Master programs taught in English:
Samara State Aerospace University

http://www.ssau.ru/english/education/educational_programs_eng/

General Information	Important information	Courses	Graduates' areas of activity
Master Degree in Aerospace Propulsion engineering The purpose of the Program is to train highly qualified specialists for work in the fields of science, engineering and technology in areas related to design and development of aircraft engines. Objects of the professional activity for graduates with Master Degree are the following: gas turbine engines, power plants and internal combustion engines; methods and tools for design, simulation and experimental study of gas turbine engines and power plants; Design and development of gas turbine engines and power plants using CAE/CAD/PDM-software. http://ssau.ru/english/education/educational_programs_eng/puesa/			Employment opportunities: Currently Russian enterprises of aircraft engines industry are currently experiencing an acute need for the specialists of almost all skill levels at the direction "Power units and energy systems of aircrafts". Graduates having the Master's Degree have almost guaranteed employment opportunities at aerospace cluster enterprises in Samara Region (JSC "Kuznetsov", JSC "Aviaagregat", JSC "Metallist-Samara" etc.), Perm Region (OJSC "Aviadvigatel", etc.) and Central Federal District (V. M. Myasishchev Experimental Design Bureau, JSC "NPO Saturn", etc.). Some graduates are already employed by the foreign enterprises like Rolls-Royce, Pratt & Whitney, Alstom AG, ORENDA, etc
Master of Science in Aerospace Engineering The purpose of the Program is to train highly qualified specialists for work in the fields of science, engineering and technology in areas related to researching, designing and lifecycle management of aircrafts. Objects of the professional activity for graduates with Master Degree are the following: • aircrafts and other atmospheric aircrafts; • methods and tools for designing, simulation and experimental study of atmospheric aircrafts;			Employment opportunities: In our country enterprises of aircraft industry is currently experiencing an acute need for the specialists of almost all skill levels at the direction "Aerospace Engineering". Over the years, these needs are satisfied not fully.

• methods and tools for automated life-cycle management of aircrafts, including project management. http://ssau.ru/english/education/educational_programs_eng/sdcaa/			Experiences show that graduates especially with Master Degree have practically guaranteed employment opportunities at enterprises of aerospace cluster in Samara Region (OJSC “Aviakor”, Samara’s Branch of Design Bureau ”Tupolev”, “Aviaagregat”, etc.), Ulyanovsk Region (CJSC Aviastar-SP, Ulyanovsk’s Branch of Design Bureau ”Tupolev”, “Aerocomposite”, etc.) and Central Federal District (V. M. Myasishchev Experimental Design Bureau, SPA “Raduga”, etc.)
Master degree in metallurgy Educational and research activities are implemented within two Departments: Plastic Working of Metals, Technology of Metals and Aircraft Materials Science. The Departments are equipped with 8 university laboratories and 3 scientific and research laboratories: SRL-37, SRL-41, OSRL-4, as well as 3 modern computer classes. The on-job training of the students is implemented at advanced enterprises of the region such as CJSC «ALCOA-SMP», JSC «RSC-Progress», JSC «Kuznetsov», JSC «Aviacor-aviation plant» and others. http://ssau.ru/english/education/educational_programs_eng/metallurgy/			Employment potential: The obtained knowledge and skills allow the program’s graduate to work successfully at engineering and metallurgical enterprises, scientific and research laboratories, to teach at higher education institutions, run a business in the sphere of high technologies.
Master degree in GNSS technologies This program is implemented within the framework of Applied Mathematics and Physics Program. The curriculum includes a set of basic courses like fundamentals of GNSS, positioning technique, methods of signal processing, Kalman fitering, MATLAB, geodetic applications of GNSS, algorithms of data processing, as well as specialized courses, and statistical methods. Required background: Fundamentals of DSP, fundamentals of digital electronics and microprocessors, fundamentals of statistics, linear algebra, geometry, and MATLAB programming. The aim of the program is to prepare highly qualified specialist, capable to develop efficient algorithms and software for GNSS data processing, adapt typical solutions for specific purposes, implementation of new algorithms of data processing for positioning based on GNSS like Galileo. Practical competencies: experience with MATLAB			Employment opportunities After graduation students will be able to work in research centres, universities, and enterprises involved in positioning applications.

