



DEGREE REQUIREMENTS 4 CORE COURSES + 7 ELECTIVE COURSES = 11 COURSES TOTAL (33 CREDIT HOURS)

PLAN OF STUDY

THE ORANGE SAMPLE PLAN OF STUDY FOLLOWS THE MOST COMMON COURSE LOAD AND TIMELINE, ALLOWING YOU TO COMPLETE YOUR DEGREE IN 2.5 YEARS WITH A SHORT BREAK EACH SUMMER.

YOU CAN ACCELERATE OR EXTEND YOUR PLAN OF STUDY AS DESIRED, BUT MUST FINISH YOUR DEGREE WITHIN 5 YEARS. YOU CAN USE THE **PLAN OF STUDY WORKSHEET** IF YOU INTEND TO FOLLOW A TIMELINE OF MORE THAN THREE YEARS.

	2023/24	2024/25	2025/26
FALL	CORE CORE	ELECTIVE ELECTIVE	ELECTIVE
SPRING	CORE ELECTIVE	ELECTIVE ELECTIVE	
SUMMER	CORE	ELECTIVE	

USING THIS WORKSHEET

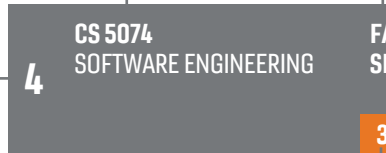
SELECT YOUR TERM ORDER, ACADEMIC YEARS, AND COURSES FROM THE DROP DOWN LISTS TO FILL IN THE BLANK PLAN OF STUDY. BE SURE TO ADHERE TO PREREQUISITES AND THE TERMS COURSES ARE OFFERED AS INDICATED BELOW AND ON THE FOLLOWING PAGE.

YOU CAN ALSO REFERENCE THE **COURSE LISTING**, **ELECTIVES BY TOPIC AREA**, AND **GRADUATE CERTIFICATES DOCUMENTS**. CONTACT OUR PROGRAM OFFICE AT VTMIT@VT.EDU FOR ASSISTANCE OR TO CONFIRM YOUR PLAN OF STUDY IS VALID.

WORKSHEET KEY

COURSE NUMBER AND TITLE

WORKSHEET REFERENCE NUMBER



TERMS COURSE IS OFFERED

FA = FALL SP = SPRING SU = SUMMER

= REQUIRED PREREQUISITE

= SUGGESTED PREREQUISITE

WORKSHEET REFERENCE NUMBER FOR ANY PREREQUISITE COURSES

INDICATES CHOICE OF COURSE

e.g. MEANS EITHER BIT 5594 OR MGT 5804 WILL FULFILL REQUIREMENT

CORE COURSES

SELECT FOUR (4) COURSES

1 ACIS 5504
INFORMATION SYSTEMS DESIGN AND DATABASE CONCEPTS
FA SP

2 BIT 5594
WEB-BASED APPLICATIONS & ELECTRONIC COMMERCE
FA SU

3 CS 5044
OBJECT-ORIENTED PROGRAMMING WITH JAVA
FA SP SU

4 CS 5704
SOFTWARE ENGINEERING
FA SP

5 ECE 5484
FUNDAMENTALS OF COMPUTER SYSTEMS
FA SP SU

6 MGT 5804
STRATEGIC LEADERSHIP IN TECHNOLOGY-BASED ORGANIZATIONS
FA SP

YOU MAY TAKE MORE THAN FOUR CORE COURSES IF YOU WISH TO SUBSTITUTE A CORE COURSE FOR AN ELECTIVE IN THE PLAN OF STUDY

= KNOWLEDGE OF JAVA, C, C++, OR C# IS REQUIRED. CONTACT OUR PROGRAM OFFICE FOR MORE INFORMATION IF YOU DO NOT YET HAVE THIS BACKGROUND.

