

# NIA Graduate Program: Fall 2017

## FULL COURSE LIST

### HAMPTON UNIVERSITY

<b>TBD</b>			
* Courses taught on HU campus			

### GEORGIA TECH

<b>Aerospace Engineering (MS and PhD)</b>			
AE 4791 Q	Mechanical Behavior of Composites	Kalaitzidou	MWF 9:05am-9:55am
AE 6009 Q	Vicious Fluid Flow	Yeung	MWF 12:20pm-1:10pm
AE 6030 Q	Unsteady Aerodynamics	Smith	Video Only
AE 6070 Q	Rotary Wing Aerodynamics	Sankar	Video Only
AE 6114 Q	Fundamentals of Solid Mechanics	Rimoli	TR 12:00pm-1:15pm
AE 6333 Q	Rotorcraft Design I	Schrage	TR 1:30pm-2:45pm
AE 6343 Q	Aircraft Design I	Mavris	F 3:00pm - 6:00pm
AE 6353 Q	Orbital Mechanics	Gunter	TR 8:00am-9:15am
AE 6372 Q	Aerospace Systems Engineering	Schrage	TR 9:30am -10:45am
AE 6503 Q	Helicopter Stability and Control	Prasad	MWF 1:55pm-2:45pm
AE 6701 Q	Wind Engineering	Sankar	Video Only
AE 6765 Q	Kinetics & Thermodynamics of Gases	Jagoda	MWF 8:00am-9:10am
AE 8801 QSM	Special Topics: 2D Unsteady Airfoil Aerodyn	Smith	

\*Synchronous (live) course received or delivered from NIA.

+ Course instructor on-site at NIA

### NORTH CAROLINA STATE UNIVERSITY

<b>Mechanical and Aerospace Engineering (MS and PhD)</b>			
MAE 504	Fluid Dynamics of Combustion I		
MAE 511	Advanced Dynamics with Applications to Aerospace Systems		
MAE 517	Advanced Precision Manufacturing for Products, Systems and Processes		
MAE 518	Acoustic Radiation I		
MAE 531	Engineering Design Optimization		
MAE 533	Finite Element Analysis I		
MAE 536	Micro/Nano Electromechanical Systems		
MAE 551	Airfoil Theory		
MAE 562	Physical Gas Dynamics		
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
<b>Electrical and Computer Engineering (courses only)</b>			
ECE 506	Architecture of Parallel Computers		
ECE 511	Analog Electronics		
ECE 513	Digital Signal Processing		
ECE 514	Random Processes		
ECE 534	Power Electronics		
ECE 549	RF Design for Wireless		
ECE 550	Power Systems Operation and Control		
ECE 556	Agent-Based Mechatronics Systems		
ECE 564	ASIC and FPGA Design with Verilog		
ECE 568	Conventional and Emerging Nanomanufacturing Techniques		
ECE 570	Computer Networks		Asynchronous streaming media
ECE 573	Internet Protocols		
ECE 585	The Business of the Electric Utility Industry		
ECE 586	Communication and SCADA Systems for Smart Grid		
ECE 592-601	Wearable Biosensors		
ECE 592-602	Topics in Data Science		
ECE 592-603	Embedded Systems Architecture		



ENAE 788D	Selected Topics in Aerospace Engineering: Advanced Space Systems Design	Akin	TR 11:00am-12:15pm
* Synchronous (live) course received or delivered from NIA XCourse instructor on-site at NIA			
<b>UNIVERSITY OF VIRGINIA</b>			
<i>Civil Engineering</i>			
CE 6470	Transport Economics and Finance	Chen	*MW 3:30pm -4:45pm
CE 6500	Transport Sustainability	Smith	desk-asynch
<i>Chemical Engineering (courses only)</i>			
ChE 6615	Advanced Thermodynamics	Choi	*TR 5:00pm-6:15pm
<i>Electrical and Computer Engineering (MS and Ph.D.)</i>			
ECE 6501	Photonics I	Gupta	*TR 3:30pm-4:45pm
ECE 6851	Linear Automatic Control Systems	Tao	*TR 11:00am-12:15pm
<i>Materials Sciences and Engineering (MS and Ph.D.)</i>			
MSE 6010	Electronic and Crystal Structure of Material	Floro	*MW 2:00pm-3:15pm
MSE 6050	Structure and Properties of Material	Zangari	TBA
<i>Mechanical and Aerospace Engineering (MS and PhD)</i>			
MAE 6250	Multibody Mechanical Systems	Russell	*MW 12:30pm - 1:45pm
MAE 6620	Linear State Space Systems	Lin	*MW 2:00pm-3:15pm
<i>Engineering Physics (MS and Ph.D.)</i>			
<i>Systems Engineering (MS and Ph.D.)</i>			
SYS 6001	Introduction to Systems Analysis and Design	Scherer	*TR 2:00pm - 3:15pm
*Synchronous (live) course received or delivered from NIA			
<b>VIRGINIA TECH</b>			
<i>Aerospace and Ocean Engineering (MS and Ph.D.)</i>			
AOE 5135	Vehicle Propulsion	L Ma	TR 8:00am-9:15am
<i>Electrical Computer Engineering (MS and PhD)</i>			
ECE 5164	Introduction to Space Science I	Clauer	MWF 9:00am-10:00am
ECE 5754	Applied Linear Systems	SC Southward	TR 11:00am-12:15pm
<i>Materials Science and Engineering (MS and Ph.D.)</i>			
MSE 5015	MSE Seminar	LV Asryan	TBD

MSE 5114	Materials Characterization	MJ Kelley	MW 12:30pm-1:45pm
<i>Virtual/CGEP Classes</i>			
CEE 5084	IT for Infrastructure	Sinha	T 5:00pm -7:45pm
CEE 5125	Environmental Engineering Design	He	T 5:30pm -8:15pm
CEE 5134	Engineering Aspects of Water Quality	Little	W 5:30pm-8:15pm
CEE 5984	Built Environment Information Modeling and Processing	Karimi	R 5:00pm -7:45pm
ECE 5560	Network and Computer Security		T 4:00pm - 6:45pm
ECE 5635	Radar System Design		TR 5:00pm - 6:15pm
ENGR 5004	Applied Systems Engineering		T 7:00pm - 9:45pm
ISE 5124	Management of Quality and Reliability		R 7:00pm-9:45pm
ISE 5434	Economics Evaluations of Industrial Projects	Keolling	M 7:00pm - 9:45pm

# Courses are available for graduate credit delivered from NIA  
X Course instructor on-site at NIA.  
the Peninsula Graduate Center  
courses are delivered at NIA Headquarters.

\*Synchronous (live) course received or  
XX ONLINE course. Primarily received at desktop.  
\*\*Synchronous (live) course delivered at  
All VT AOE, ESM, MSE and ME