Istarsko veleučilište
Università Istriana di scienze applicate

COURSE CATALOGUE

ACADEMIC YEAR 2021/2022

GENERAL INFORMATIONS

Istrian University of Applied Sciences has a long tradition of accepting incoming students. International cooperation provides many benefits, such as knowledge and skills exchange, introduction to foreign markets, cultures, traditions, etc. Furthermore, international cooperation supports personal development on both business and private levels. This brings possibilities for departing students to study abroad, and in doing so, strengthen their labor market competitiveness.

An attractive location in the very south of Istria, in the city of Pula, known as the tourist, industrial, as well as a historical center of our county, offers a wealth of opportunities for the development and advancement of emerging professionals.

Education as the key to sustainable economic and social development is a priority for a stable and secure future. Higher education institutions are one of the fundamental factors for economic growth, prosperity and competitiveness.

Our strengths that we cherish and share with our students are: focus on practical knowledge, application of teamwork in the teaching process, working with small groups which allows us to dedicate more time to students' needs, and last but not least providing professional training in the best companies in our region.

Therefore, our mission as a higher education institution is to educate experts who will contribute to the development and prosperity of our region and state through their knowledge and skills. Our motto *"Knowledge for our development"* will guide us in our mission through the years to come.

Being part of Europe, we also welcome foreign students willing to participate in our educational process so that they can make good use of the provided knowledge back in their home country.

Contacts

Address: Istrian university of Applied sciences
Istarsko veleučilište – Università Istriana di scienze applicate
Riva 6
52100 Pula
Republic of Croatia
Phone: +385 (0)52 381-412
e-mail: dekanat@iv.hr
website: https://www.iv.hr/en/

Administrative information

ERASMUS IDENTIFICATION CODE: HR PULA02
OIB (PID): 79550001298
PDV (tax) identification number: HR79550001298
Bank account: OTP banka d.d. IBAN: HR4724070001118015096

Student's office contact

Vladimir Gnip, mag.oec.
Phone: +385 (0)52 381-410
e-mail: vgnip@iv.hr

Team for International Cooperation and Mobility

The main task of the Team for International Cooperation and Mobility is increasing the quality of studies through international cooperation and international mobility, linking higher education and participation in research and professional projects in order to increase economic growth. The members of the Team for International Cooperation and Mobility are available to incoming and outcoming students and staff in solving professional and administrative tasks of mobility programs.

Team for International Cooperation and Mobility of Istrian University of Applied Sciences consists of three members:

1. Erasmus coordinator and Team leader
   Viktor Vojnić
   e-mail: vvojnic@iv.hr

2. Team member for student support
   Andrea Škalec Božac
   e-mail: abozac@iv.hr

3. ECTS coordinator
   Sanja Grbac Babić, senior lecturer
   e-mail: sgrbac@iv.hr

For any questions and additional information, you can contact our international e-mail: international@iv.hr

Additional services for Students

Every incoming student gets an X-card – which is a student's card used for eating in the student canteen and allows discounts in certain places, but it also confirms the student status.

1. Students' canteens

The meals for the students of Pula, subsidized through the so-called student X-card are served in a state-of-the-art restaurant and pizzeria opened within the university campus.

Address: Preradovićeva 28b, 52100 Pula
E-mail: restoran@scpu.hr
Website: https://www.scpu.hr/hr/prehrana/

2. The University Library of Pula

Incoming students have the right to use the University Library of Pula as a library or a reading room.

Address: Herkulov prolaz 1, 52100 Pula
Telephone: 00385 (0)52 213 888, 00385 (0)52 388 831
Fax: 00385 (0)52214 603
E-mail: skpu@unipu.hr
Website: http://www.skpu.hr

3. Public transport

There is a good network of public urban and suburban passenger land transport in Pula. The Company Pulapromet d.o.o. provides its services throughout the territory of the Cities of Pula and Vodnjan and the Municipalities of Medulin, Ližnjan, Fažana, Barban and Marčana.

Website: www.pulapromet.com/en/

In addition to this company, taxi transport is also available.

