

NIA Graduate Program: Fall 2018			
FULL COURSE LIST			
HAMPTON UNIVERSITY			
APS 600	Atmosp & Planetary Sci Seminar Science	Moore	W 12:00-12:50pm, Room 123*
APS 604	Principles of Planetary Sci	Moore	TR 9:30am-10:45am +
APS 645	Atmospheric Physics	Anderson & Moore	TR12:30pm-1:45pm, Room 124*
APS 660	Intro to Atmos Struct & Dynmcs Science	Sayanagi	TR 2:00pm-3:15pm, Room 123*
Course Number TBD	Small Satellite Design	Moore	TR 4:00pm - 5:15pm*
APS 750	Atmospheric Measurements	Loughman	TR 11:00am-12:15pm, Room 123*
* Courses taught on HU campus			
+ Course instructor on-site at NIA			
GEORGIA TECH			
<i>Aerospace Engineering (MS and PhD)</i>			
AE 6030 Q	Unsteady Aerodynamics	Smith	Video Only
AE 6050 Q	Gas Dynamics	TBD	TR 10:05am-11:55pm
AE 6070 Q	Rotary Wing Aerodynamics	TBD	Video Only
AE 6701 Q	Wind Engineering	TBD	Video Only
*Synchronous (live) course received or delivered from NIA.			
+ Course instructor on-site at NIA			
NORTH CAROLINA STATE UNIVERSITY			
<i>Mechanical and Aerospace Engineering (MS and PhD)</i>			
MAE 504	Fluid Dynamics of Combustion I		
MAE 505	Heat Transfer Theory and Applications		
MAE 511	Advanced Dynamics I		
MAE 513	Principles of Structural Vibrations		
MAE 531	Engineering Design Optimization		
MAE 533	Finite Element Analysis I		
MAE 536	Micro/Nano Electromechanical Systems		
MAE 561	Wing Theory		
MAE 577	Multi-Scale Two Phase Flow Simulations		
MAE 586	Projet Work in Mechanical Engineering		

MAE 688	Non-Thesis Masters Continuous Registration		Asynchronous Streaming Media
Electrical and Computer Engineering (courses only)			
ECE 511	Analog Electronics		
ECE 513	Digital Signal Processing		
ECE 514	Random Processes		
ECE 530	Physical Electronics		
ECE 534	Fundamentals of Power Electronics and Utility Applications		
ECE 549	RF Design for Wireless		
ECE 550	Power System Operation and Control		
ECE 556	Agent-Based Mechatronics Systems		
ECE 564	ASIC and FPGA Design with Verilog		
ECE 570	Computer Networks		
ECE 573	Internet Protocols		
ECE 574	Computer Network Security		
ECE 585	The Business of the Electric Utility Industry		
ECE 586	Communication and SCADA Systems for Smart Grid		
ECE 592	Embedded Systems Architecture		
ECE 592	Topics in Data Science		
ECE 592	Wearable Biosensors		
ECE 600	ECE Graduate Orientation		
ECE 700	Electronic System Level and Physical Design		
ECE 732	Dynamic Control of Electric Machines		
ECE 792	Adaptive Control and Reinforcement Learning		
ECE 792	Advanced Verification with UVM		
ECE 804	Seminar in Communication and Signal Processing		
Industrial & Systems Engineering (courses only)			
ISE 501	Introduction to Operations Research		Asynchronous streaming media
ISE 515	Manufacturing Process Engineering		
ISE 552	Design and Control of Production and Service Systems		
ISE 560	Stochastic Models in Industrial Engineering		
ISE 589	Python Programming for Industrial Engineers		
ISE 707	Real-Time Control of Automated Manufacturing		

ISE 723	Production Planning, Scheduling and Inventory Control		
ISE 741	Systems Safety Engineering		
ISE 789	Advanced Nanoscale Manufacturing		
Materials Sciences and Engineering (courses only)			
MSE 500	Modern Concepts in Materials Science		Asynchronous streaming media
MSE 509	Nuclear Materials		
MSE 540	Processing of Metallic Materials		
MSE 545	Ceramic Processing		
MSE 708	Thermodynamics of Materials		
MSE 710	Elements of Crystallography and Diffraction		
MSE 721	Nanoscale Simulations and Modeling		
MSE 760	Materials Science in Processing of Semiconductor Devices		
MSE 791	Metastble Materials		
MSE 791	Nonferrous Alloys		
These courses are offered asynchronously and utilize WEB accessible streaming or CDRoms delivered to the student. For updates on asynchronous courses go to: http://EngineeringOnline.ncsu.edu .			
*Synchronous (live) course received or delivered from NIA.			
X Course instructor on-site at NIA			
NORTH CAROLINA A&T UNIVERSITY			
Computer Engineering			
Electrical Engineering			
ECEN 685	Small Satellite Design	Edmonson	TR 4:00pm - 5:15pm*
*Synchronous (live) course received or delivered from NIA.			
OLD DOMINION UNIVERSITY			
Aerospace Engineering (MS and PhD)			
NIA received or web delivery			
MAE 560	Introduction to Space Systems Engineering	Ash	TR 9:30am-10:45am
MAE 601	Engineering Mathematics	Qian	TR 1:00pm-2:15pm
MAE 604	Analytical Dynamics	Newman	MW 11:00am-12:15pm
MAE 607	Continuum Mechanics	Zhang	MW 2:30pm - 3:45pm
MAE 620	Heat Transfer I	Qian	R 7:10pm-9:50pm