ELECTIVE COURSES

SELECT SEVEN (7) COURSES

COURSES HAVE BEEN ORGANIZED BY TOPIC AREA. YOU MAY CHOOSE **ANY COMBINATION OF ELECTIVE COURSES** TO FILL IN YOUR PLAN OF STUDY

ANALYTICS & BUSINESS INTELLIGENCE	7	BIT 5524 INTRODUCTION TO BUSINESS INTELLIGENCE	FA	2/6	8	BIT 5534 APPLIED BUSINESS INTELLIGENCE & ANALYTICS	SP	7
BIG DATA	9	CS 5644 MACHINE LEARNING WITH BIG DATA	FA	3	10	CS 5664 SOCIAL MEDIA ANALYTICS	SP	3
BUSINESS INFORMATION SYSTEMS	11	ACIS 5524 ADVANCED DATABASE MANAGEMENT SYSTEMS	FA SP	1	12	ACIS 5534 INFORMATION SYSTEMS ANALYSIS AND DESIGN	FA	1
CYBERSECURITY	13	ECE 5480 CYBERSECURITY AND THE INTERNET OF THINGS	FA SP	3/5	14	ECE 5585 IT SECURITY AND TRUST I	FA	5
					15	ECE 5586 IT SECURITY AND TRUST II	SP	14
CYBERSECURITY MANAGEMENT	16	BIT 5134 CYBERSECURITY PROGRAM DESIGN	FA SU	2/6	17	ACIS 5624 CYBERSECURITY GOVERNANCE AND	SP	2/6
CYBERSECURITY POLICY	18	BIT 5114 CRIME AND CONFLICT IN CYBERSPACE	SP SU	2/6	19	BIT 5124 CYBER LAW AND POLICY FOR INFORMATION TECHNOLOGY	FA	2/6
DECISION SUPPORT SYSTEMS	20	BIT 5474 COMPUTER-BASED DECISION SUPPORT SYSTEMS	FA	2	21	BIT 5484 COGNITIVE COMPUTING FOR SMART SERVICE SYSTEMS	SP	20
HEALTH INFORMATION TECHNOLOGY	22	BIT 5564 HEALTHCARE INFORMATION TECHNOLOGY	SU	1	23	BIT 5574 HEALTHCARE DATA MANAGEMENT	SU	1
INNOVATION/ ENTREPRENEURSHIP IN AI/ML	24	ECE 5494 INNOVATIVE PATHWAYS IN AI & MACHINE LEARNING	SP	5/6	25	MGT 5824 TECHNOLOGY-BASED ENTREPRENEURSHIP	SU	6
NETWORKING	26	ECE 5485 NETWORKS AND PROTOCOLS I	FA	5	27	ECE 5486 NETWORKS AND PROTOCOLS II	SP	26
SOFTWARE DEVELOPMENT	28	CS 5744 SOFTWARE DESIGN & QUALITY	FA	4	29	CS 5244 WEB APPLICATION DEVELOPMENT	FA SU	3
					30	CS 5254 MOBILE APPLICATION DEVELOPMENT	SP	3
SOFTWARE ENGINEERING	3	CS 5044 OBJECT-ORIENTED PROGRAMMING WITH JAVA	FA SP SU		4	CS 5704 SOFTWARE ENGINEERING	FA SP	3
					28	CS 5744 SOFTWARE DESIGN & QUALITY	FA	4



DEGREE REQUIREMENTS 4 CORE COURSES + 7 ELECTIVE COURSES = 11 COURSES TOTAL (33 CREDIT HOURS)

PLAN OF STUDY

THE ORANGE SAMPLE PLAN OF STUDY FOLLOWS A COMMON COURSE LOAD AND TIMELINE, ALLOWING YOU TO COMPLETE YOUR DEGREE IN 2.5 YEARS WITH A SHORT BREAK EACH SUMMER.

