BIALYSTOK UNIVERSITY OF TECHNOLOGY

CONTACT PERSON

Agnieszka Gniazdowska, MSc
a.gniazdowska@pb.edu.pl
+48 85 746 90 47
Iro.pb.edu.pl

Internship Offer at Bialystok University of Technology

min. period:
3 months (91 days)

If you are student of Architecture, Computer Science, Engineering Management, Electrical Engineering, Mechanical Engineering, Civil or Environmental Enginneering and looking for an internship in Poland within Erasmus+ Programme please check our offer!

Step by step

Step 1 - check our brochure and find an interesting offer
Step 2 - visit https://pb.edu.pl/iro/internship/ fill application form for traineeship, remember about attachments
Step 3 – prepare Learning Agreement for Traineeships and receive Invitation Letter
Step 4 – complete internship programme and get Certificate of Attendance

Remember!

- You have to be insured for the whole period of internship
- if you wish to stay on our campus please write at dormitory@pb.edu.pl

Requirements

- Vivid interest in science and research
- Min. English level B1
- Official enrolment as student at the home University

Internship Offer at Bialystok University of Technology

min. period:
3 months (91 days)

Faculty of Engineering Management

OFFER 1

Traineeship/ internship title

Management of public sector units.

Supervisor

Ewa Rollnik-Sadowska, PhD
e.rollnik@pb.edu.pl

Short description of the traineeship

During the internship, the student will learn about the methods of managing of public units, including the measures of effectiveness and efficiency as well as the methods of evaluation the quality of public services. The internships carried out in the selected public institution will provide knowledge on the specifics of the implemented activities, financing rules and evaluation methods. Form of classes: seminar with elements of tutoring.

Assessment methods

Development of a scientific publication.

Workplaces where study visits / internships are planned

Marshal's Office of Podlaskie Voivodeship
Podlasie Voivodship Office in Białystok
Voivodship Labour Office

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Familiarizing the student with the knowledge of public management.
- Familiarizing the student with the knowledge of efficiency and effectiveness evaluation methods.
- Familiarizing the student with the methods of evaluation the quality of public services.
- Familiarizing the student with the principles of conducting research and preparing scientific studies.
- Obtaining the ability to analyze documents, draw conclusions based on the conducted studies.
- Obtaining the ability of analytical thinking skills.

Monitoring plan

Regular meetings with the student and reporting of work stages.

Evaluation plan

Assessment of the ongoing tasks.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Engineering Management

OFFER 2

Traineeship/ internship title

Management methods and tools used in enterprises - theoretical aspects and the practice of enterprise.

Supervisor

Urszula Kobylińska, PhD
u.kobylinska@pb.edu.pl

Short description of the traineeship

Familiarization with the university, faculty and department where the internship will be held. Review of literature on management of innovation. Preparing an article in English for the journal – "Academy of Management". Observation of didactic methods used by teachers at faculty. Conducting 4 hours of classes in the subject of Management of Innovation or Quality Management and Control. Consultations with teachers regarding the didactic method. Establishing cooperation in scope of further joint projects and programs. Study visit to the selected company.

Assessment methods

Internship report

Workplaces where study visits / internships are planned

- SaMasz - producer of agricultural and municipal machinery
- Glosel - internet sale; e-commerce

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Increasing language competences.
- Improving the teaching process.
- Establishing new contacts needed for inter-organizational cooperation in the field of applying for joint research projects.

Monitoring plan

Ongoing monitoring of the trainee's progress by the supervisor.

Evaluation plan

Ongoing assessment of the progress of the work carried out by the trainee.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Engineering Management

OFFER 3

Traineeship/ internship title

Maintenance in a company in the conditions of Industry 4.0.

Supervisor

Krzysztof Łukaszewicz, PhD
k.lukaszewicz@pb.edu.pl

Short description of the traineeship

The topics which will be covered during the internship includes the concept of Industry 4.0, problems of maintenance in a company, the role of maintenance in a company's organisational system. Student will also learn about selected basic elements of machinery operation as well as strategies used to manage machinery in a company: reactive, preventive maintenance, condition-based and mixed. Student will get familiar with the topics of RCM, TPM and trends in maintenance development, computer assisted maintenance management tools and methods of organising activities used in maintenance in a company.

Assessment methods

Assessment based on attendance reports, completion of assignments and discussion.

Workplaces where study visits / internships are planned

Zakłady Przemysłu Sklejek Biaform S.A. (plywood plant), https://biaform.com.pl/
The business profile: manufacture of plywood for use in the construction, transport, interior finishing, furniture and packaging industries.

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- The acquisition of knowledge related to the theoretical and practical aspects of facility operation and machine maintenance under Industry 4.0 conditions.
- The acquisition of the ability to use the methods, techniques and tools of operation and maintenance to achieve the correct production capacity of the plant. To be prepared to apply the learned tools and techniques in production practice.
- Developing creativity and ability to work individually. To develop the ability to estimate the time needed to complete an assigned task.

Monitoring plan

Attendance reports from study visits and meetings with the mentor.
Approval and evaluation of the individual, partial stages of completion of the tasks issued.
The discussion with the trainee/intern.

Evaluation plan

Preparation of a written paper by the intern/trainee.

Planned number of working hours per week

20

Internship availability

October-June

Faculty of Engineering Management

OFFER 4

Traineeship/ internship title

Circular economy in activities of Polish companies and local government units.

Supervisor

Joanna Godlewska, PhD
j.godlewska@pb.edu.pl

Short description of the traineeship

Conducting projects classes from the subject of Circular Economy. Participation in the preparation of didactic materials for projects classes. Participation in the implementation of activities in the international project of the European Green Deal for Cities (Erasmus+) – testing e-learning module about circular economy. Overview of possibilities of financing activities in the field of circular economy from aid programs. Participation in on-line seminars and conferences on the circular economy. Study visits in companies. Preparation of a scientific article together with the scholarship supervisor. Participation in scientific seminar organised by the Department of Production Management. Participation in the organizational work of the Department of Production Management.

Assessment methods

Attendance in project classes, report from the overview of possibilities of financing activities in the field of circular economy from aid programs, scientific article, attendance in study visit in companies and local government entities, attendance in on-line seminars and conferences.

