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Pryazovskyi State Technical University (P13)

Plan of curricular implementation at P13

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**Cracow University
of Technology**

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Current curricular at P13

1. Biomaterials and biocompatibility	14. Medical informatics
2. Biomedical Ethics	15. Medical information technologies and their software
3. Biomedical mechanics	16. Methods of processing biomedical information
4. Biomedical programming technologies	17. Metrology and standardization of medical equipment
5. Sensors and technical measurements in biomedicine	18. Microprocessor technology
6. Measuring transducers and sensors for medical and technical systems	19. Processing biomedical images and signals
7. Influence of radiation and fields on living organisms	20. Fundamentals of Biomedical Equipment Design
8. Diagnostic and medical technique	21. Fundamentals of Circle and Signal Theory
9. Electronic devices	22. Principles of biomedical engineering
10. Engineering graphics	23. Prosthetics of the musculoskeletal system
11. Engineering support of medical equipment and equipment of a medical institution	24. Modern methods and means of diagnostics of human pathology
12. Laboratory analytical technique	25. Telemedicine systems
13. Materials science and construction materials	26. Technical support of physical rehabilitation systems

Modernization of curricular at P13 for BA

PSTU Current curricular	← BioArt Curricular
Diagnostic and medical technique	Biomedical instrumentation;. Biomedical measurement and stimulation (P06 TMMA)
Biomaterials and biocompatibility	Biomaterials I, II (P04. CUT)
Methods of processing biomedical information	Computer simulations of multibody models in biomechanical engineering (P04. CUT)
Sensors and technical measurements in biomedicine	Modules: Optical sensors for bio-medical applications. Sensor principles (P05. DUK)

Implementation of new Master program at PSTU

- Regenerative medicine and biotechnology in orthopaedics (**P05. DUK**)
- 3D printing for biomedical applications (**P04. CUT**)
- Bio-ceramics (**P04. CUT**)
- Nanostructures and nanocapsules (**P04. CUT**)

Equipment for BioArt at PSTU

No	Laboratory	Equipment	Curriculum
1	Laboratory of additive manufacturing implants by 3D-printing	3D printer Flashforge Inventor	3D printing for biomedical applications
2		3D Printer Ultimaker 2+	
3		3D scanner BQCiclop	
4	Laboratory of virtual reality	Systems of virtual reality	Regenerative medicine and biotechnology in orthopedics
5		Interactive whiteboard	
6		Multimedia projector	
7	Laboratory for biotribological studies	Tribometr «Micron-tribo»	Biomaterials Bio-ceramics
8		Profilometr «Micron-alpha»	
9		Analytical balances RADWAG AS 60 / 220.R2	
10		PC for the registration and processing of tribo-testing data	
11		Rough grinding machine for metal ORTigrind SM 300	
12		Grinding and polishing machine	
13	Laboratory of the diagnostics of medical equipment	Ultrasonic and Magnetic Laser Therapy Apparatus «MIT-11»	Biomedical Instruments Biomedical measurements
14		6-channel electrocardiogram 600G	
15		Test MedTester 5000C	

Equipment for BioArt at PSTU

No	Title	Euro
1	3D Printer Flashforge Inventor	1790
2	3D Printer Ultimaker 2+	2800
3	Rough grinding machine for metal ORTigrind SM 300	760
4	Grinding and polishing machine	1900
5	3D Scanner BQCiclop	300
6	Virtual Reality System	2500
7	Multimedia projector	920
8	Smart Board	1000
9	Tribometr «Micron-tribo»	8000
10	Profilometr «Micron-alpha»	8000
11	PC for tribometr	500
12	Analytical balances RADWAG AS 60/220.R2	800
13	Ultrasonic and Magnetic Laser Therapy Apparatus «MIT-11»	700
14	6-channel electrocardiogram 600G	750
15	Test system MedTester 5000C	3080

Total

33800

Open questions for BioArt at PSTU

1. BioArt site

2. Dissemination materials

3. Bioart banner



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Thank you for your attention!



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