YOU CAN ACCELERATE OR EXTEND YOUR PLAN OF STUDY AS DESIRED, BUT **YOU MUST FINISH YOUR DEGREE WITHIN FIVE YEARS OF YOUR STARTING TERM.**

	2023/24	2024/25	2025/26
FALL	CORE CORE	ELECTIVE ELECTIVE	ELECTIVE
SPRING	CORE ELECTIVE	ELECTIVE ELECTIVE	
SUMMER	CORE	ELECTIVE	

USING THIS WORKSHEET

USE THE **COURSE LISTING**, **ELECTIVES BY TOPIC AREA**, AND **GRADUATE CERTIFICATES** DOCUMENTS TO FILL IN THE BLANK PLAN OF STUDY BELOW. BE SURE TO ADHERE TO PREREQUISITES AND THE TERMS THAT COURSES ARE OFFERED.

CONTACT OUR VT-MIT PROGRAM OFFICE AT VTMIT@VT.EDU FOR ASSISTANCE OR TO CONFIRM YOUR PLAN OF STUDY IS VALID.

FOR OFFICE USE ONLY

STUDENT NAME:

STUDENT ID (LAST 4 DIGITS):

DATE SUBMITTED:

DATE REVIEWED:



THE VT-MIT DEGREE REQUIRES A MINIMUM OF 11 COURSES (33 CREDIT HOURS). OF THESE 11 COURSES, A MINIMUM OF FOUR MUST BE CORE COURSES. YOU MAY TAKE MORE THAN FOUR CORE COURSES IF YOU WISH TO SUBSTITUTE A CORE COURSE FOR AN ELECTIVE. YOU MAY CHOOSE ANY OF THE ELECTIVES BELOW OR VIEW THE [ELECTIVES BY TOPIC AREAS](#) DOCUMENT FOR SUGGESTED GROUPINGS.
FA = FALL SP = SPRING SU = SUMMER

CORE

COURSE NUMBER	COURSE TITLE	REQUIRED PREREQUISITE	SUGGESTED PREREQUISITE	TERMS AVAILABLE
ACIS 5504	Information Systems Design & Database Concepts			FA, SP
BIT 5594	Web-Based Applications & Electronic Commerce			FA, SU
CS 5044	Object-Oriented Programming with Java	Java, C, C++ or C#		FA, SP, SU
CS 5704	Software Engineering	CS 5044		FA, SP
ECE 5484	Fundamentals of Computer Systems	Java, C, C++ or C#		FA, SP, SU
MGT 5804	Strategic Leadership in Technology-Based Organizations			FA, SP

ELECTIVES

ACIS 5524	Advanced Database Management Systems	ACIS 5504		FA, SP
ACIS 5534	Information Systems Analysis and Design	ACIS 5504		FA
ACIS 5624	Cybersecurity Governance and Risk Management		BIT 5594 or MGT 5804	SP
BIT 5114	Crime and Conflict in Cyberspace		BIT 5594 or MGT 5804	SP, SU
BIT 5124	Cyber Law and Policy for Information Technology		BIT 5594 or MGT 5804	FA
BIT 5134	Cybersecurity Program Design & Operations		BIT 5594 or MGT 5804	FA, SU
BIT 5474	Computer-Based Decision Support Systems		BIT 5594	FA
BIT 5484	Cognitive Computing for Smart Service Systems	BIT 5474		SP
BIT 5524	Introduction to Business Intelligence & Analytics		BIT 5594 or MGT 5804	FA
BIT 5534	Applied Business Intelligence & Analytics	BIT 5524		SP
BIT 5564	Healthcare Information Technology		ACIS 5504	SU
BIT 5574	Healthcare Data Management		ACIS 5504	SU
CS 5244	Web Application Development	CS 5044		FA, SU
CS 5254	Mobile Application Development	CS 5044		SP
CS 5644	Machine Learning with Big Data	CS 5044		FA
CS 5664	Social Media Analytics	CS 5044		SP
CS 5744	Software Design & Quality	CS 5704		FA
ECE 5480	Cybersecurity and the Internet of Things	ECE 5484 or CS 5044		FA, SP
ECE 5485	Networks and Protocols I	ECE 5484		FA
ECE 5486	Networks and Protocols II	ECE 5485		SP
ECE 5494	Innovative Pathways in AI & Machine Learning	ECE 5484 or MGT 5804		SP
ECE 5585	IT Security and Trust I	ECE 5484		FA
ECE 5586	IT Security and Trust II	ECE 5585		SP
MGT 5824	Technology-Based Entrepreneurship	MGT 5804		SU



