



Co-funded by the
Erasmus+ Programme
of the European Union

MODERNIZATION OF MECHATRONICS AND ROBOTICS FOR BACHELOR DEGREE IN UZBEKISTAN
THROUGH INNOVATIVE IDEAS AND DIGITAL TECHNOLOGY
609564-EPP-1-2019-1-EL-EPPKA2-CBHE-JP



TURIN POLYTECHNIC UNIVERSITY IN TASHKENT (P8)

ASANOV SEYRAN

Andijan, Uzbekistan, 2-6 October, 2023



Andijan machine-building
institute



ΔΙΕΘΝΕΣ
ΠΑΝΕΠΙΣΤΗΜΙΟ
ΤΗΣ ΕΛΛΑΔΟΣ



SOUTH-EAST
EUROPEAN
RESEARCH
CENTRE



VILNIUS
TECH



LIEPAJA
UNIVERSITY



Instituto Politécnico
de Viana do Castelo



TURIN POLYTECHNIC
UNIVERSITY IN
TASHKENT



Farg'ona
Politehnika
Instituti



Tashkent University of
Information Technologies
named after Muhammad
al-Khwarizmi



Karshi Engineering
Economics Institute



Tashkent State
Technical University



Ministry of Higher and
Secondary Specialised Education
System of Uzbekistan



MechaUz Project

Work Package 1: Project preparation and analysis of study programs



Modernization of Mechatronics and Robotics for Bachelor degree in
Uzbekistan through Innovative Ideas and Digital Technology

(MechaUz)

609564-EPP-1-2019-1-EL-EPPKA2-CBHE-JP

Main tasks on WP1:

- Analysis of teaching bachelor degree curricula in Mechatronics, Robotics or closely related fields at the Universities of Italy, Sweden, Slovakia and Ireland;
- Summary, review and analysis of bachelor degree curricula in all EU universities which have a programme in mechatronics, robotics or a related field (**in Tandem with IHU**);
- Finalizing the WP1 report and its peer-review (**in Tandem with IHU**).

MechaUZ_D.1.1_Analysis and Comparison of
Teaching Systems_V.1

MechaUZ_D.1.2_Studying Experience of the EU
Partners, List of good Practice Examples_V.1

Work Package 2: Development of the new BSc program

Development of curriculum proposal for the project consortium (4-years, 240 ECTS)

Course type	Course code	Course name	Credit	Hours	Classes					Self-study	Course	Course code	Course name	Credit	Hours	Classes					Self-study		
					Total	Lecture	Practice	Labs	Seminar							Total	Lecture	Practice	Labs	Seminar			
1 semester (15 weeks)											2 semester (15 weeks)												
A		Mathematics		188	76	40	36	-	-	112	A		Mathematics		188	76	40	36	-	-	112		
A		Chemistry		188	76	40	36	-	-	112	A		Chemistry		188	76	40	36	-	-	112		
B		Physics		188	76	40	36	-	-	112	A		Physics		188	76	40	36	-	-	112		
A		Drawing (descriptive geometry)		188	76	40	36	-	-	112	B		Computer Science (Python programming)		188	76	30	30	16	-	112		
A		English language		188	76	40	36	-	-	112	A		English language		114	46	30	16	-	-	68		
A		Elective course 1		114	46	30	16	-	-	68	C		Elective course 1		114	46	30	16	-	-	68		
C		Elective course 1		114	46	30	16	-	-	68	C		Elective course 1		114	46	20	16	10	-	68		
Total for semester:					1168	472	260	212	-	-	696	Total for semester:					1094	442	230	186	26	-	652
											Total for year:					2262	914	490	398	26	-	1348	

3 semester (15 weeks)											4 semester (15 weeks)										
A		Mathematical Analysis 1	8	300	120	70	50	-	-	180	A		Physics 2 (Electromagnetism and Wave theory)	6	226	90	50	40	-	-	136
A		Physics 1	8	300	120	70	50	-	-	180	A		Mathematical analysis 2	6	226	90	50	40		-	136
B		Computer Science (C++/ Python)	6	226	90	40	30	20	-	136	B		Engineering Drawing	6	226	90	50	30	10	-	136
A		Linear Algebra and Geometry (+Matlab/Simulink)	8	300	120	50	40	30	-	180	B		Engineering Mechanics	6	226	90	50	40	-	-	136
											B		Fundamentals of Electrical Engineering and Circuit Theory	6	226	90	50	30	10	-	136
Total for semester:			30	1126	450	230	170	50	-	676	Total for semester:			30	1130	450	250	180	20	-	680
													Internship	0							
											Total for year:			60	2256	900	480	350	70	-	1356
5 semester (15 weeks)											6 semester (15 weeks)										
B		Fluid mechanics and Thermodynamics (including Pneumatics and Hydraulics)	8	300	120	60	30	30	-	180	B		Fundamentals of Electronics	6	226	90	40	30	20	-	136
B		Material Science	6	226	90	60	30	-	-	136	C		Robotics	6	226	90	40	30	20	-	136
B		Applied Mechanics and Machine Elements	8	300	120	60	30	30	-	180	B		CAD/CAM/CAE	6	226	90	20	20	50	-	136
C		Electric Drives	5	188	76	40	20	16	-	112	B		Electrical and Mechanical Measurements (+ Statistics Theory)	6	226	90	50	30	10	-	136
A		Formal Writing	3	114	46	26	20	-	-	68	C		Microcomputer technology (+ Microcomputer programming)	6	226	90	40	30	20	-	136
Total for semester:			30	1128	452	246	130	76	-	676	Total			30	1130	450	190	140	120	-	680
													Industrial Internship	0							
											Total for year:			60	2258	902	436	270	196	-	1356

