



**ACCREDITATION**  
**SELF EVALUATION REPORT**

Prishtinë, 2020

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## **1. Introduction**

### **1.1. A brief overview of the institution and program in evaluation**

Tempulli Academy was registered on October, 13<sup>th</sup> 2020, as a Higher Education Institution in Kosovo. Tempulli Academy, although as a new institution, has a long tradition of Tempulli since 1992, and that as a center of training and education candidates for drivers. As a result of the commitment and needs of the market, this center has evolved over the years. It has grown and developed with academic and professional programs within the Tempulli College.

However, after two consecutive unsuccessful accreditation processes (as stipulated in the Law on Higher Education in Kosovo), Tempulli college has stopped its academic activities. As a result of these circumstances, the shareholders of Tempulli have decided to continue the tradition by registering the Tempulli (now as Academy) and starting the process to build and develop it as a new institution.

Based on what was said above, the Academy offers opportunities to new students to study in unique programmes and desired by the labor market. Through quality education, where the theoretical part will be supplemented with practical work, the Academy offers to the labor market relevant field experts.

## **VISION**

A unique institution of higher education in the country and the region, with a focus on the development of professional research skills through the interconnection of innovative teaching, practical learning and scientific work for the benefit of the community.

In order to achieve its vision and fulfill its mission, Tempulli Academy intends to function based on the following values:

- Empowerment of Partnership Council consisting of competent and forward-looking professionals and entrepreneurs in the relevant fields (see the organizational chart of the institution);
- Reviewing the existing methodology of functioning and improving both in institutional and programme level;
- Investment in the training of academic staff;
- Quality assurance;
- Improve IT infrastructure to facilitate administrative processes and student services;
- Improvement of the quality of teaching by establishing IT labs and intelligent classrooms;

- Purchase anti-plagiarism software for verifying scientific works;
- Further, increase third party funding through donations, providing services to businesses and institutions, and through access to research funding.

## **MISSION**

Qualitatively prepare students and trainees with relevant knowledge and skills to learn and research in order to lead a successful career as an active professional in the community.

Tempulli Academy contributes to the society through:

- Unique study programmes in higher education and applied sciences, the Kosovo's labor market;
- Advancement, creation and dissemination of the knowledge through scientific research with, the aim to improve the welfare of the population;
- Ensuring an environment which results with social mobility and personal development;
- Serves as a local partner for businesses and industry, local and central institutions, and the community;
- Implements the social dimension of Bologna and the Human Rights-based approach;

Furthermore, Tempulli Academy is continually engaged in a dynamic dialogue with economic and social partners to provide relevant educational and research services which results in a high ratio of employment among its graduates.

Tempulli Academy ensures that the vision and mission is recognized by the entire academic community within the Academy, through their involvement in any process of reviewing/ drafting and approval of policies, regulations, and other relevant documents. The purpose of their involvement in these processes is not only the formal recognition of these documents, but also the awareness of each member of the academic community about the roles, duties and responsibilities that each of them carries for the overall accomplishment of the mission.

Furthermore, when approving the Strategic Plan, the Tempulli Academy has also developed a communication strategy, which provides for the compilation of information materials for stakeholders, including partners, the community, and businesses. For this purpose, brochures have been compiled, the development plan has been published on the website, and information sessions have been organized

within the Academy to mobilize staff, administration, students and partners to implement the planned measures as set out in the plan.

To fulfil its mission, the Tempulli Academy has set some strategic objectives for the next five years.

The planning working group has determined that for each area of intervention there should be a strategic objective as follows:

- Establish effective management and administration to support academic and research processes;
- Provide added support for transparent and participatory quality assurance procedures;
- Improving working conditions and establishing a culture of excellence, innovation and the use of new technologies in order to develop the quality of educational and research services.

Performance indicators are provided for each of the measures, for which they generate data regularly in order to measure the progress of the implementation of the Strategic Plan.

The measures are part of the annual and semester work plan for each managerial, academic and administrative member within the Tempulli Academy, in order to ensure that every step taken contributes to the fulfillment of the mission and vision of the Tempulli Academy.

