wide area networks, wired and wireless networks, cloud service configuration and support.

MSIT 741 Wireless Technology and Cloud Computing (3 credits)
This course explores the fundamentals of utilizing cloud infrastructures and wireless technology. Students will become familiar with industry cloud services such as Amazon Web Services, Microsoft Azure, and Google Cloud, learning key APIs for each service in a Linux environment. They will apply tools and techniques to build, deploy, and maintain applications on the cloud. Additionally, the course covers industry trends and key concepts of wireless technology, including its application, security, and communication. Students will research and explore the process of designing and building robust wireless systems.

Course Descriptions

MSIT 742 Network Management, Security, Policy, and Operation (3 credits)
This comprehensive course integrates the principles of enterprise network management with advanced network security techniques. Students will learn the tools and techniques needed for encryption and secure connection and apply these methods to evaluate the effectiveness of various network protection strategies against different types of attacks. The course also covers multiple network management processes, including developing network architectural strategies, management frameworks, and network policies and regulations. Through research projects and case studies, students will explore the practical applications of network security and management, utilizing information process techniques and identifying emerging trends in the field.

MSIT 759 Capstone Project in Network and Infrastructure (3 credits)
This course requires students to integrate and apply the knowledge areas of telecommunication and infrastructure, namely information and communication technology, cloud computing, wireless technology, network management and security, into one capstone project. Students are guided by an advisor from the beginning to the end of their projects.

Software Engineering (SE) Track Courses

MSIT 760 Foundations of Programming Language and Development Lifecycle; Software Development and Testing (3 credits)
This course covers the fundamentals of programming using various programing languages for software development. Students learn to use proper syntax, as well as how to write and debug code. Students utilize program logic tools.

MSIT 761 Architecture of Web, Mobile and Open-Source (3 credits)
This course presents the fundamental tools and techniques necessary for developing complex web and mobile applications. Students learn the software development life cycle with agile methodologies, development environments, IT landscape, and security considerations. The principles of open-source software architecture, including the tools and techniques of open-source management, are covered in this course. Students examine the intersections between open-source architecture and business, law, and product.

MSIT 762 Working on Enterprise Applications (3 Credits)
This course discusses the fundamental tools and techniques of software development on an enterprise scale. Students explore software development principles that are applicable in a business environment, as well as the concepts of continuous deployment, continuous integration, continuous testing, and continuous monitoring with feedback.

MSIT 779 Capstone Project in Software Engineering (3 Credits)
This course requires students to integrate and apply the knowledge areas of software engineering into one capstone project. Students apply their research on enterprise development using various programming languages and open-source software architecture when submitting their final projects. Students are guided by an advisor from the beginning to the end of their projects.

About Florida University Southeast

Florida University Southeast (FUSE) is a fully online, mission-driven academic and research institution licensed by the Florida Department of Education's Commission for Independent Education. As the first university in the world to pioneer a Master of Business Valuation (MBV) program, FUSE continues to break new ground in professional education by offering graduate degrees that align with the demands of emerging global industries.

FUSE's commitment to thought leadership and knowledge advancement is reflected in its five affiliated centers focused on research, publication, and applied learning. These hubs foster innovation across diverse disciplines and serve as engines for creating, preserving, and disseminating knowledge to students, scholars, and practitioners worldwide.

Through its School of Professional Studies, FUSE stands apart as an Authorized Training Partner of the Project Management Institute (PMI) and other global certification bodies. This distinction, along with its practitioner-designed programs, flexible eight-week course structure, and global faculty, positions FUSE as a truly international institution dedicated to preparing professionals for the next frontier in business, technology, sustainability, and beyond

FUSE's Core Values

Excellence

We are committed to the highest standards of academic and professional achievement. Through rigorous, practice-based programs and continuous innovation in curriculum and delivery, we empower students to exceed expectations and become leaders in their fields.

Integrity

We uphold honesty, accountability, and ethical conduct in all our interactions. From academic work to professional collaboration, integrity is the foundation of our community and the trust we build with our students, faculty, partners, and the public.

Diversity

We celebrate diverse backgrounds, perspectives, and experiences as essential to transformative learning. Our inclusive environment fosters mutual respect, cross-cultural understanding, and a commitment to equity in access, opportunity, and voice.

Global

We embrace a global outlook in everything we do—from our international faculty and student body to our cross-border research and partnerships. FUSE prepares students to thrive in interconnected, dynamic environments and lead on the world stage.

FLORIDA UNIVERSITY SOUTHEAST

info@myfuse.education