7 semester (15 weeks)											8 semester (15 weeks)										
B		Automatic control	6	226	90	40	30	20	-	136	B		Project Management	6	226	90	40	30	20	-	136
C		PLC and Industrial Controllers	6	226	90	30	30	30	-	136	C		Internet of Things	6	226	90	30	30	30	-	136
C		Modeling and simulation of mechatronic systems	6	226	90	40	30	20	-	136	D		Internship	9	338	-	-	-	-	-	338
C		Digital signal processing	6	226	90	40	30	20	-	136	D		Thesis	9	338	-	-	-	-	-	338
C		Power Electronics	6	226	90	40	30	20	-	136											
Total for semester:			30	1130	450	190	150	110	-	680											
A. General study (Fundamental) courses; B. General technical courses; C. Specialty courses; D. Internship and thesis																					
														30	1128	180	70	60	50	-	948
													Total for year:	60	2258	630	260	210	160	-	1628
													Total:	180	9034	3346	1666	1228	452	-	5688

List of Elective course 1 courses:

- Law and human safety;
- Web programming;
- 3D printing technologies;
- Introduction to Mechatronics;
- Arduino development.

List of Elective course 4 courses:

- IoT technologies;
- Computer networks;
- Machine learning;
- Artificial intelligence;
- Robotics and intellectual systems.

Partial assistance to the agreement of the qualification requirements in the field of Mechatronics and Robotics

Ўзбекистон Республикаси
Олий ва ўрта махсус таълим вазирлиги

60711500– Мехатроника ва робототехника
бакалавриат таълим йўналишининг малака талаблари

КЕЛИШУВ ВАРАҒИ

ИШЛАБ ЧИКИЛДИ:

Ислом Каримов номидаги
Тошкент давлат техника университети



Ректор проф. С.М. Турабджанов

2022 йил «2» 08



Уюшмаси

М.М. Юнусов

М.Ў.

КЕЛИШИЛДИ:

Ўзбекистон Республикаси
Олий ва ўрта махсус таълим вазирлиги
хузуридаги Олий таълимнинг
ривожлантириш тадқиқотлари ва
илгор технологияларини татбиқ этиш
маркази

Тошкент шаҳридаги Турин
политехника университети



Директор Ш. Якубов

2022 йил «2» 08

М.Ў.



Ректор Ж. Иноятходжаев

2022 йил «3» 08

“Unique innovation tree” MChJ

Директор Д. Хожамухаммедов

2022 йил «4» 08

М.Ў.

“ATOM Smart Solution” MChJ

Директор О. Халикулов

2022 йил «4» 08

М.Ў.

DEVELOPMENT OF COURSES FOR THE BACHELOR DEGREE PROGRAMME



Co-funded by the
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of the European Union

**O'ZBEKISTON RESPUBLIKASI OLIY VA O'RTA MAXSUS TA'LIM
VAZIRLIGI**

ISHLAB CHIQRISH JARAYONLARINI AVTOMATLASHTIRISH

**MechaUz konsorsiumi a'zolari uchun Toshkent shahridagi Turin Politehnika
universiteti tomonidan yaratilgan**

O'quv-uslubiy majmua

Toshkent-2023

|



Co-funded by the
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of the European Union

**O'ZBEKISTON RESPUBLIKASI OLIY VA O'RTA MAXSUS TA'LIM
VAZIRLIGI**

**MASHINA DETALLARI VA AVTOMATIK LOYIHALASH ASOSLARI
fani**

O'QUV-USLUBIY MAJMUA

**MechaUz konsorsiumi a'zolari uchun Toshkent shahridagi Turin Politehnika
universiteti tomonidan yaratilgan**

TOSHKENT-2023

Work Package 3: Development of the new training courses and organizing trainings for UZB teachers, staff and engineers



Тошкент шаҳри таълим сифатини
назорат қилиш бўлими

№ 3201-725с-с042-7b5f-b0b9-0433-8895
Хужжат яратилинган сана: 2019-05-03

Хужжат берилган: TURIN POLITEKNIKA UNIVERSITETI
Кабул қилувчининг идентификация рақами: 301249598