## VALUES

- **Value:** The academy has an approach to others which is reflected in the way they value their contribution. The Academy shows respect in all its relationships with stakeholders, including the relationship between management staff and the way it communicates with partners, funders and provides services to citizens;
- **Integrity:** The Academy will gain trust and respect by being professional, ethical, honest and impartial. Honesty and sincerity in all relations and communications of the Academy ensures that the information is on time and accurate;
- **Inclusion:** The Academy is committed to diversity, equality of opportunity, and social justice for all, appreciating differences and welcoming them;
- **Cooperation and partnership:** The Academy values partnership and collaboration as the most effective way to improve the quality of its services, is open to academic and scientific cooperation, with public and private institutions, local and international, in areas and projects of common interest, always guaranteeing the free expression of ideas and providing staff and students with equal opportunities for work and study;

- **Innovation:** The Academy is open to change, adaptation, pro-active action and innovation in its joint work to find new methods to meet challenges in an ever-changing environment;
- **Perfection:** The Academy has excellent expectations for itself, our students and our communities; therefore it aims to continuously improve the quality of its services based on the principle of Academicism, transparency and independence.

In this evaluation process, the Academy has applied with three programs of which two are in the process of re-accreditation, while one program is new, and they are

- Insurances and Management of Damages from Accidents, BA;
- Transport Engineering Road Infrastructure, BSc;
- Traffic Engineering and Road Safety, MSc.

### **1.1.1 Governance of the Academy**

The highest governing authority of the Academy is the Steering Council which is chaired by the chairman of the Steering Council. The Steering Council, based on the Statute of the Academy, consists of five (5) voting members, of which two members are nominated by the founder, two members are nominated by the Academic Council and one member is nominated by the Student Parliament. The Director of the Academy, the Director of the Institute and the Secretary are ex-officio members of the Steering Council without the right to vote. Until the internal elections in the Academy are taken place, the student elections and that of the academic and administrative staff, the Steering Council members are appointed temporarily by the Founder (shareholder).

### **1.1.2 Organization of the managerial decision-making structures in the Academy**

Based on the Law on Higher Education and the Statute, the Academy has separate managerial responsibilities such as Steering Council, Management headed by the Director of the Academy (who is responsible for organizing and managing the academic processes of the Academy) and the Director of the Institute (who is responsible for organizing the commercial and research affairs of the Academy). Also, a very important part of the management structures is the administration which is led by the General Secretary.

