

# **Bachelor of Science in Information Technology (BSIT) Supporting Areas Guidebook**

UNT Computer Science and Engineering  
UNT College of Engineering  
UNT Discovery Park  
Denton, TX





## **Supporting Area: Networking and Security**

### **Total number of credit hours: 21**

*Combining your IT degree with this supporting If you want to work as: **a Security Analyst, Penetration Tester, or Cloud Security Architec, Security Auditor, Security Engineer.** Entry-level salaries in 2026 typically range from **\$70,000 to \$95,000***

#### **Courses:**

- CSCE 3550 - Foundations of Cyber Security
- CSCE 4560 - Secure Electronic Commerce
- CSCE 4600 - Intro to Operating Systems
- CSCE 4530 - Computer Network Design
- CSCE 3560 - Cloud Security
- CSCE 4050 - Applications of Cryptography
- CSCE 4575 - Blockchain and Applications

#### **Optional (Pick any)- Recommended to strengthen this supporting,**

- CSCE 3520 Data Communications
- CSCE 4520 Wireless Networks and Protocols
- CSCE 4565 Secure Software Systems
- CSCE 4570 Information Privacy
- CSCE 4555 Computer Forensics
- CSCE 4520 Intro to Wireless Communications (needs MATH 2730)

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements.



## **Supporting Area: AI/Big Data**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting, will prepare you for positions such as:: AI Developer, Data Engineer, Machine Learning Specialist, Data Analyst,..... with **Salary (2026):** Entry-level positions start between **\$85,000 – \$110,000.***

### **Courses:**

- CSCE3110. Data Structures and Algorithms
- CSCE 3201 or 4201. Introduction to Artificial Intelligence
- CSCE 3214. Introduction to Data Mining
- CSCE 4205. Introduction to Machine Learning
- CSCE 4290. Introduction to Natural Language Processing
- CSCE 4300. Intro to Big Data and Data Science
- Optional Senior Elective: CSCE 4640 / CSCE 4650 / CSCE 4410

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements.



## Supporting Area: **Computer Hardware**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting, **will** prepare you for positions such as: **Hardware Engineer, FPGA Designer, or Systems Architect**, with entry-level salaries in Texas averaging between entry level **\$113,000 and \$135,000** as of 2026. High-demand tech hubs like Dallas and Austin offer top compensation for these positions, with specialized roles in **ASIC design and embedded systems** starting near **\$140,000** and can climb toward **\$160,000 to \$210,000**.*

### **Courses:**

CSCE 2610 Assembly Language and Computer Organization  
EENG 2710 Digital Logic Design  
CSCE 3610 Intro to Computer Architecture  
CSCE 3730 Reconfigurable Logic  
CSCE 4160. Parallel Processing  
CSCE 4610. Computer Architecture  
CSCE 4890. Directed Study (Hardware Topic)

### **Optional (Pick any)- Recommended to strengthen this supporting,**

EENG 3510. Electronics 1

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements.



## **Supporting Area: Software Systems & Engineering**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting leads to Top 2026 IT roles like **Software Developer, Software Engineer, Systems Programmer, Algorithm Analyst, and Software Testing Engineer**. Graduates gain strong skills in algorithms, programming languages, operating systems, and software design, which are highly valued in both industry and research settings. Typical entry-level salaries in 2026 range from **\$65,000 to \$95,000** depending on location.*

### **Courses:**

- CSCE 4110 Algorithms
- CSCE 4115 Formal Languages, Automata and Computability
- CSCE 4430 Programming Languages
- CSCE 4600 Operating Systems
- CSCE 4650 Introduction to Compilation Techniques
- CSCE 4655 Principles of Compiler Optimization
- CSCE 4460 Software Testing and Empirical Methodologies

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements.