ВАЗИРЛАР МАҲКАМАСИ ҲУЗУРИДАГИ ТАЪЛИМ СИФАТИНИ НАЗОРАТ ҚИЛИШ ДАВЛАТ
ИНСПЕКЦИЯСИ

Нодавлат таълим хизматларини кўрсатиш соҳасидаги фаолиятни амалга ошириш учун

ЛИЦЕНЗИЯ № КМО 0325

Направление образования	
Отбор поставщиков и мониторинг движения запасных частей.	
Локализация производства и импортозамещение.	
Складская логистика	
Программирование логических контроллеров	PLC PROGRAMMING
Программирование логических контроллеров (продвинутый)	
Пневмоавтоматика	PNEUMATICS AND
Гидроавтоматика	HYDRAULICS
Сенсорика	SENSORICS
Мехатроника	MECHATRONICS
Электроника, электротехника и основы электропривода	ELECTRIC DRIVES
Основы Робототехники	BASICS OF ROBOTICS
VDA 6.3 – Аудит процессов.	
Электронное правительство	
Информационная безопасность	
Основы производственной системы "Интегрированное качество для поставщиков GM BIQS"	
Анализ финансово-экономического состояния предприятия и налоговое планирование	
Бизнес-планирование	
Внеэкономическая деятельность	
Информационно-коммуникационные технологии	



Key Action 1
– Mobility for learners and staff –
Higher Education Student and Staff Mobility

Inter-institutional¹ agreement 2020-2023²
between institutions from
Programme and Partner Countries³
[Minimum requirements]⁴

The institutions named below agree to cooperate for the exchange of staff in the context of the Erasmus+ programme. They commit to respect the quality requirements of the Erasmus Charter for Higher Education in all aspects of the organisation and management of the mobility. The institutions also commit to sound and transparent management of funds allocated to them through Erasmus+.

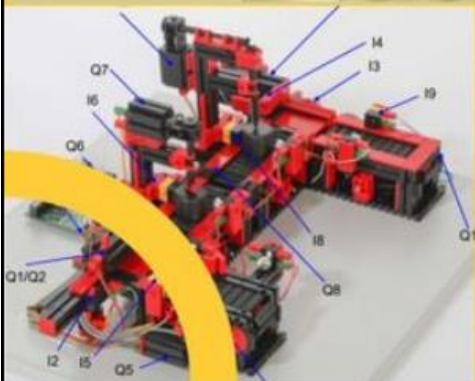
A. Information about higher education institutions

Full name of the institution / country	Erasmus code or city	Contact details (email, phone)	Website (eg. of the course catalogue)
Turin Polytechnic University in Tashkent	934160829	Khasan Khankeldiyev Uzbekistan Turin Polytechnic University in Tashkent Head of International Relations Department khankeldy@polito.uz	https://polito.uz/en/
Vilnius Gediminas Technical University	LT VILNIUS02	Erika Danienė Erasmus+ Institutional coordinator erasmus@vilniustech.lt	http://www.vilniustech.lt/en

B. Mobility numbers⁵ per academic year

FROM [Erasmus code or city of the sending institution]	TO [Erasmus code or city of the receiving institution]	Subject area code * [ISCED]	Subject area name *	Study cycle [short cycle, 1 st , 2 nd or 3 rd] *	Number of student mobility periods	
LT VILNIUS02	Turin Polytechnic University in Tashkent	0710	Engineering and engineering trades Electronics and automation Building and civil engineering Information and Communication Technologies (ICTs) Mechanics, Mechatronics	-	Student Mobility for Studies [total number of months of the study periods or average duration*]	Student Mobility for Trainee ships *
		0714				
Turin Polytechnic University in Tashkent	LT VILNIUS02	0732		1 st , 2 nd	1x120 days	0
		0610				
		0715				

FROM [Erasmus code of the sending institution]	TO [Erasmus code of the receiving institution]	Subject area code * [ISCED]	Subject area name *	Number of staff mobility periods	
				Staff Mobility for Teaching [total number of days of teaching periods or average duration *]	Staff Mobility for Training *
LT VILNIUS02	Turin Polytechnic University in Tashkent	0710	Engineering and engineering trades Electronics and automation	1 (5 working days+2 days for travelling days)	0
		0714			
Turin Polytechnic University in Tashkent	LT VILNIUS02	0732	Building and civil engineering Information and Communication Technologies (ICTs) Mechanics, Mechatronics	1 (5 working days+2 days for travelling days)	0
		0610			
		0715			



WE BUILD AUTOMATION SYSTEM
WITH PLC PROGRAMMING BY FESTO

ENTRANCE EXAM: INTERVIEW (or Project work)

PRACTICAL COURSE ROBOTICS AND MECHATRONICS COURSE

Students will receive a certificate after successfully
completing the course and also access to mechatronics lab

APPLICATIONS DEADLINE: 10-APRIL



@mechatronics.lab



t.me/Recruitment_mechatronics



Mechatronics laboratory

Registration



SUSTAINABILITY

TURIN POLYTECHNIC UNIVERSITY IN TASHKENT

"ORDERING"
Pro-Rector
" " F. Rinaudo
2023y.

Degree course name
"Industrial manufacturing technologies "

CURRICULLUM PLAN

Academic degree - Bachelor

Curriculum period - 3 years

Type of curriculum - Fulltime

"ORDERING"
Rector of TTPU

J.Sh. Inoyatkhodjaev

" " 2023 г.