### 1.1.3 Organization of academic decision making structures

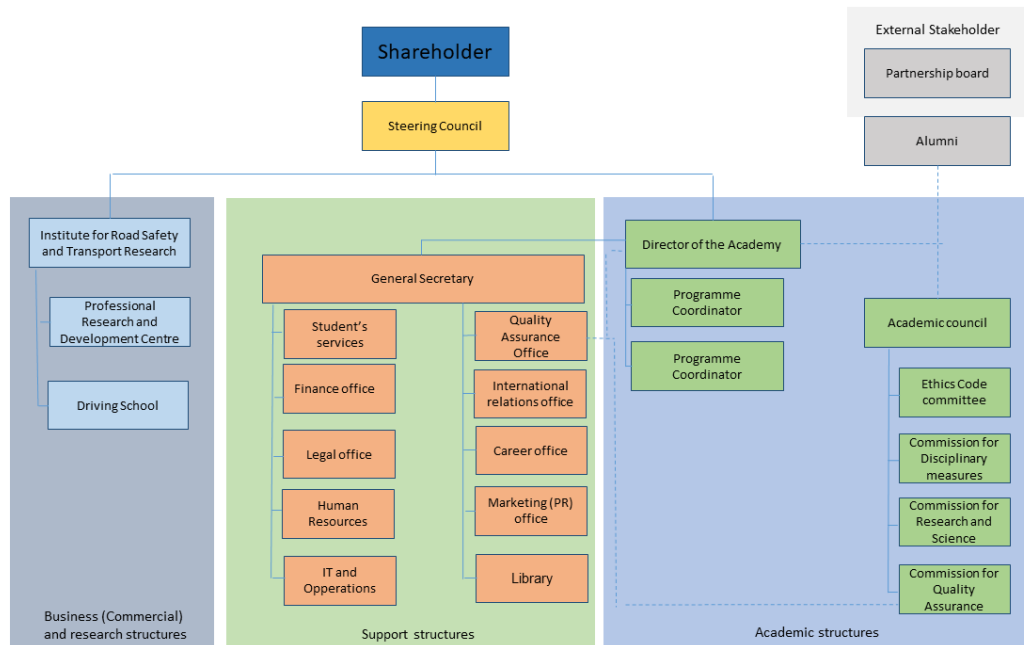


Figure 1. The organizational chart of the managerial decision-making process at the Academy

**The Academic Council** is the highest decision-making body of the Academy. The Steering Council consists of five (5) voting members with a four-year term:

- Two members are nominated by the shareholders (one is a member of Partnership Council while the other from Civil Society Organizations),
- Two members are nominated by the Academic Council and
- One Student member is nominated by the Student Parliament.

The Director of the Academy, the Director of the Institute and the Secretary are ex-officio members of the Steering Council without the right to vote. The Steering Council is chaired by the Chairman, who is elected by the members of the Steering Council. The work of the Steering Council is regulated by a separate regulation known as the Regulation of the Steering Council.

All current members of the Steering Council of the academy are provisional until the Academy organizes its elections.



**The Director of the Academy** is the main managing authority of the Academy and is appointed by the Steering Council. He is responsible for the effective and orderly work of the academic aspects of the Academy and for its management according to the policy set by the Steering Council.

**The Academic Council** is the highest academic decision-making body which deals with all academic issues related to the teaching process, academic staff and students, and operates on the basis of their regulation of procedure.

The members of the Academic Council are elected through the electoral process in accordance with the regulation for the organization of elections in the Academy. Based on the provisions of the Statute of the Academy, the Academic Council consists of these eligible members:

- Program Coordinators;
- Two elected members from the ranks of the academic staff;
- A member elected by the administration staff;
- A representative from the student parliament;
- The Secretary and Director of the Academy are permanent members of the Academic Council, without the right to vote.

The Academic Council is chaired by the Chairman of the Council, who is elected by the Academic Council by a majority vote of its members from the proposed candidates.

Given that the Academy was established in October, the members of the Academic Council have been appointed by the Governing Council in accordance with the Statute of the Academy.

The Academy, in addition to the Steering Council and the Academic Council, also has **Program Committees** which deal with issues of the teaching process.

Program committee members are:

- Program Coordinator;
- All teaching staff who teach in the respective program;
- A member from the ranks of students, elected by the Student Parliament of the Academy.

All governing authorities of the Academy exercise their activity on the principle of majority voting unless otherwise provided in the Statute. The procedure for the election of governing bodies is done in accordance with the regulation on election procedures in the Academy. All decisions of the bodies of the Academy are published on the website of the Academy.

## **Students**

Students have the right to establish student organizations to which all students can belong. Each student organization has its own statute that is approved by its members in accordance with the general regulations issued by the Steering Council, that includes the principles of equal opportunities and non-discrimination.

Student interests will be represented within the Academy through the Student Parliament. The members of the Student Parliament are elected during the student election process, and consists of representatives of student organizations that have emerged victorious in the Student Elections according to the priority lists of candidates published by each student organization at the beginning of the election campaign. The student election process is regulated by the Statute of the Academy and the Regulation on Student Elections.

Although the Academy does not yet have enrolled students, it has built the legal basis which guarantees student participation in all decision-making bodies, such as:

- Steering Council - with one representative;
- Academic Council - with one representative;
- Program Committee - with one representative;
- Quality Assurance Committee - with one representative;
- Ethics Committee - with one representative;
- Disciplinary Commission - with one representative.