## **Supporting Area: Software / Web Development**

**Total number of credit hours: 21**

*Based on current 2026 data for the Texas tech market, the top three career outcomes for students Combining their IT degree with this supporting Software/Web Development stack: leads to **Full-Stack Software Engineer**: Your salary is Entry-level: \$70,000–\$95,000.*

### **Courses:**

- **BCIS 3630:** Object-Oriented Programming for Business
- **BCIS 3680:** Advanced Object-Oriented Programming for Business
- **BCIS 4720:** Web-Based Information Technologies
- **CSCE 3110:** Data Structures and Algorithms
- **CSCE 4430:** Human-Centered Software Design
- **CSCE 4600:** Introduction to Operating Systems
- Optional electives for strengthening: LTEC 4560, LTEC 3260, CSCE 4115 – Mobile App Development

### **Optional (Pick any)- Recommended to strengthen this supporting,**

- CSCE 4115 – Mobile App Development —
- LTEC 4560 – Interactive Multimedia Design
- LTEC 3260 – Digital Media Design & Production



## Supporting Area: **Data and Decision Sciences**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting leads to Top 2026 IT roles like **Data Scientist**: Your salary is **\$72,025 (Entry)** to **\$120,586 (Average)**. **Business Intelligence Analyst**: Your salary is **\$65,838 (Entry)** to **\$102,008 (Average)**. **Data Analyst**: Your salary is **\$71,701 (Entry)** to **\$91,816 (Average)**. **DB Admin Avg 108,00**.*

### **Courses:**

- **CSCE 4380:** Data Mining
- **INFO 4501:** Principles of Data Science and Analytics
- **INFO 4707:** Data Modeling and Data Warehousing
- **DSCI 3710:** Business Statistics with Spreadsheets
- **DSCI 4510:** Modeling for Business Intelligence
- **INFO 4670:** Data Analysis and Knowledge Discovery (Text mining and RapidMiner)
- **INFO 4050:** Statistical Methods for Data Analysis (Advanced hands-on data modeling)

### **Optional (Pick any)- Recommended to Strengthen This Area**

- CSCE 4640 (Machine Learning),
- CSCE 4650 (Neural Networks)

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements.



**Supporting Area: Enterprise Systems & Software Architecture.**  
**Total number of credit hours: 21**

Combining your IT degree with this supporting leads to *Top 2026 IT roles like **Software Architect**: Your salary is **\$136,800** (Entry) to **\$158,400** (Average), an **Enterprise Systems Developer**: Your salary is **\$112,500** (Average) to **\$144,200** (Senior). A **Systems Engineer**: Your salary is **\$105,600** (Average) to **\$128,900** (Mid-level).*

**Courses:**

- **BCIS 3680:** Enterprise-Oriented Programming
- **BCIS 4720:** Web-Based Information Technologies
- **CSCE 3110:** Data Structures and Algorithms
- **CSCE 4350:** Fundamentals of Database Systems
- **CSCE 4430:** Human-Centered Software Design
- **CSCE 4600:** Introduction to Operating Systems
- **CSCE 4535:** Intro to Network Administration

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements.



**Supporting Area: Computational Intelligence & Analytics**  
**Total number of credit hours: 21**

Combining your IT degree with this supporting leads to *Top 2026 IT roles like **Machine Learning Engineer** has **Entry-Level: \$68,000 – \$95,000 (average ~\$73,000 in Texas)** **Experienced: \$138,000 – \$182,000.***

***Bioinformatics Analyst / Engineer** with **Entry-Level: \$62,000 – \$89,000 (average ~\$70,000 - \$75,000 in Texas).** **Experienced: \$102,000 – \$144,000+***

***Quantitative Data Analyst** with **Entry-Level: \$71,000 – \$107,000. Experienced: \$128,000 – \$184,000+***

**Courses:**

- **CSCE 3850** – Intro to Computational Life Science- Numerical Methods
- **MATH 3350** – Intro to Numerical Analysis- Linear Algebra
- **MATH 2700** – Linear Algebra
- **MATH 3410** – Differential Equations I- Elementary Differential Equations
- **MATH 1720** – Calculus II
- **CSCE 4810** – Bioinformatics Algorithms
- **CSCE 4820** – Advances in Bioinformatics / Computational Epidemiology

