



In His Name the Most High

**The program for Master of Science
In Aerospace Engineering-Flight Dynamics and Control**

Overall Requirements for MS Graduation

| Course | Course no. | Min. units required |
|--|------------|---------------------|
| Advanced Mathematics 1 | 45510 | 3 |
| Four Major courses from Table 1 | | 12 |
| Three Elective courses from Table 2 | | 9 |
| MSc Thesis | 45560 | 6 |
| MSc Seminar or another course from Table 2 | 45600 | 2 |
| Min. units required to complete the MS program | | 32 |

Table 1: Major Courses for Flight Dynamics

| Course name | Course no. | Units |
|--|----------------|--------|
| Guidance & Navigation 1 | 45715 | 3 |
| Advanced Automatic Control | 45710 | 3 |
| Advanced Flight Dynamics 1 | 45705 | 3 |
| Advanced Concepts in Aircraft Design or Advanced Aircraft Design | 45736 45915 | 3 3 |
| Modeling Aerospace Dynamic Systems | 45747 | 3 |

Table 2: Elective Courses

| Course name | Course no. | Units |
|--|------------|-------|
| Flight Simulation | 45745 | 3 |
| Optimal Control 1 | 45765 | 3 |
| Flight Test Principles | 45720 | 3 |
| Aerospace Technology Management | 45540 | 3 |
| Guidance & Navigation 2 | 45716 | 3 |
| Avionics | 45419 | 3 |
| Missile Flight Dynamics | 45725 | 3 |
| Spacecraft Dynamics & Control | 45780 | 3 |
| Digital Control | 45755 | 3 |
| Adaptive Control | 45760 | 3 |
| Multivariable Control | 45750 | 3 |
| Fuzzy Control | 45735 | 3 |
| Neural Networks | 45775 | 3 |
| Optimal Control 2 | 45766 | 3 |
| Missile Configuration Design | 45734 | 3 |
| Advanced Aircraft Performance | 45738 | 3 |
| Control System Design | 45730 | 3 |
| Helicopter Flight Dynamics | 45740 | 3 |
| Nonlinear System Analysis | 45748 | 3 |
| Heuristic Optimization Algorithms | 45770 | 3 |
| System Identification | 45749 | 3 |
| Max. one course from: | | |
| <ul style="list-style-type: none"> • other technical courses in the group, • technical courses in other groups, • any other course approved by the group. | | |