## **Institute**

As a very important organizational part of the Academy is the Institute for Road Safety and Transportation Research (henceforth referred to as The Institute) which is led by the Director of the Institute. The Institute consists of:

- Center for research and professional development (CRPD), which provides Infrastructure for the realization of scientific research, training programs and professional training / professional certification;
- Driving school which trains candidates for driving license.

The Institute is keenly focused on research and commercial projects that provide a revenue diversity for the Tempulli Academy. Also, through the Institute, the Academy enables students to carry out practical work.

### **Administration**

Also a very important part of the management structures is the administration which is led by the General Secretary of the Academy. The administrative staff is selected on the basis of a competition. Each official of the Academy based on the regulation on job systematization has in detail described the duties and responsibilities. At the same time, the duties and responsibilities of the administrative staff are in line with the signed contracts while their qualification is in line with their duties. It is also very important that in each governing body of the Academy it is represented by the administration.

### **Organization and learning spaces**

The Academy is located in a relatively new building, which has a very convenient, clean and attractive environment for students and staff, both in terms of learning conditions and social spaces. The Academy is located about 300 meters from the city centre, where it provides very easy access for students and staff of the Academy. The building has over 1260 m<sup>2</sup> including the spaces for The Institute.

The laboratories of the Institute can be used for student's practical work and for commercial activities of the Academy.

The building was purchased by Academy and therefore there is no need to pay rental costs. As a result, the Academy enjoys the freedom to invest all the revenue into

1. Equipment and tools;
2. Expanding of the building;
3. Enriching the library;
4. Building of laboratories etc.

The library is an important unit that supports the academic and teaching process; therefore special attention has been paid to this sector for many years. The mission of the Library is to provide services and materials in order to meet the needs of students, professors and other staff.

The library as a unit of this institution is at the service of all users of the Academy and for all other affiliated users. Users have several ways of accessing different literature in the Library:

- a) Physical Library;

b) Electronic library (electronic catalog) and online academic and scientific journals.

The Academy has now entered into contracts with a total of 27 academic staff, of which 13 are full time with the Academy as well as 14 teachers with secondary employment (part-time).

The academy has a good infrastructure, with about 1260 m<sup>2</sup>. The separate spaces for organizing the lesson are presented in the table below.

<b>Item</b>	<b>Number</b>
Total space	1260 m <sup>2</sup>
Laboratory space	114 m <sup>2</sup>
Total number of computers	80
No. of books (titles) in library	1862
Reading spaces per students	50
Number of classrooms	5

Furthermore, the Academy has signed an agreement with the National Library where students and staff can have access to more the 700,000 book titles and other literature as well as access to electronic resources of the National Library.

The practical part of the teaching will be realized in the Institute which is equipped with laboratories and adequate equipment for the realization of practical teaching/learning processes in the field of traffic and transport and other fields of applied sciences. The Academy has also concluded cooperation agreements with several institutions/companies in which in addition to other activities, it will be possible to realize practical learning for students.

## 2. Program Evaluation

Study Program Data:

Name of the Institution:	Tempulli Academy
Faculty/Department:	MSc Traffic Engineering and Road Safety
Main campus and/or branch:	Main Campus
If applying for a Branch, please specify the branch:	N/A
Name of the study program:	MSc Traffic Engineering and Road Safety
Responsible person for the Study Program:	Dr.Sc. Mevlan Bixhaku
Accreditation/Reaccreditation:	Accreditation
Level of qualification according to the National Qualifications Framework	Level VII
Academic degree and diploma title in full and abbreviated form:	Master of Science Traffic Engineering and Road Safety
Number of ECTS credits (total and per year):	120
Profile of the Study program (Specializations):	1. Traffic and Transport Engineering 2. Road Safety and Accident Management
Grada akademike sipas Erasmus Subject Area Codes (ESAC)	06.9
Study form:	Full Time and Part Time

Minimum duration of the study	2 years
Number of students accepted	90
Permanent Scientific/Academic staff for the study program (at least 3PhD)	Dr.Sc. Muhamed Krasniqi Dr.Sc. Mevlan Bixhaku

## 2.1. Mission, objectives and administration

The two-year program at the Tempulli Academy of Traffic Engineering and Road Safety will provide students with contemporary theoretical and practical knowledge in the field of transport, infrastructure, road safety and accident management.