// **CSCE 3855** – Scientific Computing (*if offered; can replace bioinformatics elective*)

// **CSCE 3820 / CSCE 3830** – Data Structures / Algorithms (*or other computation-heavy CSCE*)

**Optional (Pick any)- Recommended to Strengthen This Area**

- CSCE 4630 (AI) or CSCE 4640 (ML)



**Supporting Area: Project Management & Organizational Leadership**  
**Total number of credit hours: 21**

Combining your IT degree with this supporting leads to *Top 2026 IT roles like entry-level positions include Project Coordinator, Junior IT Project Manager, or Scrum Team Member. These roles start around \$60,000–\$75,000 per year, with potential growth to \$90,000–\$110,000 after a few years of experience and professional certifications. (PMP cert/PMI, Agile/Scrum Certification prep, tools (JIRA, MS Project, Trello).*

**Courses:**

- CSCE 3055 – IT Project Management
- BCIS 3610 – Information Systems Project Management
- INFO 4306 – IT Project Planning & Control
- INFO 4300 – Agile Project Management
- MGMT 3330 – Principles of Management
- MGMT 3721 – Organizational Behavior
- LTEC 4060 – Advanced Digital Project Strategies

**Optional (Pick any)- Recommended to strengthen this supporting,**

- LTEC 3530 – Foundations of Leadership
- LTEC 4550 – Organizational Leadership
- LTEC 4070 – Project Planning & Scheduling
- MGMT 3820 – Human Resource/Operations Management

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



**Supporting Area: Digital Retail Marketing**  
**Total number of credit hours: 21**

*Combining your IT degree with this supporting prepares you for roles such **Digital Marketing Specialist** — \$55,000–\$75,000, **Ecommerce Specialist** — \$60,000–\$80,000. **SEO/SEM Analyst** — \$60,000–\$85,000, **Marketing Data Analyst** — \$65,000–\$90,000*

**Courses:**

- **DRTL 2080** – Introduction to Digital Retail
- **DRTL 2090** – Retail Analytics & Data
- **DRTL 3090** – E-Commerce Strategies
- **DRTL 3190** – Customer Experience & Engagement
- **DRTL 4070** – Digital Retail Campaigns
- **MKTG 3651** – Marketing Research
- **CSCE 4430**- Human-Centered Software Design

**Optional (Pick any)- Recommended to Strengthen This Area**

- **CSCE 4240** – Web Software Development / Web Architecture
- **CSCE 4115** – Mobile App Development

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



**Supporting Area: Human-Centered AI & UX**  
**Total number of credit hours: 21**

Combining your IT degree with Applied Psychology prepares you to *Top positions in UX* ‘*Design Researcher, Human-Computer Interaction Specialist, Behavioral Data Analyst, AI Product Analyst, and Human Factors Specialist, U.S. salaries range from \$60,000 to \$120,000+ per year depending on role and experience.*

**Courses:**

- **PSYC- 1630-** General Psychology I
- **PSYC- 1650 -** Biological Psycho
- **PSYC 3620 -** Developmental Psychology
- **PSYC 3520 -** Psychology of Personality
- **PSYC 3650 – Experimental Methods**
- **CSCE 4205 –** Machine Learning
- **IPAC 4130 –** Data Analytics and Computational Statistics I

**Optional (Pick any)- Recommended to Strengthen This Area**

- **PSYC 3680 –** Psychological Statistics
- **CSCE 3201 –** Applied Artificial Intelligence
- **CSCE 4210 –** Data Mining
- **DSCI 3710 –** Data Modeling and Analytics

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



**Supporting Area: Digital Advertising Technology**  
**Total number of credit hours: 21**

*Combining your IT degree with this supporting can pursue roles such as:*

- **Digital Marketing Specialist / Coordinator** — \$50,000–\$70,000/yr
- **Social Media & Content Strategist** — \$55,000–\$75,000/yr
- **Web Analytics / Data Analyst** (Campaign performance analysis) —\$60,000–\$85,000/yr
- **UX/Interaction Designer** (entry level) —\$65,000–\$90,000/yr
- **Digital Campaign Manager / Advertising Account Manager** —\$60,000–\$90,000/yr.  
*Salaries vary by location, experience, and industry.*