4. Online student community for exchange students

Erasmusu is an online international student community which helps students on mobility to find:

- Information about any city (where to eat, where to go out, which places you should visit, etc.);
- Information about the Universities in your destination;
- Blogs about experiences of people that have been living there (they are really valuable!);
- Forums where you can meet people that have lived there or that is going to be there the same year as you;
- Job / traineeship offers;
- The best accommodations to book through our safe system;

Website: https://erasmusu.com/

https://erasmusu.com/en/erasmus-pula

ECTS CREDITS

ECTS credits are a numerical value (between 1 and 60) allocated to course units to describe students' workload required to complete them. They reflect the quantity of work each course requires in relation to the total quantity of work required to complete a full year in practical work, seminars, homework and examination or other assessment activities. Each course does not carry the same number of points but the total number of points in each semester is 30 points which must be evenly distributed on all courses in the semester due to the learner content of each college. All subjects are scored – obligatory and elective. The academic year consists of two semesters, each carrying 30 points for a total of 60 points for academic year. Points are earned and attributed to the student after passing the exam or some other verification of student activities according to the prescribed curriculum (syllabus). These achieved ECTS credits make it easier to assess the level of knowledge that students have when transitioning to other

institutions of higher education in the country and/or abroad. At Istrian University of Applied Sciences 1 ECTS credit corresponds to 30 hours of student load.

The Grading system at the Istrian University of Applied Sciences is as follows:

Numeric grade	Descriptive grade	ECTS grade	Range of points %
5	excellent	A	90,00 - 100,00
4	very good	B	75,00 – 89,99
3	good	C	60,00 – 74,99
2	sufficient	D, E	50,00 – 59,99
1	insufficient	FX, F	0,00-49,99