Workplaces where study visits / internships are planned

Companies as well as local government units from the Bialystok district with experience in implementing circular economy – at least 2 study visits (4 hours each).

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Gaining knowledge about circular economy solutions used in enterprises and local government units. Acquiring the ability to include ecological issues in business.

Monitoring plan

Attendance list in project classess.
Evaluation of the report from the overview of possibilities of financing activities in the field of circular economy from aid programs.
Publication of a scientific article.
Confirmation of participation in study visits in companies and local government units.
Confirmation of attendance in on-line seminars and conferences.

Evaluation plan

Evaluation in the form of written report.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Engineering Management

OFFER 5

Traineeship/ internship title

Technology Management.

Supervisor

Elżbieta Krawczyk-Dembicka, PhD
e.dembicka@pb.edu.pl

Short description of the traineeship

Query of literature in the field of technology management. Case studies in the field of technology management in enterprises (e.g. from the country of the trainee). Preparation of teaching materials in English. Participation in classes - conducting selected topics of classes. Cooperation with the student research club. Study visits in a production enterprise. Participation in the organizational work of the Department of Production Management.

Assessment methods

Preparation of a scientific paper on the subject of internships.

Workplaces where study visits / internships are planned

A production enterprise from the machine, food or printing industry (depending on the profile and interests of the trainee) - 2 hours.

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- The student has knowledge and skills regarding the acquisition and use of information in the field of technology management.
- The student has the skills to freely communicate with both the scientific and business environment in the field of organization and management systems in enterprises.
- The student is able to interact and work in a group using the integrated knowledge from various fields to solve engineering problems.

Monitoring plan

Consultations (frequency depending on the needs)
Reports on the implementation of assigned tasks (every 2 weeks)

Evaluation plan

Student activity.
Performing assigned tasks.
Presentation of selected aspects related to the main topic of the internship.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Engineering Management

OFFER 6

Traineeship/ internship title

Assessment of emerging technologies for smart/green cities.

Supervisor

Danuta Szpilko, PhD
d.szpilko@pb.edu.pl

Short description of the traineeship

The aim of the internship will be to learn about the concept of smart or green cities and to acquire research skills in identifying and evaluating emerging technologies in cities. As part of the internship, the student will conduct a literature review on emerging technologies in smart or green cities, design research to enable a multi-faceted assessment of emerging technologies in smart or green cities, carry out a research process using selected research methods and prepare a research report. Additionally (depending on the level of engagement) it will be possible to prepare a research paper together with the internship supervisor.

Assessment methods

Internship report.

Workplaces where study visits / internships are planned

The internship will be carried out at the University.
A study visit to the Institute of Innovation and Technology BUT is also planned (2-3 hours).

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

The student will acquire:

- knowledge in the field of smart/green cities;
- knowledge of how technology and innovation actors operate;
- the skills to identify and multi-faceted assessment of emerging technologies in cities;
- skills to conduct scientific research.

Monitoring plan

Regular monthly meetings
Presentation of results

Evaluation plan

Development of a literature review on emerging technologies in smart or green cities.
Development of a research tool.
Development and presentation of the results obtained in a multi-faceted evaluation of a selected emerging technology in cities.

Planned number of working hours per week

20

Internship availability

October-June

Faculty of Engineering Management

OFFER 7

Traineeship/ internship title

Methods of artificial intelligence.

Supervisor

Julia Siderska, PhD
j.siderska@pb.edu.pl

Short description of the traineeship

Acquaintance with the main activities run at Bialystok University of Technology as well as scientific and didactic fields of Faculty of Engineering Management. Assisting during computer classes held by supervisor. Conducting scientific research and preparing the scientific papers. Artificial neural networks (Statistica software – computer classes). Expert systems (several different IT tools - computer classes). Automation of business processes with the use of Robotic Process Automation technology (UiPath software - computer classes). Co-organisation of scientific conferences, other events and meetings run by the faculty. Participation in events and workshops organised at the faculty and at the university.

Assessment methods

Evaluation of the reports on the tasks carried out.
Assessment of the particular skills gained during the internship.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Development of knowledge and skills concerning automatization and robotization of business processes and artificial intelligence.
- Acquisition of basic skills in the field of building artificial neural networks in the Statistica software.
- Basic skills of developing software robots to business process automation.
- Gaining knowledge on the implementation of Industry 4.0 paradigms in enterprises.
- Gaining skills of planning, organising and conducting scientific research and didactic classes.
- Developing skills of preparing scientific articles.
- Gaining skills of organising scientific conferences and events.
- Developing the competences of cooperation and team work.

Monitoring plan

Once a week meetings to discuss planned tasks and results of finished tasks. Once a month preparation of reports on the tasks carried out.

Evaluation plan

Assessment of reports and evaluation of the ongoing tasks.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Engineering Management

OFFER 8

Traineeship/ internship title

Service quality management.

Supervisor

Aleksandra Gulc, PhD
a.gulc@pb.edu.pl

Short description of the traineeship

Familiarizing the student with the methods of service quality management. Preparing the literature review concerning current trends in chosen branch of service sector and drivers of its development. Identification of factors determining service quality in chosen branch of service sector. Designing and carrying out a research process using selected research methods. Preparing final report or scientific article. Assisting during computer classes held by supervisor. Co-organisation of meeting, conferences and events held at the faculty of engineering management. Participation in events and workshops organised both at the faculty and the university.

Assessment methods

Preparation of a report or a scientific paper on the subject of traineeship.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

The student will acquire or develop:

- knowledge concerning service quality management;
- skills to design and conduct scientific research;
- ability to interact and work in a group;
- ability to organize events.

Monitoring plan

Regular consultations
Presentation of results (once a month)

Evaluation plan

Trainee engagement and activity.
Assessment of assigned tasks.
Presentation of final results of research process.

Planned number of working hours per week

20

Internship availability

October-June

Faculty of Engineering Management

OFFER 9

Traineeship/ internship title

Technology impact assessment (TIA).

