M.S. in Aviation (MSAV)

Degree Requirements

Air Traffic Management Specialization

(For students with NO ATC experience)

MSAV Core Requirements 12 **Required Courses** MSA 540 The Air Transportation System 3 MSA 545 Human Factors in the Aviation/Aerospace 3 Industry or MSA 554 Project Management in Aviation Aerospace Statistical Analysis for Aviation/Aerospace 3 MSA 662 MSA 670 Research Methods in Aviation/Aerospace 3 **Specialization Requirements** 9 **Required Courses** 3 MSA 520 Introduction to Air Traffic Control Tower MSA 617 En route Radar Operations 3 MSA 623 Advanced Air Traffic Control Tower 3 Electives 3 MSA 508 Advanced Airport Modeling Aviation/Aerospace Simulation Systems MSA 515 3 MSA 547 Leadership and Critical Decision Making in the 3 Aviation Industry **MSA 608** Aviation/Aerospace Accident Investigation and 3 Analysis MSA 636 Advanced Aviation/Aerospace Planning 3 Systems Select one of the following options: 12 **Option I: Capstone** MSA 691 Graduate Capstone Research Project 3 9 MSA Electives from the above list of electives or any MSA electives (500-600)* **Option II: Thesis** MSA Electives from the above list of electives or any MSA 6 Electives (500-600 Level).* MSA 700 Thesis 6 **Total Credits** 33 · For students with no ATC experience or education and for AT-CTI students, the following undergraduate foundation prerequisite courses are required: **Required Undergraduate Foundation** AT 202 Introduction to Air Traffic Management 3 AT 305 Introduction to Terminal Radar Operations 3

Aviation/Aerospace Management and

Sustainability Specialization

AT 401

MSAV Core Rec	quirements	
Required Courses		
MSA 540	The Air Transportation System	3
MSA 545	Human Factors in the Aviation/Aerospace	3
or MSA 554	Project Management in Aviation Aerospace	
MSA 662	Statistical Analysis for Aviation/Aerospace	3
MSA 670	Research Methods in Aviation/Aerospace	3
Specialization Requirements		
Select three of the following:		9

Advanced Terminal Radar Operations

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MSA 508	Advanced Airport Modeling	3
MSA 547	Leadership and Critical Decision Making in the Aviation Industry	3
MSA 573	Agent-based Modeling (ABM) for Aerospace and Aviation Systems	3
MSA 600	Sustainable Aviation and Aerospace Perspectives	3
MSA 609	Aircraft Maintenance Management	3
MSA 636	Advanced Aviation/Aerospace Planning Systems	3
MSA 641	Production and Procurement Management in the Aviation/Aerospace Industry	3
MSA 642	International Aviation Policy	3
MSA 644	Integrated Logistics Support in Aviation/ Aerospace	3
Note: Only one BA/MGMT courses may be selected with permission of the Program Coordinator.		
Select one of the	e following options:	12
Option I: Capsto	one	
MSA 691	Graduate Capstone Research Project	3
MSA Electives (500-600 Level)*		9
Option II: Thesis	6	
MSA Electives (5	00-600 Level)*	6
MSA 700	Thesis	6
Total Credits		33

Aviation/Aerospace Operations Specialization

MSAV Core Requirements Required Courses 12 MSA 540 The Air Transportation System 3 MSA 545 Human Factors in the Aviation/Aerospace 3 Industrv or MSA 554 Project Management in Aviation Aerospace MSA 662 Statistical Analysis for Aviation/Aerospace 3 MSA 670 Research Methods in Aviation/Aerospace 3 **Specialization Requirements** Select three of the following: q **MSA 508** Advanced Airport Modeling 3 MSA 515 Aviation/Aerospace Simulation Systems 3 MSA 516 Applications in Crew Resource Management 3 MSA 547 Leadership and Critical Decision Making in the 3 Aviation Industry MSA 562 Situation Awareness and Performance in 3 Aviation/Aerospace MSA 573 Agent-based Modeling (ABM) for Aerospace 3 and Aviation Systems MSA 619 Airport Certification and Operations Safety 3 MSA 620 3 Air Carrier Operations MSA 622 **Corporate Aviation Operations** 3 Note: One BA/MGMT Courses may be selected with permission of the Program Coordinator. Select one of the following options: 12 **Option I: Capstone** MSA 691 Graduate Capstone Research Project 3 MSA Electives (500-600 Level)* 9 **Option II: Thesis** MSA Electives (500-600 Level)* 6 **MSA 700** Thesis 6 **Total Credits** 33