CALENDAR OF ACADEMIC YEAR 2021/2022

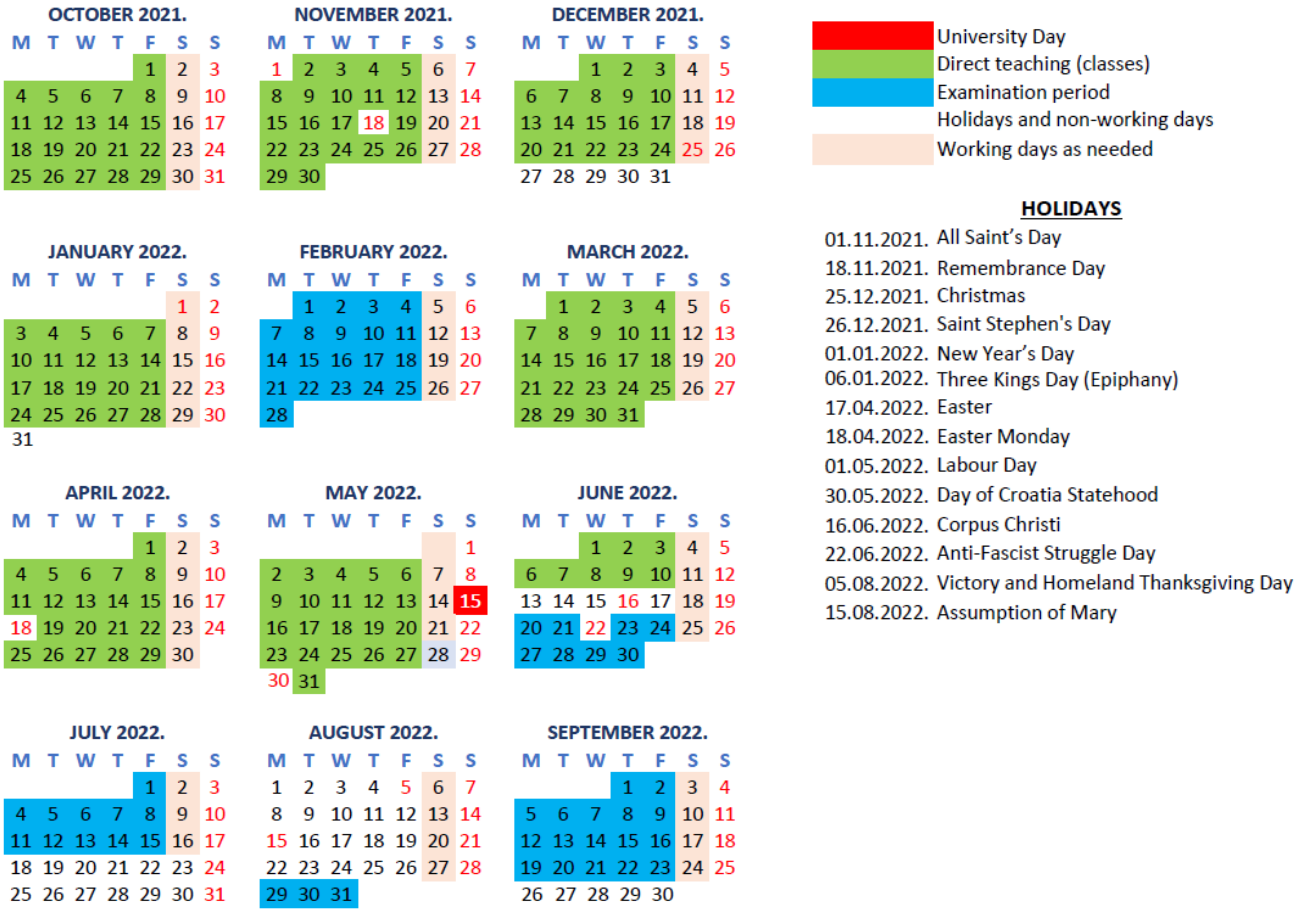

Figure 1: Academic calendar 2021/2022

Winter semester: 04.10.2021. - 28.01.2022.

Summer semester: 01.03.2022. - 10.06.2022.

Examination periods: 01.02.2022. - 28.02.2022.
20.06.2022. - 15.07.2022.
29.08.2022. - 23.09.2022.

STUDY PROGRAMMES

In the academic year 2021/2022 three study programmes are performed, which are:

1. Undergraduate Professional Study Programme: Mechatronics

Duration: 3 years, (6 semesters)
Professional title: professional bachelor (baccalaureus) in the field of mechatronics
Credits: 180 ECTS
Fields of education: mechanical engineering, electrical engineering, automatization, electronics, energetics, informatics.
Head of the study programme: Neven Munjas PhD, lecturer

The undergraduate professional study in Mechatronics combines basic knowledge of mechanical engineering, electrical engineering, computer science, and robotics. It is applicable and sought after in all branches of economy. The content of the study is focused on new technologies. In the modern world, mechatronics experts are an important part of competitive business. Mechatronics is a very important part of the STEM (science, technology, engineering and mathematics) field.

Professional bachelors in the field of Mechatronics are creators who apply ideas and knowledge in mechanical and electrical engineering to design complex systems for today's industry.

Advantages of the study program:

- a large number of hours of professional practice enables future bachelors to apply the knowledge acquired in a practical way and get acquainted with the labor market in order to find employment after study
- cooperation with the Research Centre for Metal Industry in Istrian County - METRIS enables the application of acquired knowledge and skills on state-of-the-art analytical equipment in modernly equipped chemical, mechanical, and biotechnical laboratories
- a modern approach to education

Learning Outcomes of the Undergraduate Professional Study Programme in Mechatronics

Upon finishing the study programme in Mechatronics, students will acquire the following competences:

Generic competences:

- ability to use a second language in professional literature and professional communication;
- ability to apply knowledge in mathematics and physics to engineering issues;
- ability to use techniques, skills and modern tools necessary in engineering practice;
- ability to relate engineering design, manufacturing and marketing to user's requirements for products and services;
- ability to identify, model and solve engineering issues.

Personal competences:

- knowledge of contemporary issues in the professional area and society;

- responsibility, consistency, accuracy and promptness;
- ethical and moral approach to work;
- critical evaluation of arguments, assumptions and data in order to make opinion and contribute to the solution of a problem;
- readiness to do fieldwork and work under non-standard conditions;
- work experience with project teams and in industry;
- presenting information, ideas, problems and solutions to the professional and general public;
- communication skills in professional communications and with clients in both English and Croatian;
- positive professional and personality traits;
- adaptability to new technologies and techniques as a part of lifelong learning process;
- openness to new knowledge, experience and cultural circumstances;
- flexibility and adaptability to finding technical solutions based on unquestionable observance of basic ethical principles, regulations and professional rules.