simulation of GNSS signals and hardware/software, application of A-GPS and DGPS technology, implementation of specific positioning algorithms. http://ssau.ru/english/education/educational_programs_eng/gnss_paa/			
Master degree in GNSS technologies This program is implemented within the framework of Radio Engineering Program. The curriculum includes a set of basic courses like fundamentals of GNSS, positioning technique, mathematical methods of signal processing, state-of-art circuitry engineering, as well as specialized courses like radio receivers' implementation, SDR technology, antennas, DSP processors and algorithms, techniques for acquisition and tracking of GNSS signals, micro- and nanoelectronics, and MATLAB. The aim of the program is to prepare highly qualified specialist, capable to develop hard- and software GNSS receivers, adapt typical solutions for specific purposes, to implement new algorithms of signal processing for SDR approach. Practical competencies: experience with Matlab simulation of GNSS signals and hardware/software, using FPGA and DSPs for the development of GNSS receivers, efficient implementation of SDR technique, implementation of specific positioning algorithms. http://ssau.ru/english/education/educational_programs_eng/gnssr_has/	Required background: Theory of signals, Fundamentals of DSP, Fundamentals of antennas and signal's propagation, fundamentals of digital electronics and microprocessors, basics of circuitry engineering, basic MATLAB programming.		Employment opportunities After graduation students will be able to work in research centres, universities, and enterprises involved in positioning applications.
Master of Science in Photonics The purpose of the Program is to train highly qualified specialists within the following areas: Photonics, Diffractive Nanophotonics, Nanooptics and Diffractive Optics. http://www.ssau.ru/english/education/educational_programs_eng/amf/			Employment opportunities: Currently, enterprises of Photonic industry in Russia are experiencing an acute shortage of specialists with all levels of skills in the field of Applied Mathematics and Physics. Over the years, these needs have not been satisfied in full.
Master of Science in High Technology Business Management (SSAU) Areas of expertise: • technology implementation; • production systems; • innovative projects; • finance and investments; • human resources; • intellectual property;	Requirements for International Applicants Degree: Bachelor of Science - Language proficiency: CEFR B2	Curriculum • High-Technology Review; • Engineering Economics; • Communications, Leadership & Teamwork;	Employment opportunities Program graduates are expected to be employed by: • aircraft and spacecraft enterprises; • software development companies; • federal and regional agencies for science and innovations.

• innovative entrepreneurship. • Key advantages: • up-to-date teaching methods; • project-oriented activities; • relevant research areas; • internship in leading regional high technology companies. http://www.ssau.ru/english/education/educational_programs_eng/htbm/		• Decision Making; • Project Management	
Master Degree in Mechatronic Systems The purpose of the Program is to train highly qualified specialists for work in the fields of science, engineering and technology in areas related to design and development of mechatronic systems using fluid power for various applications including aircraft engines control. http://www.ssau.ru/english/education/educational_programs_eng/mechatronic_systems/			Employment opportunities: Russian industry is currently experiencing an acute need for the specialists able to meet challenges of modernization and automation of technological processes using multidisciplinary approach. Graduates having the Master Degree in Mechatronics skilled in pneumatics and hydraulics, electronic and control systems have almost guaranteed employment opportunities at enterprises of various industries including aerospace cluster in Samara Region (ALCOA, Delphi, Schneider Electric, Alliance AVTOVAZ-RENAULT-NISSAN, Bosch, JSC Information Satellite Systems, Comau, Camozzi, NATIONAL INSTRUMENTS, Rosneft, Nissan Manufacturing Rus, Nestle, Salut, JSC Space-Rocket Center "Progress", Rocket and Space Corporation "Energia", V. M. Myasishchev Experimental Design Bureau, JSC "Kuznetsov", JSC “Aviaagregat”, JSC “Metallist-Samara”, JSC “NPO Saturn”, OJSC “Aviadvigatel”, etc.). Some graduates are already

			employed by the foreign enterprises Bosch, Nestle and NATIONAL INSTRUMENTS.