**Courses**

- **ADVG 2000** – Digital Advertising Tools and Analytics
- **ADVG 1000** – Principles of Advertising and Brand Strategy
- **ADVG 4200** – Advertising Automation and AI
- **ADVG 2500** – User Experience (UX) Design for Advertising
- **LTEC 5310** – Human-Computer Interaction
- **INFO 5814** – Web Content Development and Maintenance
- **CSCE 3201** – AI

**Optional (Pick any)- Recommended to strengthen this supporting**

- **ADVG 3200** – Advertising Account Management
- **LTEC 5260** – Computer Graphics for Mediated Communications
- **MKTG 4120** – Consumer Behavior
- **ADVG 3500** – Advertising Media Buying and Planning



## **Supporting Area: Educational Technology and Computing**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting can get positions in: **Instructional Technology Specialist, Learning Experience Designer, Educational Data Analyst, Educational Software Developer, and Technology Integration Specialist**- supporting tech implementation in education or corporate training. U.S. salaries range from about **\$55,000–\$75,000** for entry-level specialists to **\$80,000–\$110,000**.*

### **Courses:**

- **LTEC 3600** - Instructional Design and Development
- **LTEC 4200** - Learning Analytics
- **LTEC 4300** - Human-Computer Interaction or CSCE 3220
- **LTEC 2600** - Digital Tools in Education
- **CSCE 4890** – Directed studies - Data Analytics
- **IPAC 4130**- Data Analytics and Computational Statistics 1
- Plus one additional related elective or Directed Study

### **Optional (Pick any)- Recommended to strengthen this supporting**

- **CSCE 3214** – Software Development for AI
- **CSCE 4640** – Machine Learning
- **CSCE 3201** – AI
- **LTEC 4040** – Digital Project Management

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



**Supporting Area: Learning Technologies Specialist in STEM**  
**Total number of credit hours: 21**

*Combining your IT degree with this supporting can get positions in: STEM Instructional Technologist, Learning Experience Designer (STEM), STEM Curriculum Developer, Educational Data Analyst (STEM-focused), and EdTech Project Coordinator. U.S. salaries range from \$55,000–\$70,000 for entry-level positions, \$70,000–\$90,000 for mid-level roles, and \$90,000–\$110,000+ for senior or specialized positions.*

**Courses:**

- LTEC 3000 - Foundations of Learning Technologies in STEM
- LTEC 3100 - New Horizons for Learning Technologies in STEM
- LTEC 3440 - Introduction to Instructional Technology
- LTEC 4200 - Performance Improvement in Education and Training
- LTEC 4630 - Evaluation, Measurement and ROI
- LTEC 4300 – Human-Computer Interaction in Education
- CSCE 3201 Applied AICSCE 3214 -Software Development for AI.

**Optional (Pick any)- Recommended to strengthen this supporting**

- **IPAC 4130 – Data Analytics and Computational Statistics I**
- **CSCE 4640 – Machine Learning**
- **LTEC 4040 – Digital Project Management** (*for managing STEM EdTech projects*)
- **CSCE 3214 – Software Development for AI**

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



**Supporting Area: Sports Entertainment and Analytics**  
**Total number of credit hours: 21**

*Combining your IT degree with this supporting can get you positions in: Sports Data Analyst (\$72k – \$95k), Performance Analyst (Sports Teams/Clubs) – \$70k–\$95k, Marketing/Data Analytics Specialist (Entertainment/Sports) – \$68k–\$100k, Operations Analyst (Sports/Entertainment Venues) – \$65k–\$90k, Fan Engagement Specialist (\$65k – \$88k)*