In line with the role and importance of transport for the future development of Kosovo, the region and beyond, the mission of the Tempulli Academy is to continue promoting and raising knowledge, skills and abilities in vocational training programs and academic programs in order to manage traffic, increase traffic safety and various trainings in this field, in accordance with European and world standards, in full and open cooperation with relevant institutions, business, industry and the community.

This study program builds scientific and professional skills over those bachelor of traffic engineering, infrastructure and traffic and gives the opportunity to enroll all students who have completed bachelor studies in relevant fields.

Based on the development trends of young people in Kosovo, the demand for driver's licenses is growing, so this growing trend of driver license applications will contribute to increasing the market need for experts in the field of traffic who can apply for job as a Lectures on Driving Schools and as a Examiners in Department of Driving License at the state authority.

This analysis highlights the need for a program that would build new staff in the field of Traffic Engineering and Road Safety, supplemented by additional knowledge such as: project management and evaluation, and research methodology, in accordance complete with market demands, is evident and would directly affect the overall development of the country.

The Tempulli Academy has also owned the Tempulli Driving School since 1992, in addition, there are more than 200 Driving Schools in Kosovo. Based on the above, the need for people prepared with the Master level on profiles of Traffic Engineering and Road Safety is evident, especially in recent years

after the entry into force of the Law on Driver's License <sup>1</sup>. The field of road safety is also very important, especially now that Tempulli is a key player in the three-year EuroRAP License in the National Road Safety Assessment Program in Kosovo<sup>2</sup> .

During the cooperation contacts between the Academy and businesses, the need has been raised by businesses for experts in the field of Traffic Engineering and Road Safety in the labor market, the Program Coordinator together with the teachers of the Academy, discussed together about the business proposal and agreed that the program coordinator initiate procedures for further approval (Appendix 2A. List of Participation from the meeting of the Program Committee).

The Program Coordinator then forwards this proposal to the regular meeting of the Teaching / Scientific Council of the Academy, where the Draft Decision is approved to start preparing a new program in the field of Traffic Engineering and Road Safety.

After the approval of the proposal by the Council of the Academy, the proposal for the new program was approved by the Steering Council of the Academy, takes a decision to start the application procedures for Accreditation of this new program (Study program: Master of Science Traffic Engineering and Road Safety).

Based on these steps, the process of compiling the study program, syllabi and other necessary documents has begun.

To give a more accurate orientation to the program, we have continued meetings with businesses that deal primarily with traffic expertise and technical control of vehicles to specifically explore the skills and competence needs of employees and the community requirements for their services. This is to build the foundation of a triangular link: program-companies-community, links that will work throughout the life of the program. In the next meeting with businesses, the learning outcomes were presented (Appendix 2B list of participants and meeting extract) and businesses were encouraged to give ideas and suggestions about the program.

Business representatives have provided important inputs regarding the learning outcomes that the student needs to be successful in applying their knowledge in practical work. They also recommended that the Traffic Engineering and Road Safety to have two specializations as follows: Traffic and Transport Engineering; Road Safety and Accident Management.

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<sup>1</sup> <https://gzk.rks-gov.net/ActDocumentDetail.aspx?ActID=12516>

<sup>2</sup> <https://eurorap.org/wp-content/uploads/2021/01/EuroRAP-National-Programme-Policy-Recommendations-2.pdf>

During the design of the program, the Academy has included the requests of business representatives which contribute to the development of students' skills, as follows:

- Advancing traffic safety;
- Analysis of Cause of accidents and prevention;
- Accident reconstruction (professional expertise);
- Analysis of the behavior of drivers in traffic;
- Development of policies for traffic safety management;
- Road safety inspection and audit;
- Traffic flow planning and design;
- Analysis and design of road signs;
- Identification of critical points along the road infrastructure;
- Simulation of accident development and traffic flow through application software;
- Development of research skills as an individual and in a group.