MAE 640	Modern Control Theory	Alberts	MW 11:00am-12:15pm
MAE 672	Design Experiments	Landman	TR 4:20pm-5:35pm
MAE 696	Small Satellite Design	Ash	TR 4:00pm - 5:15pm*
MAE 752/852	Mechanical Behavior of Materials	Ghosh	R 7:10pm-9:50pm
MAE 783/883	Robots and Manufacturing Automation	Huang	TR 1:00pm-2:15pm
MAE 795/895	Conventional Control Methods	Newman	TR 11:00am-12:15pm
UNIVERSITY OF MARYLAND			
<i>Aerospace Engineering (MS and PhD)</i>			
ENAE 651	Smart Structures	Chopra	TR 9:30am-10:45am
ENAE 655	Structural Dynamics	Bauchau	MW 11:00am-12:15pm
ENAE 684	Computational Fluid Dynamics I	Baeder	TR 11:00am-12:15pm
ENAE 788B	Selected Topics: Aircraft System Identifications - Theory and Practice	Morelli	MW 10:00am-11:15am*
ENAE 788D	Selected Topics:Advanced Space Systems Design	Akin	TR 11:00am-12:15pm
ENAE 788K	Selected Topics: Estimation and Control of Stochastic Systems	Sanner	MW 2:00pm-3:15pm
* Synchronous (live) course received or delivered from NIA XCourse instructor on-site at NIA			
UNIVERSITY OF VIRGINIA			
<i>Civil Engineering</i>			
CE 5020 (Seciton 600, Class Number 19415)	Introduction to GIS	Miller	TR 11:00am-12:15pm*
CE 6250 (Section 600, Class Number 19411)	Environmental Systems Modeling and Management	Culver	TR 11:00am-12:15pm*
CE 6470 (Section 600, Class Number 21058)	Transport Economics and Finance	Chen	TR 2:00pm-3:15pm*
<i>Chemical Engineering (courses only)</i>			
CHE 6665 (Section 600, Class Number 18510)	Techniques for Chemical Engineering Analysis & Design	Paolucci	MW 3:30pm-4:45pm*
<i>Electrical and Computer Engineering (MS and Ph.D.)</i>			
ECE 6501 (Section 600, Class Number 17192)	Photonics I	Gupta	TR 3:30pm-4:45pm*
ECE 6713 (Section 600, Class Number 20237)	Communication Systems Engineering	Wilson	TR 3:30pm-4:45pm*
ECE 6851 (Section 600, Class Number 17100)	Linear Automatic Control Systems	Tao	TR 11:00am-12:15pm*
ECE 6852 (Section 600, Class Number 19682)	Linear State Space Control Systems	Tao	MW 2:00pm-3:15pm*
<i>Materials Sciences and Engineering (MS and Ph.D.)</i>			
MSE 6230 (Section 600, Class Number 19536)	Thermodynamics and Phase Equilibria of Materials	Zangari	TR 2:00pm-3:15pm*
MSE 7220 (Section 600, Class Number 19561)	Surface Science	Reinke	TR 3:30pm-4:45pm*
<i>Mechanical and Aerospace Engineering (MS and PhD)</i>			

MAE 6080 (Section 600, Class Number 19438)	Constitutive Modeling of Biosystems	Panzer	MW 3:30pm-4:45pm*
MAE 6610 (Section 600, Class Number 17100)	Linear Automatic Control Systems	Tao	TR 12:30am-1:45pm*
MAE 6410 (Section 600, Class Number 17306)	Engineering Mathematics I	Wood	MW 5:00pm-6:15pm*
MAE 6620 (Section 600, Class Number 19682)	Linear State Space Control Systems	Tao	MW 2:00pm-3:15pm*
Engineering Physics (MS and Ph.D.)			
Systems Engineering (MS and Ph.D.)			
SYS 6012 (Section 600, Class Number 19682)	Linear State Space Control Systems	Tao	MW 2:00pm-3:15pm*
SYS 6581 (Section 600, Class Number 19561)	Principles of Modeling for Cyber Physical Systems	Behl	TR 3:30pm-4:45pm*
*Synchronous (live) course received on student desktop or laptop			
VIRGINIA TECH			
Aerospace and Ocean Engineering (MS and P.D)			
AOE 5754	Applied Linear Systems	SC Southward	TR 11:00am-12:15pm
Electrical Computer Engineering (MS and PhD)			
Materials Science and Engineering (MS and Ph.)			
MSE 5114	Materials Characterization	MJ Kelley	MW 12:30pm-1:45pm
Mechanical Engineering (MS and PhD)			
ME 5135	Vehicle Propulsion	KT Lowe	On-line course
ME 5304	Conduction Heat Transfer	Pitchumani	On-line course
ME 5404	Fluid Dynamics	Pitchumani	On-line course
ME 5434	Adv Intro Comp Fluid Dynamics	Choi	On-line course
ME 5554	Applied Linier Systems	Southward	On-line course
ME 5724	Advanced Instrumentation	Wicks	On-line course
<div># Courses are available for graduate credit</div> <div>XX ONLINE course. Primarily received at desktop.</div> <div>**Synchronounous (live) course delivered at the Peninsula Graduate Center</div> <div>ESM, MSE and ME courses are delivered at NIA Headquarters.</div> <div>*Synchronous (live) course received or delivered from NIA</div> <div>X Course instructor on-site at NIA.</div> <div>All VT AOE,</div>			