2 M.S. in Aviation (MSAV)

Aviation/Aerospace Safety Systems Specialization

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MSAV Core Red	quirements	
Required Cours	ses	12
MSA 540	The Air Transportation System	3
MSA 545	Human Factors in the Aviation/Aerospace	3
or MSA 554	Project Management in Aviation Aerospace	
MSA 662	Statistical Analysis for Aviation/Aerospace	3
MSA 670	Research Methods in Aviation/Aerospace	3
Specialization F	Requirements	
Select three of t	the following:	9
MSA 516	Applications in Crew Resource Management	3
MSA 562	Situation Awareness and Performance in Aviation/Aerospace	3
MSA 608	Aviation/Aerospace Accident Investigation and Analysis	3
MSA 611	Aviation/Aerospace System Safety	3
MSA 619	Airport Certification and Operations Safety	3
MSA 621	Aviation/Aerospace Safety Program Management	3
Select one of th	ne following options:	12
Option I: Capst	one	
MSA 691	Graduate Capstone Research Project	3
MSA Electives (8	500-600 Level)*	9
Option II: Thesi	S	
MSA Electives (500-600 Level)*	6
MSA 700	Thesis	6
Total Credit		33

Space Operations Specialization

MSAV Core Requirements

MSA 545 Hu	ne Air Transportation System uman Factors in the Aviation/Aerospace dustry oject Management in Aviation Aerospace	12 3 3
MSA 545 Hu	uman Factors in the Aviation/Aerospace dustry	
	dustry	3
	oject Management in Aviation Aerospace	
or MSA 554 Pr		
MSA 662 St	atistical Analysis for Aviation/Aerospace	3
MSA 670 Re	esearch Methods in Aviation/Aerospace	3
Specialization Requ	uirements	9
Select three of the f	ollowing:	
MSA 511 Ea	arth Observation and Remote Sensing	3
MSA 512 Sp	bace Mission and Launch Operations	3
MSA 513 Sp	pace Habitation and Life Support Systems	3
	oplications in Space: Commerce, Defense, ad Exploration	3
Select one of the fo	llowing options:	12
Option I: Capstone		
MSA 691 Gr	raduate Capstone Research Project	3
MSA Electives (500-6	600 Level)*	9
Option II: Thesis		
MSA Electives (500-6	600 Level)*	6
MSA 700 Th	nesis	6
Total Credits		33

Uncrewed Systems Specialization

MSAV Core R	equirements	
Required Cou	irses	12
MSA 540	The Air Transportation System	3

MSA 545	Human Factors in the Aviation/Aerospace	3
or MSA 554	Project Management in Aviation Aerospace	
MSA 662	Statistical Analysis for Aviation/Aerospace	3
MSA 670	Research Methods in Aviation/Aerospace	3
Specialization R	equirements	
Select three of t	he following:	9
MSA 534	Application of Uncrewed Systems	3
MSA 535	Current Issues in Uncrewed Systems	3
MSA 538	Legal and Regulatory Issues in Uncrewed Systems	3
MSA 624	sUAS Operational Planning and Safety Management	3
MSA 625	Uncrewed Systems Interoperability and Control	3
MSA 635	Uncrewed Systems Operational Configuration	3
Select one of the following options:		12
Option I: Capsto	ne	
MSA 691	Graduate Capstone Research Project	3
MSA Electives (500-600 Level)*		9
Option II: Thesis	3	
MSA Electives (500-600 Level)*		6
MSA 700	Thesis	6
Total Credits		33