I. CURRICULUM TIMETABLE

Year	WEEKS																																																				Curriculum												
																																																					Total	Including					Holidays						
																																																						Lectures & practice	attestation	Internship	Final Work	Project work							
	September					October					November					December					January					February					March					April					May					June					July					August									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52													
1	H	H	H															H	H	A	A															A	A	I	I	I	I	I	H	H	H	H	H	H	H	H	H	39	30	4	5	0	0	13							
2	H	H																H	H	A	A														A	A	A	I	I	I	I	I	I	I	H	H	H	H	H	H	H	H	H	41	25	6	10	0	0	11					
3	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	H				A	P	P	P	P	P	P	P	P	P	P	F	F	F	F	A	A	A	H	H	H	H	H	H	H	H	H	H	H	H	H	38	3	4	18	3	10	14					

☐

Lecture and practice

☒

Attestation

☐

Internship

☐

Holidays

☐

Final Work

☐

Project work

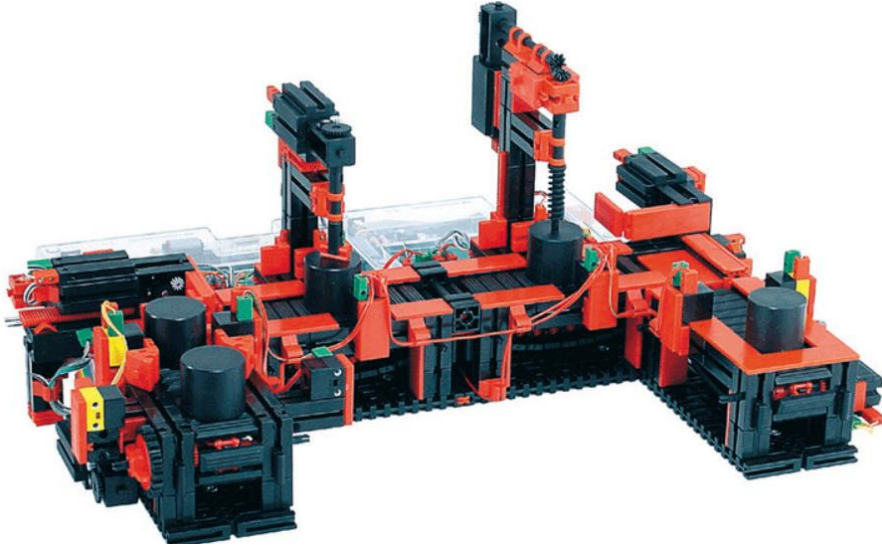
II. CURRICULUM PLAN

First year															
№	Subject ID	Subjects	Value of all assignment		Total workload per student							Semester		ECTS Credits	
					Total	Lecture	Practice	Activity	Laboratory	Seminars	Tutoring	Self study	1		2
													Semester 1		Semester 2
			Hour	%								Credits per semester			
1		2	3	4	5	6	7	8	9	10	11	12	13	14	
		Main subjects													
1	FLTEC-4	Technical english	120	6,3%	60	35	25				60	4		4	
2	FLCM-6	Fundamentals of chemistry and materials	180	9,4%	90	60	30				90	6		6	
3	FLPH-6	Fundamentals of physics	180	9,4%	90	48	42				90	6		6	
4	FLMAT-6	Fundamentals of mathematics	180	9,4%	90	58	32				90	6		6	
5	FLIBEO-8	Introduction to business economics and organization	240	12,5%	120	86	34				120	8		8	
6	FLMTM-6	Introduction to materials and technologies for the manufacturing	180	9,4%	90	60	10	20			90		6	6	
7	FLIMEC-6	Introduction to Mechanics	180	9,4%	90	68	22				90		6	6	
8	FLBIOT-6	Fundamentals of Business Information Systems and Internet of Things	180	9,4%	90	54	36				90		6	6	
9	FLITD-6	Fundamentals of industrial technical drawing and CAD	180	9,4%	90	34	20	36			90		6	6	
10	FLINT-8	Internship I	300	15,6%	300								8	8	
		Total (main subjects 1st year)	1920	100,0%	1110	503	251	56	0	0	810	30	32	62	
		Total 1st year subjects	1920	100%	1110	1175	871	56	0	0	810	30	32	62	

Second year														
№	Subject ID	Subjects	Total workload per student								Semester		ECTS Credits	
			Value of all assignment		Activity						1	2		
					Total	Lecture	Practice	Laboratory	Seminars	Tutoring	Self study	Semester 3		Semester 4
												Credits per semester		
1		2	3	4	5	6	7	8	9	10	11	12	13	14
Main subjects														
1	SLFUN-6	Fundamentals of production management	180	9,4%	90	54	36				90	6		6
2	SLFUN-8	Fundamentals of industrial plants and job safety	240	12,5%	120	68	52				120	8		8
3	SLIND-6	Industrial Automation Laboratory	180	9,4%	90	54	12	24			90	6		6
4	SLQUA-6	Quality management and measurement Laboratory	180	9,4%	90	58	10	22			90	6		6
5	SLDIG-6	Digital technologies laboratory for industry 4.0	180	9,4%	90	54	12	24			90		6	6
6	SLIND-6	Industrial systems Planning Laboratory	180	9,4%	90	24	30	36			90		6	6
7	SLINT-16	Internship II	600	31,3%							600		16	16
		Optional subjects (6 credits)	180	9,4%	90						90		6	6
		Total (main subjects 2nd year)	1920	100,0%	660	312	152	106	0	0	1260	26	34	60
Optional subjects														
1	SLLAB-6	Laboratory of Materials and Technologies for manufacturing	180	9,4%	90	48	18	24			90		6	6
2	SLPLA-6	Plastics Industry Technology Laboratory I	180	9,4%	90	58	10	22			90		6	6
3	SLDIG-6	Digital technologies laboratory for product development	180	9,4%	90	36	24	30			90		6	6
		Total 2nd year subjects	1920	100%	660	312	152	106	0	0	1260	26	34	60