Supervisor

Joanna Ejdys, MSc, PhD, ProfTit
j.ejdys@pb.edu.pl

Short description of the traineeship

The aim of the internship will be to learn the principles of Technology Impact Assessment and to propose the idea of functioning of the Technology Impact Assessment Centre at the University. As part of the internship, the student will review similar units operating at other universities. At the same time, as part of scientific research, the student will participate in research aimed at building models of acceptance of selected innovative technologies (e.g. digital technologies).

Assessment methods

Internship report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- The student will acquire the ability to build technology acceptance models and their application on a specific technology example (digital, gerontechnology).

Monitoring plan

Regular monthly meetings
Presentation of results

Evaluation plan

Development of the Technology Impact. Assessment Centre concept.
Development and practical verification (through research) of a technology acceptance model on selected examples (digital technologies).

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Engineering Management

OFFER 10

Traineeship/ internship title

Acquisition of basic skills related to the programming of the technological process implemented on numerically controlled machine tools.

Supervisor

Łukasz Dragun, PhD
l.dragun@pb.edu.pl

Short description of the traineeship

Programming of numerically controlled machine tools on the example of the Sinumerik 810D/840D control system (computer classes).

Assessment methods

Preparation of a computer program on the SIEMENS simulator.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Discusses the types of machining.
- Analyzes the content of technological documentation.
- Lists the types of semi-finished products and their selection for technological preparation of production.

Monitoring plan

Partial tasks

Evaluation plan

Preparation of the program in the SIEMENS simulator.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Engineering Management

OFFER 11

Traineeship/ internship title

Application of ICT in the functioning of cities – the citizens perspective.

Supervisor

Sławomira Hajduk, PhD
s.hajduk@pb.edu.p

Short description of the traineeship

The internship includes several tasks: preparation of questionnaire, conducting survey research, elaborating the result, conclusions and recommendation for municipalities.

Assessment methods

Internship report, questionnaire and result of quantitative research.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Interns acquire the ability to independently design and conduct quantitative research using a questionnaire.

Monitoring plan

Evaluation of the partial results after each internship stage

Evaluation plan

Interns should conduct surveys and process the results.

Planned number of working hours per week

20

Internship availability

October-June

Faculty of Civil Engineering and Environmental Sciences

OFFER 1

Traineeship/ internship title

Reduction of energy consumption in HVAC and DWH systems in buildings supplied from renewable and conventional energy sources.

Supervisor

Assoc. Prof. Dorota Anna Krawczyk, DSc, PhD, Eng.
d.krawczyk@pb.edu.pl

Short description of the traineeship

Review of the literature related to solutions applied in Poland and in the applicant country. Laboratory experiments regarding RE/HVAC/ DWH systems at BUT or energy simulations and analysis (a case study conducted using computer software in English) – depending on agreement with a supervisor. Study visit in a local company. Preparation of a final presentation in a paper/poster or power point form.

Assessment methods

Oral discussion. Written reports.
Final presentation.

Workplaces where study visits / internships are planned

KAN http://kan-therm.com/,
BIAWAR https://www.biawar.com.pl/
DE DIETRICH https://dedietrich.pl/
and local design studios.

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Selected aspects of detailed knowledge – necessary for understanding heating, flowing, ventilation and air-conditioning processes that occur in environmental engineering.
- Appropriately plan experiments and tests in the field of environmental engineering and conduct them, interpret results, draw accurate conclusions based on them.
- Analyse content obtained from various sources and evaluate critically its potential applications for work in the profession.

Monitoring plan

Weekly meetings and consultations.

Evaluation plan

60% progres reports, 40% final presentation.

Planned number of working hours per week

30

Internship availability

October-June

Faculty of Civil Engineering and Environmental Sciences

OFFER 2

Traineeship/ internship title

Sanitary installations in nZEB buildings.

Supervisor

Assoc. Prof. Mariusz Adamski, PhD
mariusz.adamski@pb.edu.pl

Short description of the traineeship

Presentation of sanitary installation solutions in near zero energy consumption buildings (nZEB).

Assessment methods

Based on a report of research results, analyses, passing test.

Workplaces where study visits / internships are planned

UNIHAUS is a company that in a professional and innovative way uses a system of full prefabrication of elements, deals in the production of houses, large facilities, such as restaurants, hotels, and production halls
- 5 hours a week.
https://en.unihaus.eu/

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Utilize analytical methods to model the course of physical, chemical, heating and flow phenomena occurring in environmental engineering.
- Appropriately select sources and information regarding innovative solutions in environmental engineering; make a critical analysis, synthesis and assessment of them.
- Design, according to initial guidelines, suitable and feasible water supply, sanitation, ventilation, heating or air-conditioning networks and systems, using appropriately selected technologies, methods, tools and materials.
- Act in a creative and entrepreneurial manner, cooperate in a team accepting different roles within that team.
- Analyze content obtained from various sources and critically evaluate its potential applications for work in the profession.

Monitoring plan

Attendance list, periodic reports, final report.

Evaluation plan

30% presence in the laboratory, 40% final report, 30% passing test.

Planned number of working hours per week

25

Internship availability

September-June

Faculty of Civil Engineering and Environmental Sciences

OFFER 3

Traineeship/ internship title

The recycling technologies and use of waste materials in modern construction.

Supervisor

Katarzyna Kalinowska-Wichrowska, PhD, Eng.
k.kalinowska@pb.edu.pl

Short description of the traineeship

Review of the literature related to waste materials and ways of applied in concrete composites. Laboratory experiments of preparing, recycling and modification of concrete composites based on waste materials. Study visit in company which use waste materials to concrete production technology. Preparation of a final presentation in a paper.

Assessment methods

Written reports. Final presentation.

Workplaces where study visits / internships are planned

Jadar.pl

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Selected aspects of detailed knowledge – modern recycling technology.
- Structural analysis of recycled materials.
- Planning experiments and tests in the field of civil engineering, results analysis, accurate conclusions based on them, statistical analysis.
- Preparing scientific articles.

Monitoring plan

Weekly meetings and consultations.

Evaluation plan

60% progres reports, 40% final presentation.