The working group worked together to formulate learning outcomes, assign program subjects, distribute them through semesters and syllabi in ongoing consultation with all stakeholders and these developments were presented at the program committee meeting. Business proposals were prioritized throughout the program design process.

After two meetings and consultations with businesses, the common conclusion was reached that the program of Traffic Engineering and Road Safety and its specializations, is the program that meets the demands of the market.

The drafted program was presented to the Partner Council of the respective field and the learning outcomes of this program were discussed as well as the development of these skills with specific subjects.

The further academic staff of the Academy has participated in the further developments of the program design process, such as the design of teaching results, the distribution of courses throughout the semesters.

Also, the study program of Traffic Engineering and Road Safety and its specializations has been developed in harmony with the National Qualifications Framework as well as at the elevated level of skills and competencies of graduates to apply knowledge, understanding, and problem-solving skills in new or unfamiliar environments within a broad context of the multidisciplinary field of study.



Most of the courses included in the program are built in modular format by combining modules for combining skills within a course. The program is developed with a good structural flow of courses distributed over six semesters and based on the experience of the University of Zagreb.

Teaching and learning will be done using modern technologies through smartboard technology and IT classrooms, complemented by the scientific approach to problem-solving, both theoretical (through case study analysis) and practical (at our laboratories and in enterprises/businesses).

In addition to theoretical teaching, the program develops students' skills through the practical part which is realized in the Tempulli Academy and various companies with which the Academy has cooperation agreements. In order to increase practical work skills, the Academy has signed a considerable number of agreements with enterprises and has prepared the necessary regulations and manuals for the realization of practical learning in the company.

The Academy has several regulations which regulate academic procedures and policies. These regulations are posted online on the website. Except for online publications, the Tempulli Academy organizes staff meetings and notifies them for the updates of the new regulations.

Some of them are presented below:

- Regulation of Code of Ethics;
- Regulation on Disciplinary Measures;
- Regulation on Quality Assurance;
- Regulation for Studies in the Academy;
- Regulation on Scientific Research;
- Regulation for Tutor;
- Regulation on Electoral Procedures in the Academy;
- Regulation for Alumni;
- Regulation on Mobility;
- Transfer Regulation;
- Rules and Procedure of the Board of Directors;
- Rules and Procedure of the Academic Council;
- Regulation on Cooperation;

- Rules and Procedure of the Program Committee;
- Regulation on Practical Work;
- Regulation on Academic Calling and Staff Selection;
- Regulation on the Allocation of Scholarships and Fees;
- Regulation for the Student Council;
- Manual for Scientific Publications;
- Student Handbook;
- Handbook for Staff;
- Regulation on Communication;
- Regulation for the Library;
- Career Center Regulation;
- Partnership Council Regulation;
- Regulation on Archives;
- Calendar for Quality Assurance;
- Regulation on Performance Appraisal;

The Academy as a new institution is under construction of the legislative base which regulates the activities in the Academy. In accordance with standard 1.6, the Academy has adopted policies to review the regulations at least once every two years, in special cases the Academy will review or change the regulations even more often if it deems it necessary.

For any development in the issuance of any new regulations or updates of existing regulations, the Academy keeps informed in a timely manner all academic and administrative staff, as well as students through the Student Parliament and stakeholders.

After the new recruits, the selected staff when joining the Academy, participates in the activity called (notification week) where they are introduced to the rules and procedures of the Academy, access to and use of the Student Electronic Management System (SEMS), a system that the Academy has to administer the student's records, etc.

The Academy also has a Personnel Manual, which is provided to new academic staff during the announcement week. On the other hand, new students when enrolling in the Academy are informed about the rules that are relevant to them, through the "Student Manual", and how to access the documents that define these rules.

