

Courses

The program consists of the following courses:

Course	Credits
Year 1: Fall Semester	
'MSc. Program Specific Core Course 1'	3
'MSc. Program Specific Core Course 2'	3
Space Core Course (SSC501: Spacecraft Systems and Design)	3
Master Thesis Work related to space technology	3
Year 1: Spring Semester	
'MSc. Program Specific Core Course 3'	3
'MSc. Program Specific Core Course 4'	3
SSC502: Space Systems Lab-1	1
Master Thesis Work related to space technology	3
Year 1: Summer	
Master Thesis Work related to space technology	6
Year 2: Fall Semester	
Technical Elective relevant to space technology	3
MI Core Course: (UCC501: Sustainable Energy)	3
SSC503: Space Systems Lab-2	1
Master Thesis Work related to space technology	6
Year 2: Spring Semester	
SSC504: Space Systems Lab-3	1
Master Thesis Work related to space technology	6
TOTAL CREDITS	48

Admission Requirements

Admission is open to both male and female citizens. Applicants must be sufficiently proficient in English to be able to manage a challenging, fast-paced executive master's degree program.

Additional requirements can be found on: www.masdar.ac.ae

www.yahsat.com | www.orbitalatk.com

First Multidisciplinary Space Academic Program in the region



Masdar INSTITUTE مصدر معهد

yahsat اليه سات

Orbital ATK

Yahsat has partnered with the Masdar Institute of Science and Technology to create a master's degree concentration that is endorsed by one of the world's top universities, the Massachusetts Institute of Technology (MIT). The program was created to encourage local talent to partake in specialized higher education within the satellite field. The first students who enrolled in this unique two-year program in September 2015, comprehensively learnt the practical and theoretical processes involved in developing, building and eventually launching a miniature satellite.

Degree

Master's Concentration in Space Systems and Technology.

Specialization

Engineering with Concentration in Space Systems & Technology.

About the program

- This program is the first multidisciplinary academic space program in the UAE that is integrated into a MSc program.
- As part of the program, students will design, build, test and potentially launch the small satellite, with guidance by Orbital engineers and mentorship by Yahsat.
- The program curriculum was co-developed by Masdar Institute and Orbital ATK.
- The program is part of the two-year Master's concentration at Masdar Institute.
- The program aims to advance the UAE's national space ambitions and create future intellectual and human capital for its space sectors.

Faculty

The program will be taught by professors from the Masdar Institute faculty who are academically qualified at the doctoral level and have professional experience in space technology.

Program objectives



Exposure and training in satellite design and manufacturing techniques to students in the UAE.



Educate high potential students and launch them into the future workforce of UAE.



Evolve space system training "Centers of Excellence" with hands-on approach that would lead to a structured academic program.



Create a platform for future satellite design IP, which could have a ripple effect in other sectors.

Learning Outcomes

As students of the seven related Master's programs, Master's Concentration in Space Systems and Technology enrollees are expected to achieve the following learning outcome:

- Successfully apply advanced concepts of fundamental sciences and engineering to identify, formulate and solve complex engineering problems.
- Effectively and ethically apply advanced concepts of engineering science to analyze, design and develop industrial processes and plants.
- Use advanced techniques, skills and modern scientific and engineering software tools for professional practice.
- Apply advanced methods to design and conduct experiments and to analyze and interpret data.
- Communicate effectively in written and oral form both, individually and as a member of a multidisciplinary team.
- Engage in life-long learning and self-education.
- Demonstrate proficiency in the aspects of space systems design and analysis.
- Design and build a small-satellite as part of a multi-disciplinary team.