**Courses:**

- **SENM 4230** - International Brand Strategies in the Sport Entertainment Industry
- **SENM 4870** - Business Planning in the Sports Entertainment Industry
- **SENM 4325** - Fan Engagement Strategies in Sport Entertainment Industry
- **CSCE 3201** – Applied AI
- **JOUR 4270** - Strategic Social Media
- **INFO 4306** – Data Visualization
- **INFO 4206**: Information Management & Security

**Optional (Pick any)- Recommended to strengthen this supporting**

- **JOUR 4355** - Sport Media Relations
- **CSCE 4820** (Machine Learning)

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



**Supporting Area: Hospitality Technology Management**  
**Total number of credit hours: 21**

*Combining your IT degree with this supporting can land you positions in: **Hospitality Technology Specialist, Operations/Data Analyst (Hospitality), IT Systems Coordinator for Hotels/Resorts, E-Commerce & Digital Experience Coordinator, or Hospitality Revenue/Analytics Specialist.** U.S. salaries range from \$50,000–\$65,000 for entry- and \$85,000–\$100,000+ for specialized or managerial technology positions in larger hotel/resort or tech-enabled hospitality companies.*

**Courses:**

- HMGT 3700 – Hotel Operations
- HMGT 4200 – Hospitality Marketing and Sales
- HMGT 4300 – Hospitality Financial Management
- HMGT 3800 – Hospitality Law
- CSCE 4350 – Fundamentals of Database Systems
- INFO 4670 – Data Analysis and Knowledge Discovery
- LTEC 3260 – Web Authoring

**Optional (Pick any)- Recommended to strengthen this supporting**

- INFO 4710 – Information Technology Management
- INFO 4745 – Information Architecture
- CSCE 3214 – Software Development for AI
- HMGT 4500 - Hospitality Management Internship (6 credits)

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



**Supporting Area: Applied Heritage Management**  
**Total number of credit hours: 21**

Courses:

- ARCH 2800 – Archaeological Science
- GEOG 3500 – Introduction to Geographic Information Systems
- AMDS 3210 – Public Engagement in Heritage Management
- AMDS 3220 – Heritage Museum Studies
- AMDS 3230 – Heritage Travel
- AMDS 3240 – Heritage Laws and Ethics
- Plus one additional related elective or Directed Study

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



## **Supporting Area: Bioinformatics and Computational Biology**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting can land you positions in **bioinformatics analysis, computational biology, genomics data science, life sciences data analytics, and biomedical software development**. U.S. salaries range from about **\$60,000–\$80,000** for entry-level analyst positions, **\$80,000–\$110,000** and **\$110,000–\$140,000+** for senior computational biologists or data science specialists in biotechnology, pharmaceutical, or healthcare research sectors.*

### **Courses:**

- **BIOL 3451 – Genetics**
- **BIOL 3510 – Cell Biology**
- **BIOL 4210 – Biostatistics**
- **BIOL 4050 – Biomedical Informatics**
- **BIOL 4850 – Biological Data Visualization**
- **CSCE 3214 – Software Development for AI**
- **IPAC 4130 – Data Analytics and Computational Statistics I**

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



## Supporting Area: **Music Technology**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting lead to roles in: **Audio Software Developer, Sound Designer / Audio Engineer, Music Data Analyst, Interactive Media Developer, and AI Music Systems Engineer**—U.S. salaries range from **\$55,000–\$75,000** for entry-level and **\$95,000–\$120,000+** for specialized software development or AI-focused audio engineering roles.*

### Courses

- **MUCP 3670** – Intro to Electronic Music I
- **MUCP 3675** – Intro to Electronic Music II
- **PHYS 1270** – Science and Tech of Musical Sound
- **PHYS 3510** – Physics, Computation, and Software Applications
- **MUAE 3100** – Intro to DAW Techniques
- **MUAE 3200** – Advanced DAW Techniques
- **CSCE 3214** – Software Development for AI

### **Optional (Pick any)- Recommended to strengthen this supporting**

- **IPAC 4130** – Data Analytics and Computational Statistics I (*music usage, streaming data analytics*)
- **CSCE 4560** – Secure E-Commerce (*for music platforms, online services*)
- **PHYS 3910** – Intermediate Computational Modeling of Physical Systems (*DSP and signal processing*)
- **MUCP 4690** – Topics in Computer Music Media (*specialized tech/media electives*)
- **Programming for Audio / DSP courses**

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements.



