

MS Avionics Engineering

The avionics engineering department at IAA offers MS in four (04) specialties subject to adequate student enrolment in a particular specialty. The award of MS degree requires successful completion of 24 credit hours of graded post-graduate level courses and successful defense of 6 credits hours of thesis research.

Course Requirements

Core Courses: At least three courses of relevant stream from the following core courses:

Course No.	Course Title
AV-610	Linear Systems Theory
AV-611	Linear Multivariable Feedback Control Systems
AV-620	Random Processes
AV-621	Digital Signal Processing
AV-626	Digital Communications
AV-630	Wireless Communications-I
AV-640	Electromagnetic Field Theory
AV-641	Transmission Lines and Waveguides
AV-712	Optimal Control
AV-713	Non-Linear Systems
AV-714	Flight Dynamics & Control
AV-716	Adaptive Control
AV-723	Detection & Estimation
AV-725	Communication Networks
AV-726	Array Signal Processing
AV-727	Radar Signal Processing
AV-735	Design & Analysis of Algorithms
AV-737	Image Processing

AV-742	RF and Microwave Circuit Design
AV-743	Microwave Engineering
AV-744	Microwave Electronic Devices
AV-829	Information Theory
MA-644	Advanced Engineering Mathematics
AV-799 ¹	MS thesis research

¹Compulsory

Elective Courses:

Course No.	Course Title
AV-632	Software Engineering
AV-715	Robust Control
AV-717	Soft Computing Systems
AV-718	System Identification
AV-719	Neural Networks
AV-720	Avionics Systems Integration
AV-722	Stochastic Systems
AV-724	Embedded System Design
AV-731	Wireless Communications II
AV-734	Principles of Real-Time Computing
AV-736	Optimization
AV-738	Adaptive Filter Theory
AV-739	Introduction to Chaos
AV-740	Multimedia Signal Processing
AV-741	Digital Video Processing
AV-745	Analog IC Design (Bipolar)
AV-747	Semiconductor Device Technology

AV-749	Analog IC Design (MOS)
AV-760	Power Electronics
AV-819	Instrumentation & Measurement for Aerospace Applications
AV-827	Navigation Systems
AV-828	Missile Guidance
AV-831	Computer Vision
AV-833	Model based Software Testing
AV-846	Advanced Antenna Engineering
AV-848	Microwave Design
AV-880	Advanced Topics in Control Engineering
AV-881	Advanced Topics in Communications
AV-882	Advanced Topics in Microwave Engineering