Third year														
№	Subject ID	Subjects	Total workload per student									Semester		ECTS Credits
			Value of all assignment		Activity							1	2	
					Total	Lecture	Practice	Laboratory	Seminars	Tutoring	Self study	Semester 5	Semester 6	
												Hour	%	
1		2	3	4	5	6	7	8	9	10	11	12	13	14
1	TLPRO-20	Project Work	300	17,4%	300		150	150					20	20
2	TLINT-30	Internship III	1125	65,2%							1125	30		30
3	TLFIN-3	Final Project	120	7,0%	60	45	15				60		3	3
	TLOPT-6	Optional subjects (6 credits)	180	10,4%	90						90		6	6
		Total (main subjects 3rd year)	1725	100%	450	45	165	150	0	0	1275	30	29	59
Optional subjects														
1	TLINN-6	Innovation Management Laboratory	180	10,4%	90	40	26	24			90		6	6
2	TLPLA-6	Plastics Industry Technology Laboratory II	180	10,4%	90	58	0	32			90		6	6
3	TLMEC-6	Mechatronics Technology Laboratory	180	10,4%	90	42	24	24			90		6	6
Total 3rd year subjects			1725	100%	450	45	165	150	0	0	1275	30	29	59
Total			5565	100%	2220	860	568	312	0	0	3345	86	95	181

Work Package 4: Establishment of I-LABs, Training Centre and Society



II. Equipment installed beforehand







III. Sustainable development of the laboratory



Work Package 5: Quality Control and Monitoring

PROVIDING REQUIRED INFORMATION FOR REPORTS AND PARTICIPATION IN PROJECT SURVEYS



MECHAUZ 1ST QUARTERLY REPORT

Reporting Period: 1.1.2020 – 31.3.2020

MECHAUZ 3RD QUARTERLY REPORT

Reporting Period: 1.7.2020 – 30.9.2020

MECHAUZ 5TH QUARTERLY REPORT

Reporting Period: 1.1.2021 - 31.3.2021

MECHAUZ 4TH QUARTERLY REPORT

Reporting Period: 1.10.2020 – 31.12.2020

MECHAUZ 2ND QUARTERLY REPORT

Reporting Period: 1.4.2020 – 30.6.2020

MECHAUZ 6TH QUARTERLY REPORT

Reporting Period: 1.4.2021 - 30.6.2021



Modernization of Mechatronics and Robotics for Bachelor degree in
Uzbekistan through Innovative Ideas and Digital Technology

(MechaUZ)

609564-EPP-1-2019-1-EL-EPPKA2-CBHE-JP

MechaUZ_D.5.1_Interim Report_V.0.1

Work Package 6: Dissemination/Exploitation

Contact details of TTPU

1. Web –site: **www.polito.uz**
2. Social media channels
 - Facebook : **[@ttpu.polito.uz](https://www.facebook.com/ttpu.polito.uz)**
 - Instagram: **[@polito_uz](https://www.instagram.com/polito_uz)**
 - Telegram: **https://t.me/polito_uz**
 - E-mail: **info@polito.uz**
4. **MechaUz project :**
mechauz.polito.uz
 - Facebook: **[@MechaUzTTPU](https://www.facebook.com/MechaUzTTPU)**
 - Instagram: **[@mechauz_ttpu](https://www.instagram.com/mechauz_ttpu)**
 - Telegram:
https://t.me/mechauz_ttpu