Subject specific competences:

- ability to design machine elements and circuits taking into consideration the principles of strength, deformation, kinematics and dynamics;
- ability to propose types of material and technological procedures;
- ability to design and implement hydraulic and pneumatic systems in all technical branches;
- ability to propose sensors, actuators, energy and control units, communication protocols and the accompanying equipment to be used in automation of various technical processes in mechatronics (electric drives, machine tools, fluid storage processes, heat and transport processes);
- ability to calculate regulator parameters to be used in regulation of various technical processes in mechatronics;
- ability to design electronic circuits containing microcontrollers by means of EDA tools;
- ability to devise program solutions to embedded computer systems used in various technical processes in mechatronics;
- ability to plan production and projects and optimize resources;
- ability to work out foundations for a modern approach to quality assurance;

Electives:

- ability to control CNC machines, CAD/CAM systems and flexible manufacturing systems;
- ability to analyze robot and manipulator operations in mechatronics.

Direct classes of each course are held in the form of:

- lectures and/or (L)
- exercises and/or (E)
- seminars (S)

according to the table that follows.

	NAME OF THE COURSE	Weekly teaching load		ECTS	TEACHER
		L	E		
1. semester	Mechanics and Strength of Materials	2	3	6	Roberto Žigulić, PhD / Manuel Širola
	Mathematics	3	3	7	Đani Žufić,
	Materials and Manufacturing Processes	2	2	5	Vedrana Špada, PhD
	Computers Application Basics	1	2	3	Marko Turk
	Programming Basics	1	3	5	Marko Turk
	Technical Documentation	1	3	4	Matej Kolarik
2. semester	Matlab	1	2	3	Matej Kolarik
	Physics	2	3	6	Miro Plavčić, MSc
	Mechatronic Machine Elements	2	2	5	Neven Munjas, PhD
	Fundamentals of Electrical Engineering	2	3	6	Nino Stojković, PhD / Zoran Šverko
	Applied Mathematics	3	1	5	Vanja Travaš, PhD
	Sensors	2	2	5	Sanja Grbac Babić
3. semester	Electronic Elements and Circuits	2	2	5	Sanja Grbac Babić
	Dynamic System Modelling	3	1	5	Vanja Travaš, PhD
	Power Electrical Engineering	2	3	6	Sanja Grbac Babić / Even Živić
	Computer Aided Design	2	3	5	Neven Munjas, PhD / Manuel Širola
	Essentials of Mechanisms	2	2	5	Roberto Žigulić, PhD / Manuel Širola
	English Language in Mechatronics	2	2	4	Zrinka Friganović Sain, MSc / Viktor Vojnić
4. semester	Elements of Automation	2	2	5	Eduard Lorencin, MSc
	Pneumatics and Hydraulics	2	3	6	Goran Gregov, PhD
	Processing Computers	2	3	6	Marko Turk
	Automatic Control	2	2	5	Matej Kolarik
	Business English Language in Mechatronics	2	2	4	Zrinka Friganović Sain, MSc / Viktor Vojnić
	Structure and Properties of Technical Materials – elective course	3	1	4	Irina Pucić, PhD
5. semester	Electrical Servo Drives	2	2	5	Matej Kolarik
	Communication Techniques in Mechatronics	2	1	4	Sanja Grbac Babić
	Metrology and Quality Control	2	2	4	Vedrana Špada, Phd
	Maintenance of Technical Systems in Mechatronics	2	1	4	Davor Stanić, PhD
	Designing Embedded Computer Systems	2	2	5	Marko Turk
	Production and Project Management	2	1	4	Neven Munjas, PhD
	Computer networks - elective course	2	2	4	Sanja Grbac Babić / Dino Krivičić
6. semester	Methodology of Professional and Scientific Research	1	2	4	Dijana Drandić, PhD
	Organization Architecture	2	2	4	Daglas Koraca, PhD
	Professional Practice	0	(240)	7	Head of the study programme