Planned number of working hours per week

30

Internship availability

October-June

Faculty of Civil Engineering and Environmental Sciences

OFFER 4

Traineeship/ internship title

Thermal analysis of solid feedstock.

Supervisor

Asst. Prof. Magdalena Joka, PhD
m.joka@pb.edu.pl

Short description of the traineeship

Laboratory tests of biological and non-biological solid feedstocks with the means of thermogravimetry TGA and differential scanning calorimetry DSC.

Assessment methods

Final report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Select appropriate sources and information regarding innovations occurring in the field of agriculture, forestry, food processing and renewable energy, as well as critically analyse, synthesise and evaluate the obtained information.
- Identify problems, formulate and test research hypotheses in the field of agriculture, forestry, food processing and renewable energy, as well as recognise systemic and non-technical aspects when solving these issues.
- Gather and present information and opinions concerning scientific achievements and other aspects of the engineer's activities to the public as well as make efforts to communicate such information and opinions to the public in a commonly understood manner, presenting different points of view.

Monitoring plan

Partial reports, attendance list.

Evaluation plan

60% final report, 40% attendence.

Planned number of working hours per week

20-30

Internship availability

October-June (excl. February)

Faculty of Civil Engineering and Environmental Sciences

OFFER 5

Traineeship/ internship title

Toxicological analysis with the use of human cells as a biological models.

Supervisor

Assoc. Prof. Agata Jabłońska-Trypuć, PhD
a.jablonska@pb.edu.pl

Short description of the traineeship

Toxicological analyzes at the molecular level. Study of the impact of selected environmental pollutants on the human body at the cellular level (in vitro cultures of human cells). Work in a science and research laboratory. Preparation of reagents for determinations. Work in the cell culture laboratory.

Assessment methods

Credit on the basis of a research report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student understands hygiene and safety rules during work with human cell lines.
- Student learns the basic cell culture techniques.
- Student has the ability to work with an inverted light microscope.
- Student knows the use of cells and tissues research methods in modern biology and biotechnology.
- Student can carried out simple research experiments and analyses under the supervisor guidance.
- Student is able to conduct a proper reasoning according to scientific data.

Monitoring plan

Periodic reports, attendance list.

Evaluation plan

50% research report, 50% presence and work in the laboratory.

Planned number of working hours per week

40

Internship availability

October-May

Faculty of Civil Engineering and Environmental Sciences

OFFER 6

Traineeship/ internship title

Qualitative and quantitative research on plant extracts and evaluation of their antioxidant activity.

Supervisor

Assoc. Prof. Monika Kalinowska, PhD
m.kalinowska@pb.edu.pl

Short description of the traineeship

Laboratory classes, during which the trainee will learn about various extraction techniques, perform extraction of selected natural products, and evaluate their quantitative and qualitative composition in terms of phenolic compounds content. Using various spectrophotometric tests, the trainee will test the antioxidant activity of the obtained extracts. The trainee will prepare a research report.

Assessment methods

On the basis of the test results report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Knowledge and understanding of issues in the field of chemistry of natural products.
- Ability to use laboratory equipment, plan and carry out chemical experiments, use appropriately selected methods of isolation and identification of chemical compounds of natural origin, interpret the obtained results and draw correct conclusions and prepare documentation from the experience.
- Critical assessing the knowledge and content received in the field of chemistry of natural products.

Monitoring plan

Periodic reports, attendance list.

Evaluation plan

80% research report, 20% laboratory presence.

Planned number of working hours per week

35

Internship availability

September-June

Faculty of Civil Engineering and Environmental Sciences

OFFER 7

Traineeship/ internship title

Concrete tests or concrete structures.

Supervisor

Assoc. Prof. Julita Krassowska, PhD.
j.krassowska@pb.edu.pl

Short description of the traineeship

Laboratory practice in the form of research work. Conducting tests of concrete or concrete structures.

Assessment methods

On the basis of the report of research results, analyses.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Principles of analysis, modeling, design, dimensioning and construction of general construction, industrial and road transport infrastructure, bridge construction and their elements.
- Make a critical analysis of the functioning of the existing technical solutions in construction and evaluate these solutions.
- Read architectural, construction and geodetic drawings and in accordance with the principles of descriptive geometry and technical drawing, prepare graphic documentation in the environment of selected graphic programs; interpret the designs of basic construction installations.
- Plan and carry out experiments, including measurements and computer simulations, interpret the obtained results and draw conclusions.
- Choose and correctly apply construction materials and products.
- Recognizing the importance of knowledge in solving problems in the field of construction and consulting experts in the event of difficulties with solving the problem on their own.
- Thinking and conducting activities in the field of construction in an entrepreneurial way.
- Responsible fulfillment of professional duties and continuous training in areas related to the nature of the performed professional roles.

Monitoring plan

Periodic reports, reports, attendance list.

Evaluation plan

60% research report, 30% pass test, 10% presence in the laboratory.

Planned number of working hours per week

20-40

Internship availability

September-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Civil Engineering and Environmental Sciences

OFFER 8

Traineeship/ internship title

Identification and characterization of the concentration of dust suspended in the atmospheric air in a selected area.

Supervisor

Assoc. Prof. Ewa Szatyłowicz, PhD
e.szatylowicz@pb.edu.pl

Short description of the traineeship

Measurements with portable PM10 and PM2.5 particulate meters. Operation of a stationary dust collector for collecting suspended dust.
Qualitative analysis of suspended dust obtained from a stationary dust collector.
Analysis of the obtained results of suspended dust participation in a specialist workshop in the subject of "Air protection".

Assessment methods

Report on the research results and a final test on the design classes.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Appropriately select sources and information regarding innovative solutions in environmental engineering; make a critical analysis, synthesis and assessment of them.
- Plan and conduct advanced experiments including measurements of technical-technological and operational parameters of equipment used in environmental engineering; interpret obtained results and draw conclusions.
- Design, according to initial guidelines, suitable and viable water-sanitation, air protection or waste systems using appropriately selected technologies, methods, tools and materials.
- Analyze content obtained from various sources and critically evaluate its potential applications for work in the profession.

Monitoring plan

Periodic reports on the performed tests.

Evaluation plan

60% research report, 30% passing test, 10% attendance during project classes.