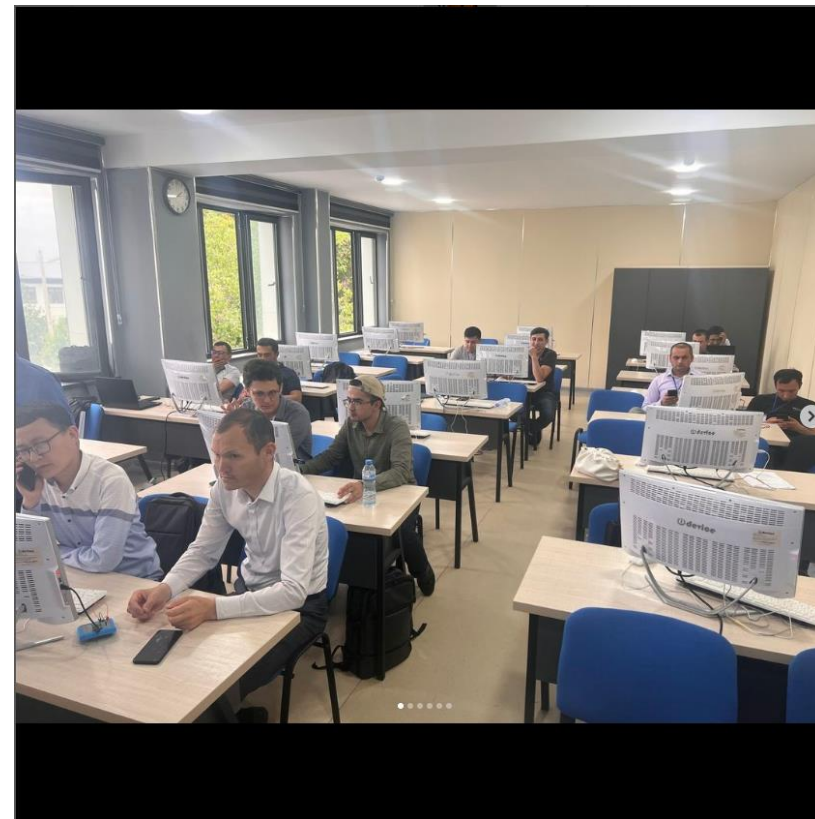


TTPU MechaUz project сейчас 😊 счастлив(-а) здесь: Tashkent University of Information Technologies.

17 май · Ташкентская область, Ташкент · 🌐

Professors from prominent European educational institutions hold meetings and training courses at TUIT...

In cooperation with the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan and 6 universities of the Republic of Uzbekistan and 6 European universities, the "Modernization of Mechatronics and Robotics for Bachelor degree in Uzbekistan through Innovative Ideas and Digital Technology (MechaUz)" international project No. 609564-EPP-1-2019-1-EL... Ещё



mechauz_ttpu
Tashkent University of Information Technologies



mechauz_ttpu The first day of the third training course offered by MechaUz, TUIT.
As previously stated, the Tashkent University of Information Technologies named after Muhammad al-Khwarizmi hosted the training classes slated for May 15-19 as part of the MechaUz project.
As planned, the first day of the training sessions began on May 16, 2023, in an intriguing and enthusiastic mood. The first training course on "Robot control systems" was led by professors Vytautas Buinskis and Andrius Dzedzickis of Lithuania's Vilnius Gediminas Technical University. This training course will introduce you to the normal setup of industrial robot control systems, as well as the accessible programming methodologies and the most common robot programming languages.
Uldis amis, a professor at the University of Lipaja in Latvia, offered a presentation on "IoT applications used in environmental monitoring" in the afternoon of the same day, followed by a laboratory exercise on the same topic.
This course taught information and abilities in the creation of controlled devices, as well as data collecting and transmission. The course was divided into two sections:
The participants made sensor connections based on the programmable controller Arduino Uno, programming is done using the C++ programming language, data transmission via Bluetooth was organized, and experience was gained in software library applications for connecting various actuators in the first part of the course.
In part 2, participants create touch connections using the Raspberry Pi microcomputer; programming was done using the Python programming language; data transfer to a remote server was organized using Internet technologies; simple digital and

Статистика



Нравится fikret_umerov и ещё 8

17 МАЙ



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<https://telegra.ph/Meeting-of-Erasmus--MechaUz-project-participants-05-17>

Telegraph

Meeting of Erasmus + MechaUz project participants.

On May 16, 2022, within the framework of the Erasmus + project to expand the boundaries of higher education, a meeting of the participants of the Erasmus + project "MechaUz- moderni...



1610 Mahfuza, 16:56



ABOUT NEWS RESULT TEAM PARTNERS CONTACT US

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Modernization of Mechatronics and Robotics for Bachelor degree in Uzbekistan through Innovative Ideas and Digital Technology - MechaUZ

TURIN POLYTECHNIC
UNIVERSITY IN
TASHKENT

ABOUT ADMISSIONS RESEARCH & INNOVATION



Another meeting of the participants of the Erasmus+ CBHE MechaUz project consortium took place in Latvia

Training and research centers (labs) in the framework of the ERASMUS PLUS projects at TTPU

Turin Polytechnic university in Tashkent hosted a project management meeting in the framework of Erasmus Plus ELBA project “Establishment of Training and Research Centers and Courses Development on Intelligent Big Data Analysis in Central Asia – ELBA” between September 19-21.



ANDIJAN MACHINE-BUILDING INSTITUTE



**“2ND INTERNATIONAL SCIENTIFIC AND PRACTICAL
CONFERENCE ON "MECHATRONICS AND ROBOTICS: PROBLEMS
AND DEVELOPMENT PROSPECTS"**



ANDIJAN 2023



Comparative Analysis of Curricula in Mechatronics, Robotics, or Closely Related Fields at prominent Italian Universities

**Asanov Seyran, MSc in Mechanical Engineering, Turin Polytechnic University in
Tashkent**

**Umerov Fikret, Ph.D in Automotive Engineering, Turin Polytechnic University in
Tashkent**

Abstract:

This scientific article aims to conduct a comprehensive comparative analysis of the curricula offered by various Italian universities in the fields of Mechatronics, Robotics, and closely related disciplines. The study will provide insights into the diversity of educational programs in these fields, identify commonalities, and highlight unique features, thereby aiding prospective students, educators, and policymakers in making informed decisions about program selection and curriculum development.