	Semester Paper (Project)	1	(75)	3	Marko Turk / Dino Krivičić
	Final Thesis	0	(320)	12	mentor

2. Specialist Graduate Study: Creative Management in Processes

Duration: 2 years (4 semesters)
Professional title: professional specialist in the field of creative management
Credits: 120 ECTS
Fields of education: management, organization, entrepreneurship
Head of the study programme: Boris Marjanović, PhD, senior lecturer

The study of Creative Management in Processes empowers professionals ready to be proactive in responding to contemporary business challenges. The study is based on knowledge and skills in the fields of management, entrepreneurship, organization, and informatics.

Upon graduation, professional specialists in the field of Creative Management are capable of management at a high organizational level of business. Acquired skills from various fields enable the development of experts who will make a significant contribution to the success of companies in the domestic and foreign markets with their knowledge. Professional specialists in the field of Creative Management utilize acquired knowledge and skills to analyze, manage, optimize, and automate business processes.

Studying Creative Management in Processes is an ideal continuation of education for anyone who wants to develop the social skills and techniques necessary for contemporary executives.

Advantages of the study program:

- individualized work in small groups enables students to easily acquire and apply knowledge through concrete examples from practice
- the contemporary social study with a developed curriculum equips professionals to meet the needs of everyday business environment,
- the contemporary interdisciplinary knowledge and skills acquired throughout the course of the study are applicable at almost all managerial business levels.

By applying creative methods and techniques to effectively manage processes, professional specialists in the field of Creative Management improve business results and create new values for themselves as individuals, as well as for employers and society.

Direct classes of each course are held in the form of:

- lectures and/or (L)
- exercises and/or (E)
- seminars (S)

according to the table that follows.

	NAME OF THE COURSE	Weekly teaching load			ECTS	TEACHER
		L	E	S		
1. semester	Creative Management	3	0	1	8	Vladimir Filipović
	Marketing Management	3	2	0	8	Boris Marjanović / David Košara
	Basics of Methodology for Scientific Research	3	0	1	6	Dijana Drandić, PhD
	Finance Control	1	3	0	4	Andrea Vareško, MSc
	Business Communication in English 1	1	0	2	4	Zrinka Friganović Sain, MSc / Viktor Vojnić
2. semester	Project Management	3	2	0	8	Andrea Vareško, MSc
	Digital Business	2	2	0	6	Sanja Grbac Babić
	Communication Skills	3	0	1	4	Mario Bogdanović, PhD
	Product and Service Branding	2	2	0	4	Boris Marjanović, PhD 7 David Košara
	Service Quality Management	2	0	1	4	Albert Mendica, MSc
	Computer skills - elective course	1	0	2	4	Sanja Grbac Babić / Dino Krivičić
3. semester	Process Management	3	2	0	8	Mario Bogdanović, PhD
	Financial Management	3	2	0	8	Daglas Koraca, Phd
	Human Resource Management	3	0	1	6	Vladimir Filipović
	Business Communication in English 2	1	3	0	4	Zrinka Friganović Sain, MSc / Viktor Vojnić
	Digital Marketing - elective course	1	0	1	4	Miško Macolić Tomičić
4. semester	Entrepreneurship	2	2	0	6	Edo Cetina, MSc
	Management Accounting	2	1	0	4	Ticijan Peruško, PhD
	Corporate Social Responsibility	2	0	1	4	Daglas Koraca, PhD
	Intercultural Aspects of Management	2	0	1	4	Dijana Drandić, PhD
	Graduate Thesis				12	mentor

Learning Outcomes of the Specialist Graduate Study in Creative Management in Processes

- to critically evaluate the effects of implementing the generated ideas on business;
- to evaluate the key features of digital business;
- to apply scientific research methods and formulate the concept of the thesis;
- to analyze teamwork performance in accordance with team development characteristics;
- to critically evaluate the effects of project implementation;
- to evaluate opportunities for implementing marketing strategies under the given conditions;
- to identify and critically analyze the underlying assumptions of communication competence in the business environment;
- to optimize the business process using modern methods and tools;
- to evaluate the profitability of the business investment and the real time for the return on investment, and the implications for the business operator;

- to evaluate investment in human resources through the concept of creating new value;
- to critically evaluate the importance of implementing entrepreneurial strategies within the available resources;
- to evaluate the importance of accounting indicators in strategic planning;
- to assess the impact of corporate social responsibility to the economy and sustainable development;
- to analyze and compare the influence of certain characteristics of the culture of society on the functioning of contemporary management.