## Supporting Area: **Criminal Justice**

**Total number of credit hours: 21**

*Combining your IT degree with this **Supporting** can land you positions in: **Digital Forensics Analyst, Cybercrime Investigator, Criminal Data Analyst, Threat Intelligence Analyst, and IT Specialist in Law Enforcement**. U.S. salaries range from **\$55,000–\$70,000** for entry-level analysts and **\$95,000–\$120,000+** for senior forensic analysts, cybersecurity specialists, or leadership positions in law enforcement technology units.*

### **Courses:**

- **CJUS 2100 – Crime and Justice in the US**
- **CJUS 3201 – Criminal Law**
- **CJUS 3330 – Intro to Criminalistics**
- **CJUS 3340 – Computer Crime**
- **CSCE 4555 – Computer Forensics**
- **IPAC 4130 – Data Analytics and Computational Statistics I** (*crime trend analysis & predictive analytics*)
- **CSCE 4205 – Machine Learning** (*AI for predictive policing and crime pattern detection*)

### **Optional (Pick any)- Recommended to strengthen this supporting**

- **CSCE 4560 – Secure E-Commerce** (*cybersecurity and digital protection skills*)
- **INFO 4710 – Information Technology Management** (*managing IT systems in law enforcement*)
- **CJUS 3600 – Criminology** (*theoretical foundation for advanced analytics*)
- **CJUS 4250 – Law and Social Problems** (*societal/legal context in IT-enabled investigations*)

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements.



## Supporting Area: **Pre-MBA (General Business)**

**Total number of credit hours: 21**

*Combining your IT degree with the **Pre-MBA (General Business)** supporting area can lead to positions such as **Business Analyst, Financial Analyst, Marketing Analyst, Operations Analyst, IT Business Consultant, or Management Trainee**. U.S. salaries range from **\$55,000–\$70,000** for entry-level analysts, **\$70,000–\$90,000** and **\$90,000–\$120,000+** for senior consultants, managers, or MBA-prepared professionals.*

### **Courses:**

- **Econ 1100** – Principles of Microeconomics
- **ACCT 2010** – Accounting Principles I
- **ACCT 2020** – Accounting Principles II
- **BLAW 3430** – Legal & Ethical Environment of Business
- **FINA 3770** – Finance
- **MKTG 3651** – Foundations of Marketing Practice
- **BCIS 2610** – Intro to Computers in Business

### **Optional (Pick any)- Recommended to strengthen this supporting**

- **INFO 4670** – Data Analysis and Knowledge Discovery

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements.



## Supporting Area: **Digital Supply Chain Management**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting can lead to positions in: **Logistics Analyst, Supply Chain Data Analyst, Transportation Planner, Warehouse Automation Specialist, Supply Chain Technology Consultant, or Operations Data Specialist**. U.S. salaries range from \$55,000–\$70,000 for entry-level analysts and \$90,000–\$120,000+ for senior supply chain technology specialists or consultants in large logistics, manufacturing, or e-commerce companies.*

### **Courses:**

- **LSCM 4530** – Global Supply Chain Management
- **LSCM 4540** – Procurement and Sourcing
- **LSCM 4560** – Transportation and Distribution
- **LSCM 3960** – Supply Chain Analytics (*data-driven decision making*)
- **LSCM 4360** – Logistics Planning and Control
- **IPAC 4130** – Data Analytics and Computational Statistics I (*analyze routes, inventory, predictive modeling*)
- **CSCE 3214** – Software Development for AI (*AI in warehousing, predictive logistics, automation*)