For program management purposes, the Academy has established the following Key Performance Indicators (KPIs) for the study program:

- Graduate satisfaction - where graduates will be contacted and surveyed for their satisfaction with the program, how useful the program was in their employment, did they get the right skills as required by the employer, etc.
- Employer Satisfaction - After researching with graduates, the Academy will identify the businesses in which the graduates are employed and survey them to their satisfaction with the program (based on their experience with the graduates).
- Graduate employment - a study with the program alumni will result in information on the employment rate.
- Student Satisfaction - where every year (once a semester) they will be surveyed for satisfaction with the program, administration and staff of the Academy.
- Graduation rate - will be generated by the administration of the Academy.

The student satisfaction survey with program is conducted by the Academy and the results are analyzed and shared with the program coordinator, programme committee, the general management of the Academy.

Eventually, the graduation rate is calculated annually by the Academy administration and shared with the Program Committee, and the Academy management.

While for student satisfaction the research is conducted once a year, as this is the first time that the Academy offers the program, graduate satisfaction, employers, and graduation rate can be assessed only after the completion of the program with the first generation of students.

Through SEMS all data related to students, courses and programs are managed electronically including the exam management data. After each exam deadline, the exam results are analysed and they are shared with the Program Committee and the management of the Academy.

The Academy has built a comprehensive learning process management system, creating and updating the files of each program staff. This means that each staff member will have a personal file (folder) that will record all activities undertaken by an academic staff. The file which will contain information such as: Teaching data, assessments (students, colleagues, deans, self-assessment), research and other

activities related to the academy, will be used to develop their development plan, such as and academic advancements etc.

After the completion of each exam, statistical data are generated for student assessment and distribution of assessments. These are all analyzed by the administration and shared with the Academy management.

The Academy in its statute and in all its policies takes into account the aspect of gender equality and in the case of employment also that of priority in equal circumstances with male competitors.

### **SWOT analysis for mission, objectives, and administration:**

#### **A. Strengths**

- Modern program in content and designed for labor market in cooperation with business;
- Application of theoretical learning in practice through the laboratory owned by the Academy and business internships;
- Professional staff.

#### **B. Weaknesses**

- Lack of space at the Academy where students would do extracurricular activities
- limited knowledge of English language teaching staff

#### **C. Opportunities**

- Increasing the cooperation and awareness of businesses and their involvement in program developments

#### **D. Challenges**

- Immigration of young people to seek employment outside Kosovo.

## **2.2. Quality management**

Program Traffic Engineering and Road Safety is reviewed together with the academic staff of this program. In the process of reviewing the program, initially, a meeting was held with all the academic staff of the program where they defined the learning outcomes of the program and its objectives, then in the second meeting, the subjects were determined and distributed throughout the semesters.

Program design Traffic Engineering and Road Safety has flows in accordance with the processes provided by quality assurance regulations:

- The initiative was leaked by Academic Staff and businesses (in accordance with the regulation).

- The review and approval of the initiative is done by the bodies defined in the regulations (Program Committee, Teaching / Scientific Council and approved by the Steering Council).
- The working team consisting of the academic staff involved in the program, who have specializations in the relevant areas of the program, conducts continuous consultations with the academic staff of the Academy and with businesses to determine the objectives, learning outcomes, course plan and distribution of until they drafted the final version of the program.
- The drafting of the new program has been supervised and verified by the Quality Commission.
- Approval of the new program by the Scientific Teaching Council and the Steering Council of the Academy.

Similarly, during the process of realization of the study program, all mechanisms for quality assurance and improvement will be implemented.

For quality assurance purposes, the Tempulli Academy has adapted the following self-assessment mechanisms:

- Assessment from the students for the program;
- Student assessment for services and Tempulli Academy administration;
- Student assessment for Academic staff;
- Peer evaluation;
- Assessment by the manager;
- Self-assessment;
- Assessment by the academic staff, for the services and administration of the Academy;
- Assessment by Alumni;
- Assessment by Businesses.

All this information has been used to plan the development of the staff of the Academy in general as well as the individual of each staff.