THE VT-MIT DEGREE REQUIRES A MINIMUM OF 11 COURSES (33 CREDIT HOURS), OF WHICH AT LEAST FOUR MUST BE CORE COURSES. THE REMAINING SEVEN MAY BE CHOSEN FROM THE LIST OF ELECTIVES BELOW. THE TOPIC AREAS ARE MEANT TO HELP GUIDE YOUR COURSE SELECTIONS, BUT YOU MAY MIX AND MATCH YOUR ELECTIVES IF DESIRED. VIEW THE [COURSE LISTING](#) FOR A LIST OF THE CORE COURSES.
FA = FALL SP= SPRING SU = SUMMER

COURSE NUMBER	COURSE TITLE	REQUIRED PREREQUISITE	SUGGESTED PREREQUISITE	TERMS AVAILABLE
ANALYTICS & BUSINESS INTELLIGENCE				
BIT 5524	Introduction to Business Intelligence & Analytics		BIT 5594 or MGT 5804	FA
BIT 5534	Applied Business Intelligence & Analytics	BIT 5524		SP
BIG DATA				
CS 5644	Machine Learning with Big Data	CS 5044		FA
CS 5664	Social Media Analytics	CS 5044		SP
BUSINESS INFORMATION SYSTEMS				
ACIS 5524	Advanced Database Management Systems	ACIS 5504		FA, SP
ACIS 5534	Information Systems Analysis and Design	ACIS 5504		FA
CYBERSECURITY				
ECE 5480	Cybersecurity and the Internet of Things	ECE 5484 or CS 5044		FA, SP
ECE 5585	IT Security and Trust I	ECE 5484		FA
ECE 5586	IT Security and Trust II	ECE 5585		SP
CYBERSECURITY MANAGEMENT				
BIT 5134	Cybersecurity Program Design & Operations		BIT 5594 or MGT 5804	FA, SU
ACIS 5624	Cybersecurity Governance and Risk Management		BIT 5594 or MGT 5804	SP
CYBERSECURITY POLICY				
BIT 5114	Crime and Conflict in Cyberspace		BIT 5594 or MGT 5804	SP, SU
BIT 5124	Cyber Law and Policy for Information Technology		BIT 5594 or MGT 5804	FA
DECISION SUPPORT SYSTEMS				
BIT 5474	Computer-Based Decision Support Systems		BIT 5594	FA
BIT 5484	Cognitive Computing for Smart Service Systems	BIT 5474		SP
HEALTH INFORMATION TECHNOLOGY				
BIT 5564	Healthcare Information Technology		ACIS 5504	SU
BIT 5574	Healthcare Data Management		ACIS 5504	SU
INNOVATION/ENTREPRENEURSHIP IN AI/ML				
ECE 5494	Innovative Pathways in AI & Machine Learning	ECE 5484 or MGT 5804		SP
MGT 5824	Technology-Based Entrepreneurship	MGT 5804		SU
NETWORKING				
ECE 5485	Networks and Protocols I	ECE 5484		FA
ECE 5486	Networks and Protocols II	ECE 5485		SP
SOFTWARE DEVELOPMENT				
CS 5744	Software Design & Quality	CS 5704		FA
CS 5244	Web Application Development	CS 5044		FA, SU
CS 5254	Mobile Application Development	CS 5044		SP



USE THE COURSE SELECTIONS BELOW TO SPECIALIZE YOUR PLAN OF STUDY AND EARN UP TO TWO GRADUATE CERTIFICATES.