3. Undergraduate professional study: Polytechnics

Duration: 3 years, (6 semesters)
Professional title: professional bachelor (baccalaureus) in the field of Polytechnics
Credits: 180 ECTS
Filed of education: mechanical engineering, electrical engineering, electronics, informatics, management, teamwork
Head of the study programme: Sanja Grbac Babić, senior lecturer

The undergraduate professional study of Polytechnics is aligned with the needs of the Croatian manufacturing industry and as such ensures the acquisition of classical basic knowledge and skills of engineers, as well as modern planning, management and optimization skills. The content of the study is focused on the fields of engineering, computer science, management and economics.

The program is based on similar study programs recognized in the European Union and the USA.

The modern approach to the manufacturing industry is a complex system of design, organization and management. The combination of different knowledge and skills of engineers gained through the completion of this program facilitates the detection of errors in all production processes, therefore, professional bachelors in the field of polytechnics participate in all stages of design, management and optimization of processes, technological cycles, systems and plants.

Professional bachelors in the field of polytechnics are not narrowly specialized, but possess the breadth of knowledge required to view a manufacturing or a service business system as a complex entity or process.

Advantages of the study program:

- individualized work in small groups enables students to easily acquire and apply knowledge through concrete examples from practice,
- cooperation with the Research Centre for Metal Industry in Istrian County - METRIS enables the application of acquired knowledge and skills on state-of-the-art analytical equipment in modernly equipped chemical, mechanical, and biotechnical laboratories,
- a modern approach to education.

Direct classes of each course are held in the form of:

- lectures and/or (L)
- exercises and/or (E)
- seminars (S)

according to the table that follows.

	NAME OF THE COURSE	Weekly teaching load		ECTS	TEACHER
		L	E		
5. semester	Constructions	2	2	4	Neven Munjas, PhD
	Quality Management	2	2	4	Vedrana Špada, PhD
	Project Management	3	2	5	Andrea Vareško, MSc
	Automatic Control Basics	2	2	4	Goran Gregov, PhD
	Professional Practice		(94)	13	Head of the study programme
6. semester	Business and Production Processes	2	3	5	Marko Turk
	Methodology of Professional and Scientific Research	2	2	4	Dijana Drandić, PhD
	Marketing	2	1	3	Boris Marjanović, PhD / David Košara
	Sustainable Development	2	2	4	Smiljana Goreta Ban, PhD / Silvia Buttignoni
	Professional Practice	0	(40)	7	Head of the study programme
	Final Thesis and Defense	0	0	7	mentor

Learning Outcomes of the Undergraduate professional study in Polytechnics

- to design industrial manufacturing processes by applying knowledge and skills in mathematics, natural sciences, and informatics, and by respecting the engineering and economic principles;
- to design and maintain technical production systems for real economic, environmental, ethical, health, and safety conditions;
- to analyze interdisciplinary industrial problems from a technical standpoint, enriched with economic, legal and IT perspectives;
- to create engineering activities in production preparation, procurement and sales;
- to make decisions based on clearly identified evidence and defined criteria;
- to solve engineering problems using modern techniques, skills and engineering tools;
- to design the work of multidisciplinary teams;
- to create multidisciplinary industry ventures in a team;
- to plan and conduct experiments and interpret experimental data and results;
- to communicate professionally in local and foreign languages;
- to assess the impact of manufacturing processes on environmental change;
- to assess the impact of industrial ventures on global economic, legal, and general social phenomena;
- to assess lifelong learning needs and to engage in lifelong learning;
- to develop and critically evaluate a solution in the domain of marketing application in practice;
- to develop and critically evaluate a solution in the domain of applying a business organization in practice.