Planned number of working hours per week

20-40

Internship availability

October-January

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Mechanical Engineering

OFFER 1

Traineeship/ internship title

Injection processes of thermoplastic materials – industrial scale.

Supervisor

Assoc. Prof. Marek Jałbrzykowski, DSc, PhD, Eng.
m.jalbrzykowski@pb.edu.pl

Short description of the traineeship

Practical tests of the injection process in the industrial scale. Research mainly involving technical plastics and compositions based on them. Assessment of the influence of parameters process on the functional properties of plastics.

Assessment methods

The report containing results and discussion.

Workplaces where study visits / internships are planned

Pimar-Plastics, Czarna Białostocka

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- The student has general knowledge of practical injection methods.
- The student is able to perform simple injection tests.
- Applies health and safety rules.

Monitoring plan

Regular meetings. Report on the progress of the internship.

Evaluation plan

Substantive assessment of the various stages of the internship.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Mechanical Engineering

OFFER 2

Traineeship/ internship title

Motion design and control of UR robotic system.

Supervisor

Assoc. Prof. Kanstantsin Miatluk, DSc, PhD, Eng.
k.miatliuk@pb.edu.pl

Short description of the traineeship

The aim of the internship is to familiarize the student with the issues of motion design of universal robot arm and control of UR robotic system. The student during the classes will acquire the skills of design and simulation of robotic arm motion using RoboDK program system, and will be acquanted with the ways of universal robot control using Python and URscript program systems.

Assessment methods

The report which contains the results and discussion.

Workplaces where study visits / internships are planned

Visit to Promotech enterprise is foreseen.

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student understands and can solve the problems of robotic arm motion design and simulation,
- Student will acquire the skills in motion planning and control of universal robot with taking into account the robotic task context.

Monitoring plan

Assessment of the correctness of the results of the fulfillment of control and design tasks at each stage of the internship course.

Evaluation plan

The internship evaluation will consist in the preparation of partial reports on the individual phases of the student's work.

Planned number of working hours per week

20

Internship availability

October-June

Faculty of Mechanical Engineering

OFFER 3

Traineeship/ internship title

Simulation of vibration-based energy harvesting system of mechanical structure with MFC elements.

Supervisor

Assoc. Prof. Andrzej Koszewnik, DSc, PhD, Eng.
a.koszewnik@pb.edu.pl

Short description of the traineeship

The aim of the internship is to familiarize the student with the issue of harvesting energy from vibrations with the use of piezoelectric elements. Thus, the student during the design classes will have the opportunity to acquire the skills of modeling a piezoelectric element and the phenomenon of harvest energy from vibrations using the programs based on finite elements of the Ansys that it is available at the faculty. Based on this program, the impact of modeling the multilayer piezo structure of the composite structure modeling and the selection of the type of active layer material will be additionally analyzed.

Assessment methods

The report contains results and discussion.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows and understands the need to model electromechanical phenomena in order to obtain energy from vibrations.
- Student will acquire skills in modeling electromechanical phenomena and studying mechanical structures using the finite element method.

Monitoring plan

Modeling of a piezo composite as a multilayer structure. Numerical investigations of the mechanical structure with a single-layer piezo element under acting harmonic force (frequency analysis). Modeling of a piezo composite as a multilayer structure. Numerical investigations of the mechanical structure with a multi-layer piezoelectric element (frequency analysis). Analysis of numerical results.

Evaluation plan

The internship evaluation will consist in the preparation of partial reports on the individual stages of the student's work.

Planned number of working hours per week

20

Internship availability

October-June

Faculty of Mechanical Engineering

OFFER 4

Traineeship/ internship title

Construction, design and automation of pneumatic systems.

Supervisor

Rafał Grądzki, PhD.
r.gradzki@pb.edu.pl

Short description of the traineeship

The classes are aimed at acquainting participants with the principles of building simple pneumatic systems and their design. The systems will be physically built in the laboratory on SMC's laboratory stands. The process of designing and testing systems on computer stations equipped with FluidSIM software.

Assessment methods

Attendance at class, building, testing, designing all systems given by the teacher.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Understanding the basics of the construction of pneumatic systems.
- Understanding the principle of operation of selected pneumatic components.
- Understand the principles of pneumatic design.
- Learning to use pneumatic elements that allow for the automation of processes.

Monitoring plan

Checking the correctness of the design of pneumatic systems in FluidSIM from each module of the course.

Evaluation plan

Preparation of design documentation of the built systems during internship.

Planned number of working hours per week

30

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Mechanical Engineering

OFFER 5

Traineeship/ internship title

Research on thermal and physicochemical properties of polymeric materials.

Supervisor

Assoc. Prof. Joanna Mystkowska, DSc, PhD Eng.
j.mystkowska@pb.edu.pl

Short description of the traineeship

Review of the literature in the field of polymeric materials. Selection and preparation of research materials. Development of research methodology. Experimental research, including thermal tests with the use of differential scanning calorimetry and thermogravimetry, and tests of physicochemical properties. Analysis of the obtained research results.

Assessment methods

Research report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- The student uses general knowledge of plastics and polymer composites.
- Student performs simple tests of physicochemical and thermal properties of polymers and composites.
- Applies health and safety rules.

Monitoring plan

Regular meetings. Report on the progress of the internship.

Evaluation plan

Substantive assessment of the various stages of the internship.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Mechanical Engineering

OFFER 6

Traineeship/ internship title

Designing and developing a prototype of bioreactor for evaluation of hydroxyapatite formation on biomedical materials.

Supervisor

Piotr Prochor, PhD, Eng.
p.prochor@pb.edu.pl

Short description of the traineeship

Conducting a review over known prior art and literature about bioreactors and hydroxyapatite formation process. Designing bioreactor with the use of CAD software. Preparing of technical drawings. Practical execution of a prototype of designed device. Evaluation of the bioreactor with the use of optimal methods. Conclusions.

Assessment methods

Research report presenting an evaluation of developed prototype.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Basic knowledge on the topic of bioreactors and importance of hydroxyapatite formation process in biomedical engineering.
- Student has a basic ability in using CAD software.
- Students applies any necessary safety rules.