FA = FALL SP= SPRING SU = SUMMER

*PREREQUISITE NOT REQUIRED FOR CERTIFICATE-ONLY STUDENTS

COURSE NUMBER	COURSE TITLE	REQUIRED PREREQUISITE	SUGGESTED PREREQUISITE	TERMS AVAILABLE
BIG DATA				
CS 5044	Object-Oriented Programming with Java (CORE)	Java, C, C++ or C#		FA, SP, SU
CS 5644	Machine Learning with Big Data	CS 5044		FA
CS 5664	Social Media Analytics	CS 5044		SP
BUSINESS DATA ANALYTICS				
ACIS 5524	Advanced Database Management Systems	ACIS 5504*		FA, SP
BIT 5524	Introduction to Business Intelligence & Analytics		BIT 5594 or MGT 5804	FA
BIT 5534	Applied Business Intelligence & Analytics	BIT 5524		SP
CYBERSECURITY MANAGEMENT				
ACIS 5624	Cybersecurity Governance and Risk Management		BIT 5594 or MGT 5804	SP
BIT 5134	Cybersecurity Program Design & Operations		BIT 5594 or MGT 5804	FA, SU
MGT 5804	Strategic Leadership in Technology-Based Organizations (CORE)			FA, SP
CYBERSECURITY POLICY				
BIT 5114	Crime and Conflict in Cyberspace		BIT 5594 or MGT 5804	SP, SU
BIT 5124	Cyber Law and Policy for Information Technology		BIT 5594 or MGT 5804	FA
BIT 5594	Web-Based Applications & Electronic Commerce (CORE)			FA, SU
CYBERSECURITY TECHNOLOGIES				
ECE 5484	Fundamentals of Computer Systems (CORE)	Java, C, C++ or C#		FA, SP, SU
ECE 5585	IT Security and Trust I	ECE 5484		FA
ECE 5586	IT Security and Trust II	ECE 5585		SP
ECE 5480	Cybersecurity and the Internet of Things	ECE 5484 or CS 5044		FA, SP
HEALTH INFORMATION TECHNOLOGY				
ACIS 5504	Information Systems Design & Database Concepts (CORE)			FA, SP
BIT 5564	Healthcare Information Technology		ACIS 5504	SU
BIT 5574	Healthcare Data Management		ACIS 5504	SU
INFORMATION SYSTEMS DESIGN				
ACIS 5504	Information Systems Design & Database Concepts (CORE)			FA, SP
ACIS 5524	Advanced Database Management Systems	ACIS 5504		FA, SP
ACIS 5534	Information Systems Analysis and Design	ACIS 5504		FA
INFORMATION TECHNOLOGY MANAGEMENT				
BIT 5474	Computer-Based Decision Support Systems		BIT 5594	FA
BIT 5594	Web-Based Applications & Electronic Commerce (CORE)			FA, SU
MGT 5804	Strategic Leadership in Technology-Based Organizations (CORE)			FA, SP
INTERNET & NETWORK TECHNOLOGIES				
ECE 5480	Cybersecurity and the Internet of Things	ECE 5484 or CS 5044		FA, SP
ECE 5484	Fundamentals of Computer Systems (CORE)	Java, C, C++ or C#		FA, SP, SU
ECE 5485	Networks and Protocols I	ECE 5484		FA
SOFTWARE DEVELOPMENT				
CS 5044	Object-Oriented Programming with Java (CORE)	Java, C, C++ or C#		FA, SP, SU
CS 5244	Web Application Development	CS 5044		FA, SU
CS 5254	Mobile Application Development	CS 5044		SP
CS 5704	Software Engineering (CORE)	CS 5044		FA, SP

CHOICE