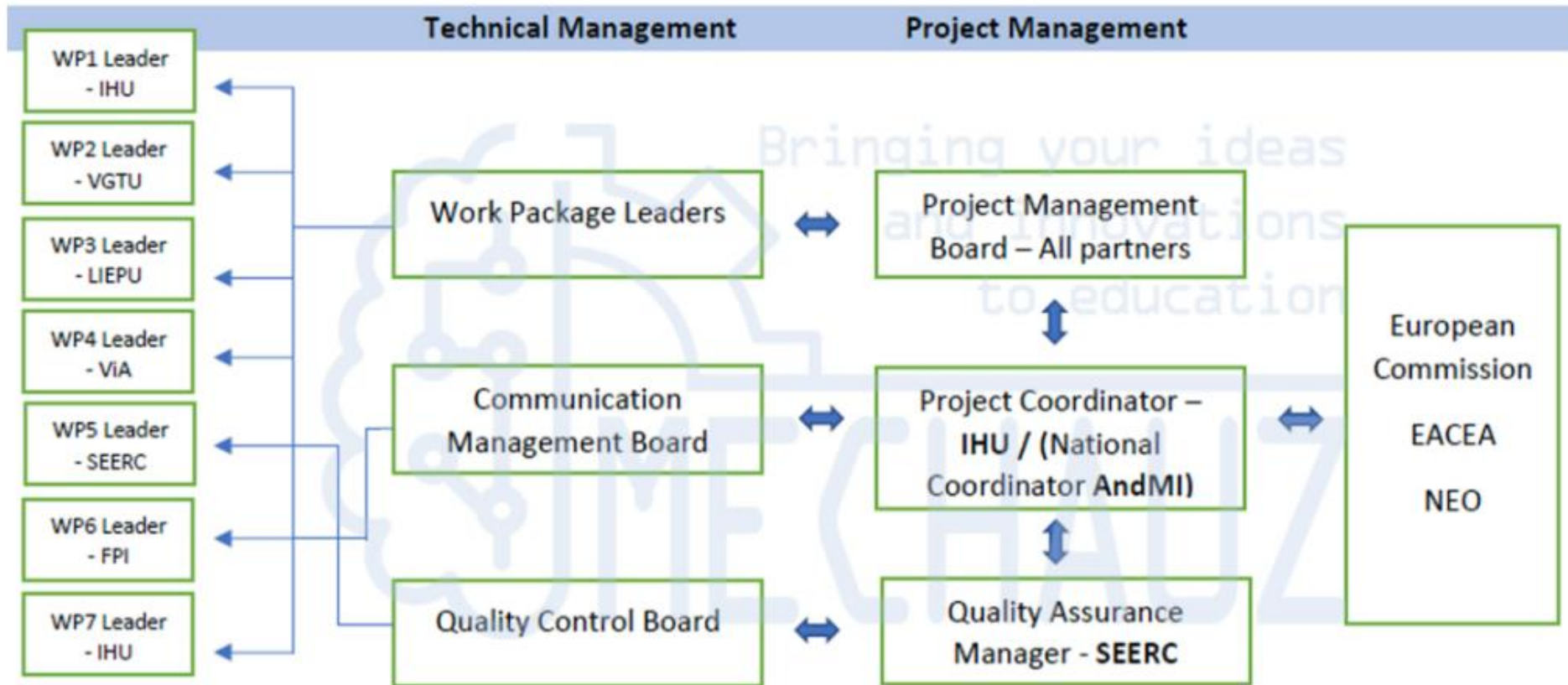
4. Acknowledgements

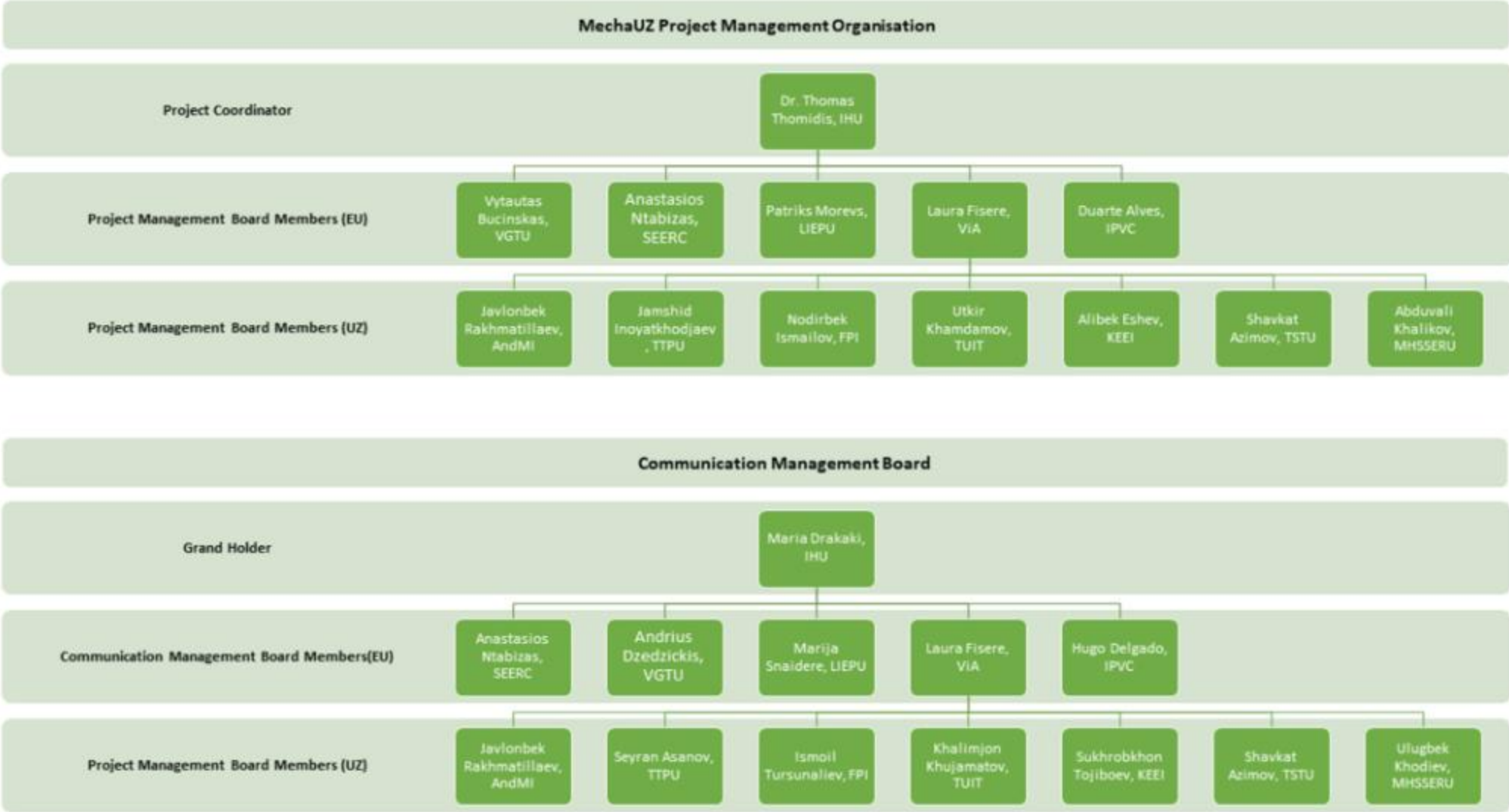
The analysis in this paper is done as part of WP1 of Erasmus + CBHE project “MechaUz- Modernization of Mechatronics and Robotics for bachelor degree in Uzbekistan through innovative ideas and digital technologies”.



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Erasmus+ Programme
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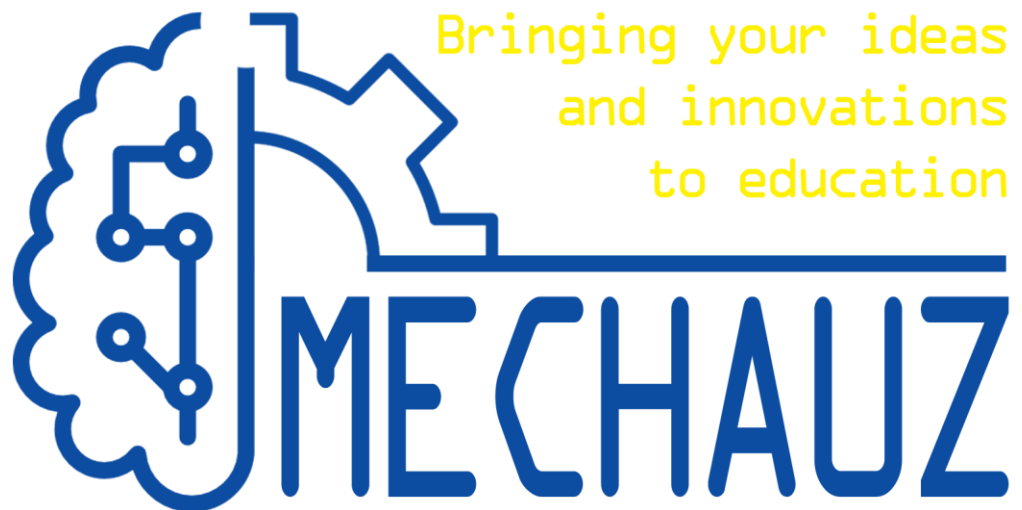


Meetings

#	First meeting	Second Meeting	Third meeting	Fourth meeting	Fifth meeting	Sixth meeting	Seventh meeting	Total
Total Participants	2	6	5	4	5	2	4	28
Male	2	6	5	3	5	2	4	27
Female	0	0	0	1	0	0	0	1

Training

#	First training	Second Training	Third Training	Total
Total Participants	5	4	5	14
Male	5	3	5	13
Female	0	1	0	1



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THANK YOU

FOR YOUR ATTENTION