Monitoring plan

Regular meetings. Report on the progress of the internship.

Evaluation plan

Substantive assessment of the various stages of the internship.

Planned number of working hours per week

30

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Mechanical Engineering

OFFER 7

Traineeship/ internship title

CAM systems programming.

Supervisor

Karol Golak, PhD, Eng.
k.golak@pb.edu.pl

Short description of the traineeship

The aim of the internship is to familiarize the student with Computer Aided Manufacturing (CAM) programs used for programming Computerized Numerical Control (CNC) machines in manufacturing production. During the design classes student have the opportunity to create programs to control milling and turning machines and how to select the appropriate tools. The student will acquire a basic knowledge of how to plan the sequence of operations for machining machine parts and how to select the appropriate tools.

Assessment methods

Research report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows and understands general principles of using CAM systems in the parts manufacturing process.
- Student will acquire skills in programming CNC milling and turning machines.

Monitoring plan

Regular meetings. Report on the progress of the internship.

Evaluation plan

Substantive assessment of the various stages of the internship.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Mechanical Engineering

OFFER 8

Traineeship/ internship title

Simulation testing of a subassembly of motor vehicles.

Supervisor

Andrzej Borawski, PhD, Eng.
a.borawski@pb.edu.pl

Short description of the traineeship

Review of the literature in the field of Basics of vehicle design and their components. Selection and preparation of research plan. Development of research model. Simulation study of the modelled phenomena. Analysis of the obtained research results.

Assessment methods

Research report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Knowledge about the construction of the vehicle and its components.
- Recognition the techniques of computer tests of a selected vehicle component and the process of analyzing the results.

Monitoring plan

Regular meetings. Reports on each of the state of progress of the internship.

Evaluation plan

Substantive assessment of the various stages of the internship.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Mechanical Engineering

OFFER 9

Traineeship/ internship title

Research on tribological properties of polymeric materials.

Supervisor

Wojciech Tarasiuk, PhD, Eng.
w.tarasiuk@pb.edu.pl

Short description of the traineeship

Review of the literature in the field of polymeric materials and tribological tests. Selection and preparation of research materials. Development of research methodology. Experimental pin-on-disc testing. Analysis of the obtained research results.

Assessment methods

Research report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- The student uses general knowledge of plastics materials.
- Student performs simple tribological tests.
- Applies health and safety rules.

Monitoring plan

Regular meetings. Reports on each of the state of progress of the internship.

Evaluation plan

Substantive assessment of the various stages of the internship.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Computer Science

OFFER 1

Traineeship/ internship title

Development of didactic materials for the course Web Applications Development in Java.

Supervisor

Urszula Kużelewska, PhD
u.kuzelewska@pb.edu.pl

Short description of the traineeship

Software development , the student will conduct a lesson with Erasmus+ students on the basis of preparing materials.

Assessment methods

Presentation, using e-learning platform.

Workplaces where study visits / internships are planned

GoodSoft, Imago

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows how to use e-learning Moodle platform.
- Programming python, php or java language.

Monitoring plan

Consultation reports every week.

Evaluation plan

Final certificate.

Planned number of working hours per week

30

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Computer Science

OFFER 2

Traineeship/ internship title

Development of didactic materials for the mathematical statistics course.

Supervisor

Assoc. Prof. Dorota Mozyrska, PhD
d.mozyrska@pb.edu.pl

Short description of the traineeship

Preparation of quizes at Moodle platform, closed and open questions, connected with the utilization of R/Excel/Python.

Assessment methods

Presentation, using e-learning platform.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows and understands concepts related to mathematical statistics.
- Student knows how to use e-learning platforms.
- Student practice to use the basic didactic methods e.g. lecture, discussion, brainstorming.

Monitoring plan

Consultation reports every two weeks.

Evaluation plan

Final certificate.

Planned number of working hours per week

24

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Computer Science

OFFER 3

Traineeship/ internship title

Development of didactic materials for the Introduction to databases course.

Supervisor

Małgorzata Krętowska, PhD, DSc
m.kretowska@pb.edu.pl

Short description of the traineeship

Presentation of theory, practical exercises and quizzes at Moodle platform (closed and open questions, connected with the relational databases, SQL queries) with solutions connected with Introduction to Databases course . The student will conduct lessons with Erasmus+ students on the basis of preparing materials.

Assessment methods

Presentation, using e-learning platform.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows and understands concepts related to relational databases and SQL queries.
- Student knows how to use e-learning platforms.
- Student practice to use the basic didactic methods e.g. lecture, discussion, brainstorming.

Monitoring plan

Consultation, reports every two weeks.

Evaluation plan

Final certificate.

Planned number of working hours per week

24

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Computer Science

OFFER 4

Traineeship/ internship title

Development of software applications.

Supervisor

Konrad Kozłowski, MSc, Eng.
k.kozlowski@pb.edu.pl

Short description of the traineeship

Software development , the student will conduct a lesson with Erasmus+ students on the basis of preparing materials.

Assessment methods

Presentation, using e-learning platform.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows how to use e-learning Moodle platform.
- Programming python, php or java language.

Monitoring plan

Consultation, reports every week.

Evaluation plan

Final certificate.

Planned number of working hours per week

30

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Computer Science

OFFER 5

Traineeship/ internship title

Development of didactic materials for the computer networks course.

Supervisor

Andrzej Chmielewski, PhD
a.chmielewski@pb.edu.pl

Short description of the traineeship

Preparation of quizes at Moodle platform, closed and open questions, connected with the utilization of switches (VLAN), routers (RIP, OSPF) and network services (DHCP, DNS, firewall, NAT, Apache).

Assessment methods

Presentation, using e-learning platform.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows and understands concepts related to computer networks and basic security.
- Student knows the Linux operating system; knowledge of Router OS is an added advantage.
- Student knows how to use e-learning platforms.
- Student practice to use the basic didactic methods e.g. lecture, discussion, brainstorming.

Monitoring plan

Consultation, reports every two weeks.

Evaluation plan

Final certificate.