### **Optional (Pick any)- Recommended to strengthen this supporting**

- **LSCM 4510** – Warehousing and Inventory Management (*optional for deeper logistics operations knowledge*)
- **INFO 4670** – Data Analysis and Knowledge Discovery (*for ERP or supply chain data insights*)
- **LTEC 4260** – Digital Tools for Logistics / Automation

Note: Some courses may have pre-requisites that must be completed. Generally, any Pre-requisites can also be used in the supporting area unless they are required in another portion of the overall degree requirements



## Supporting Area: **AI & Data Engineering**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting can lead to positions in:*

- **Data Scientist / Machine Learning Engineer:** \$75,000 – \$110,000
- **AI / Deep Learning Engineer:** \$85,000 – \$115,000
- **Data Analyst (Big Data focus):** \$65,000 – \$90,000
- **BI Developer:** \$65,000 – \$95,000
- **NLP Engineer:** \$80,000 – \$115,000

Salaries vary by location, company size, and industry.

### **Courses:**

- CSCE 4205 – Introduction to Machine Learning
- CSCE 4300 – Intro to Big Data and Data Science
- CSCE 3110 – Data Structures and Algorithms
- CSCE 4350 – Fundamentals of Database Systems
- CSCE 5218 – Deep Learning (or Senior Elective equivalent)
- CSCE 4290 – Natural Language Processing (NLP)
- Add your 7th course/elective or CSCE 4410 – Data Mining and Knowledge Discovery



## Supporting Area: **Business Information Systems**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting can lead to positions in: **Business Analyst, Systems Analyst, IT Consultant / Technology Consultant, Database Analyst / Junior Database Administrator, Business Intelligence (BI) Analyst, and IT Security Analyst (Entry-Level)**, with typical U.S. starting salaries ranging from **\$60,000 to \$95,000**.*

### **Courses:**

1. BCIS 3610 – Basic Information Systems
2. BCIS 3620 – Systems Analysis and Design
3. BCIS 3630 – Object-Oriented Programming for Business
4. BCIS 4610 – Analysis of Business Information Systems
5. BCIS 3615 – Visual Display of Business Information
6. INFO 4608 – Introduction to Database Applications
7. INFO 4745 – Information Technology Security



## Supporting Area: **Manufacturing Engineering aka Industry 4.0**

**Total number of credit hours: 21**

*Combining your IT degree with this supporting can lead to positions in: Manufacturing Systems Analyst, Digital Manufacturing Engineer, or IT Systems Specialist. U.S **Salary:** Starting at **\$71,000 – \$88,000** in DFW, with senior roles exceeding **\$130,000**.*

### **Courses:**

- MFET 4210: CAD/CAM System Operations**
- MFET 4220: CNC Programming and Operations**
- MFET 4190: Quality Assurance**
- ENGR 1304: Engineering Graphics**
- MSET 4510: Digital Manufacturing**
- MFET 3110: Machining Principles and Processes**
- MFET 4200: Engineering Cost Analysis**



## Supporting Area: **Community College associate degree Transfers**

### **Total number of credit hours: 21**

#### **Courses:**

21 hours of related coursework can be transferred from any Community College Associates Degree or single or multiple certificate programs into the supporting area. Typical examples would include CISCO Certification Programs, Network Associates Degrees, Web Design programs, technical support Programs, Health Informatics, Biotech, and many others. A CENG or CSE advisor can help you with your specific course set.

Below are some examples from DFW area Community Colleges:

AA/AS and Fields of Study in:

- Business, Criminal Justice
- Engineering
- CS/IT
- Electrical Engineering

AAS and Certificates in:

- Animation
- Information systems
- Cyber Security
- Robotics and Automation Technology
- Web Development
- Biotechnology
- Business Management
- Cloud Computing
- Computer Networking
- Communications Design
- Database Development
- Electrical Engineering Technology
- Geographic Information Systems
- Health Information Management



**Supporting Area: Design your own**  
**Total number of credit hours: 21**

Courses:

A 21-hour custom supporting area can also be created by a student in consultation with an advisor. If the course set has some relationship between the courses such that we can give it meaningful title, then it will likely be approved.



**END**