Planned number of working hours per week

24

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Computer Science

OFFER 6

Traineeship/ internship title

Development of didactic materials for the elements of logic and set theory for computer scientists course.

Supervisor

Magdalena Kacprzak, PhD
m.kacprzak@pb.edu.pl

Short description of the traineeship

Preparation of quizes at Moodle platform, closed and open questions, tutorials etc.

Assessment methods

Presentation, using e-learning platform.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows and understands concepts related to elements of logic and set theory for computer scientists.
- Student knows how to use e-learning platforms.
- Student practice to use the basic didactic methods e.g. lecture, discussion, brainstorming.

Monitoring plan

Consultation, reports every week.

Evaluation plan

Final certificate.

Planned number of working hours per week

30

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Computer Science

OFFER 7

Traineeship/ internship title

Development of didactic materials for the linear algebra course.

Supervisor

Marzena Filipowicz-Chomko, PhD
m.filipowicz@pb.edu.pl

Short description of the traineeship

Preparation of quizzes at Moodle platform, closed and open questions, connected with the utilization of R/ Python.

Assessment methods

Presentation, using e-learning platform.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows and understands concepts related to linear algebra.
- Student knows how to use e-learning platforms.
- Student practices to use the basic didactic methods e.g. lecture, discussion, brainstorming.

Monitoring plan

Consultation, reports every two weeks.

Evaluation plan

Final certificate.

Planned number of working hours per week

24

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Computer Science

OFFER 8

Traineeship/ internship title

Development of didactic materials for the “Introduction to Linux” course for Erasmus students.

Supervisor

Ireneusz Mrozek, PhD
i.mrozek@pb.edu.pl

Short description of the traineeship

Preparation of lectures slides, practical exercises, tests with solutions in the field of the course subject.

Assessment methods

Presentation, using e-learning platform.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows and understands: text-based interface, basic text-based Linux tools, Linux permissions scheme, regular expressions, bash scripts.
- Student has the skills to use Moodle learning platform.

Monitoring plan

Consultation, reports every two weeks.

Evaluation plan

Final certificate.

Planned number of working hours per week

24

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Computer Science

OFFER 9

Traineeship/ internship title

Development of didactic materials for the discrete mathematics course (sections: recursion, number theory, combinatorics, graph theory.

Supervisor

Joanna Karbowska-Chilińska, Phd
j.karbowska@pb.edu.pl

Short description of the traineeship

Presentation of theory and practical exercises and tests with solutions connected with Discrete Mathematics course . The student will conduct a lesson with Erasmus students on the basis of preparing materials.

Assessment methods

Presentation, using e-learning platform.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Student knows and understands concepts related to discrete mathematics.
- Student knows how to use e-learning platforms.
- Student practice to use the basic didactic methods e.g. lecture, discussion, brainstorming.

Monitoring plan

Consultation, reports every two weeks.

Evaluation plan

Final certificate.

Planned number of working hours per week

24

Internship availability

October-June

Faculty of Electrical Engineering

OFFER 1

Traineeship/ internship title

Project of real-time control system of the electric drive with PMSM.

Supervisor

Andrzej Andrzejewski, PhD Eng.
a.andrzejewski@pb.edu.pl

Short description of the traineeship

Familiarization with research equipment. Familiarization with Automation Studio software, concept of integrated automation in Automation Studio software, familiarization with drive equipment in the laboratory. Design creation in Automation Studio, equipment configuration in Automation Studio, online communication in Automation Studio. Operating system basics, memory management, variables Local_Global_Retain_Permanent, drive operation modes, drive input and output management, multitasking, diagnostic tools review, programming in Lauder Diagram language, logic. Using function blocks (TON, CTU), creating user functions, programming in ST language - Structured Text. Basics of visualization with touch panel. Preparation of the final report.

Assessment methods

Traineeship evaluation on the basis of the final result of work and the quality of final report.

Workplaces where study visits / internships are planned

One day visiting in an industrial plant and observation of the automation systems and the electrical installations (in one of the work places SMP Poland or AC S.A. or electric power plant in city).

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Traineeship in digital skills.
- Structure of vector control system with Permanent Magnet Synchronous Motors, current control loop, speed control loop, position control loop.
- Concept of real-time operational system for electric drives and automation systems.
- Real time Ethernet “Powerlink”
- Design creation in Automation Studio with binary inputs, outputs, visualization on touchy screen,
- Programming and utilization of automatic drive with three phase Permanent. Magnets Synchronous Motors.
- Improvement of technical English.

Monitoring plan

Progress report per every month.

Evaluation plan

Traineeship evaluation on the basis of the final result of work and the quality of final report.

Planned number of working hours per week

24

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Electrical Engineering

OFFER 2

Traineeship/ internship title

Application of machine learning algorithms to control a manipulator effector along a given trajectory.

Supervisor

Assoc. Prof. Arkadiusz Mystkowski, Dsc, PhD, Eng.
a.mystkowski@pb.edu.pl

Short description of the traineeship

The design of selected machine learning algorithms in Matlab/Simulnik software, including the performance of simulation studies. Implementation of the developed algorithms in the UR3/UR5 robot controller. Conducting experimental studies in the laboratory. Processing and compilation of test results. Performing comparative analysis of simulation and experimental results.

Assessment methods

Partial and final reports. The obtained research results will be used to prepare a joint publication.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Knowledge of the construction of industrial manipulators.
- Knowledge of mathematical modeling.
- Knowledge of machine learning algorithms and artificial intelligence algorithms.
- Practical skills in the field of modeling in Matlab/Simulink.
- Conducting simulations.
- Implementing algorithms in the manipulator's controller.
- Operating the manipulator, conducting experimental tests.
- Working in a team.
- Presenting work results on a seminar.

Monitoring plan

Progress will be discussed at regular weekly meetings.

Evaluation plan

Depends on the intern's work contribution and the results obtained.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Electrical Engineering

OFFER 3

Traineeship/ internship title

Project of an IoT distributed measurement system.

Supervisor

Wojciech Wojtkowski, PhD. Eng.
w.wojtkowski@pb.edu.pl

Short description of the traineeship

Familiarization with research equipment. Familiarization with CAD software, familiarization with IoT elements in the laboratory. Register level microcontroller programming, I/O ports, local communication serial interfaces. Design and creation of the software, peripherals configuration. Preparing documentation of the project. Preparation of the final report and presentation the results at departmental seminar.

Assessment methods

Traineeship evaluation on the basis of the final result of work and the quality of final report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Structure of Internet of Things measurement systems.
- Concept of Cloud computing.
- IoT protocols.
- Register level programming of IoT microcontrollers.
- Structure of a chosen family of microcontrollers.
- Local communication interfaces.
- Programming microcontrollers in IoT systems, connecting analog and digital sensors,
- Programming serial communication routines.
- Improvement of technical English.
- Experience in presentation of technical subject.

Monitoring plan

Progress will be discussed at regular weekly meetings.

Evaluation plan

Progress report every two weeks. Final report.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Electrical Engineering

OFFER 4

Traineeship/ internship title

Control algorithms for wheeled mobile robots.

Supervisor

Assoc. Prof. Zbigniew Kulesza, DSc, PhD, Eng.
z.kulesza@pb.edu.pl

Short description of the traineeship

Derivation of mathematical/simulation models of wheeled mobile robot kinematics and dynamics. Design of selected control algorithms for derived robot simulation models; simulation studies of control algorightms performance. Implementation of the developed algorithms in a robot controller. Experimental tests of the control system. Processing and compilation of test results. Comparative analysis of simulation and experimental results.

Assessment methods

Partial and final reports. The obtained research results will be used to prepare a joint publication.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Knowledge of mathematical modeling.
- Knowledge of control algorithms for wheeled mobile robots.
- Practical skills in the field of modeling of control systems in a selected software simulation package.
- Practical skills in implementing algorithms in the robot's controller.
- Practical skills in conducting experimental tests.
- Competences to present work results on a seminar.

Monitoring plan

Progress will be discussed at regular weekly meetings.

Evaluation plan

Depends on the intern's work contribution and the results obtained.

Planned number of working hours per week

20

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Faculty of Electrical Engineering

OFFER 5

Traineeship/ internship title

Implementation and integration of the LTE spacifications.

Supervisor

Krzysztof Konopko, PhD Eng.
k.konopko@pb.edu.pl

Short description of the traineeship

Familiarization with the hardware and software available in the laboratory. Installation and configuration of the implementation of OpenBTS and OpenLTE in the GNU Radio environment using SDR hardware platforms. Integration of the implementation with the Asterisk system. Functional tests of the realized system. Familiarization with glass photonics and special optical fibers.

Assessment methods

Traineeship evaluation on the basis of the final result of work and the quality of final report.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Gaining knowledge of various aspects of telecommunication switching systems, including signaling and traffic analysis.
- Acquaint with maintenance and operation of modern telecommunication systems.
- Acquaint with software defined radio (SDR) and the techniques used for implementation of digital signal processing methods.
- Gaining knowledge to establish and control telephone calls between telecommunication endpoints with using Asterisk software.
- Acquaint with technology and spectroscopy of photonics glasses and special optical fibers.
- Improvement of technical English.

Monitoring plan

Progress report per every month.

Evaluation plan

Traineeship evaluation on the basis of the final result of work and the quality of final report.

Planned number of working hours per week

20

Internship availability

October-June

Architecture Faculty

OFFER 1

Traineeship/ internship title

Virtual Reality Experimentational Architectural Design.

Supervisor

Bartosz Sliwecki, MSc, Eng, Arch.
b.sliwecki@pb.edu.pl

Short description of the traineeship

Trainees will work on a VR project from bottom up with the use of Unreal Engine and test the architectural design for design flaws. Work will take place primarily on laboratory equipment along with the assistance of home computers. The goal of this is to teach young engineers and architects a very powerful validation tool that can be used to test out ready designs as well as serve as a platform for the development of more radical and experimentational architectural forms.

Assessment methods

Final project / hand in.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Understands the basics of reproducing architectural space in VR.
- Can create a full VR experience based on a set of technical drawings.
- Can create custom 3D models to fit the design needs in VR.
- Knows how to search for answers regarding interactivity and troubleshooting.

Monitoring plan

Progress report every 2 weeks or achieved milestone.

Evaluation plan

Trainee evaluation based on overall performance and commitment to the given problem.

Planned number of working hours per week

24

Internship availability

October-June

BIALYSTOK UNIVERSITY OF TECHNOLOGY

Architecture Faculty

OFFER 2

Traineeship/ internship title

Research traineeship - Adaptation to climate change in spatial planning, urban planning and architecture.

Supervisor

Michał P. Chodorowski, PhD, Arch.
m.chodorowski@pb.edu.pl

Short description of the traineeship

Introduction on the scientific methods used in research in regional planning, in urban studies. Introduction on the methods used in analyses, in regional planning, in urban designing projects. Reviewing the Horizon Europe Research and Innovation Investment Programme, concentrating on the one of the mission of the R&I: Adaptation to climate change, including societal transformation. Challenges of the climate crisis in regional planning, spatial policy, direction of spatial development, urban design, architecture. Preparation of plan the researches, assumptions and the field of them. Creating user application for one-time measurement evaluation process. The practice: a) research methods: review of literature, way to collect data, research methods used in spatial and urban planning; b) designing: analyses methods, work over urban and architectural drawing documentation. Assisting in classes with international students.

Assessment methods

Traineeship evaluation on the basis of the final result of work and the quality of final report/article/project.

Workplaces where study visits / internships are planned

-

Knowledge, skills and competences to be aquired during the traineeship (expected learning outcomes)

- Research methods used in describing problems in the field of spatial planning, urban studies, architecture.
- Methods used in urban analyses.
- Research methodology and workshop, organization of tasks.
- Organization of the manuscript.
- Organize process of research.
- Using research tools.
- Preparing manuscript for publication.
- Experience in teaching process.
- Communications in foreign language.
- Work in a team.
- Improvement of technical English.

Monitoring plan

Progress report per every month of the internship.

Evaluation plan

Based on the schedule which is delivered after approved dates of the trainneeship.

Planned number of working hours per week

24

Internship availability

March-June