During the planning of the program, the Academy has ensured that the information of all actors in the process is taken into account, both external and internal and not only the evaluations and self-evaluations of students and staff. From external actors who are mainly businesses, feedback is received on the programs offered and new ones and after other processes of program development or

modification, the process goes through the final filters such as the Program Committee, the Teaching / Scientific Council, and the Steering Council of the Academy.

Through these mechanisms, the Academy will evaluate the contribution to education (teaching staff, student support, library, classrooms, etc.), the process (teaching methodology, teaching process, theory and practice, etc.) and the result (employment), etc.

The Academy is building a tradition in continuous quality assessment which will be carried out through adequate questionnaires depending on the objectives of the assessment. The review of the questionnaires is done by the Quality Assurance Commission.

The frequency and timing of quality assurance assessments which is done through mechanisms possessed by the academy are regulated by the annual quality assurance calendar.

Data collected from questionnaires with students are a regular part of the self-assessment process. They will be used by the management and programme coordinators of the Academy to identify and evaluate the performance of the academic staff as well as by the administration to evaluate the administrative, infrastructural aspects, etc.

The results of the evaluation of the program each year will be discussed in the program committee, as well as the eventual findings from the evaluation process are addressed. The quality assessment process will be carried out in accordance with the academic calendar for quality assurance.

In addition to the annual quality assessments, the programme coordinator in different time periods (after each exam term) analyzes the students' passing through courses and programs and this is then discussed with the higher management of the Academy. Also, before the beginning of each semester, the program committee and the academic staff review the syllabuses and discuss the organization of practical work.

Part of the quality assessment instruments is also the evaluation of the subject by the professor.

The course evaluation process is done for each subject, by the teacher who has taught that subject. Through this assessment the academy will identify difficulties, challenges and recommendations for changes in relevant subjects. The process of evaluation of the subject by the respective teacher is done in each semester after the end of the lectures and before the beginning of the exam period.

Also, the teaching process is constantly monitored by the program coordinators and the same is reported to the senior management (director of the academy) of the Tempulli Academy.

Information from the academic staff evaluation process including student evaluation, peer review and manager evaluation, the Academy will use to plan the development of the Academy's academic staff in general, as well as the individual form of each staff.

During the drafting phase of this evaluation report, Tempulli Academy has drafted the development policies of the academic staff which regulate the process of identifying shortcomings in the teaching process and strategies for addressing them.

Tempulli Academy is currently using Google Form for data collection, while in the future it will use a digital system of program and staff evaluation by students through SEMS where each student will participate in the evaluation process.

Tempulli Academy will realize a self-assessment report at least once every three years. The Academy practices so far have shown that the involvement of businesses in the revaluation process not only results in a program that suits their needs, but also makes the business partner and co-owner of the process.

Tempulli Academy has built the legislative basis for quality assurance, at the end of 2020 it has approved the regulation for quality assurance which regulates all quality assurance processes. The quality assurance regulation will be reviewed at least once every two years and amended as necessary (Appendix 2C Quality Assurance Regulation).

Quality Assurance Committee is elected by the Academic Council for a four-year term; with the right of re-election, in this composition: From a representative from each program, an administrative staff and a representative from the students as well as the Director of the Academy (ex-officio). The members of the quality assurance commission can nominate themselves, or are proposed by the members of the Academic Council, and have these responsibilities;

- Develops and approves quality assurance policies and procedures in accordance with the Academy's statute, international and national standards;
- Approves the quality assurance calendar;
- Approves evaluation instruments (questionnaires for alumni, businesses, program and evaluation of academic staff by students);
- Ensures effective and efficient implementation in academic and administrative structures.

Students are part of almost all activities and bodies (authorities) at the Tempulli Academy. When appointing commissions, a representative student is appointed by the Students Council who is part of that commission.

Based on the statute of the Academy and the regulations in force, students are represented in all activities and organizational structures of the Academy, such as:

- Steering Council;
- Academic Council;
- Program committee;
- Quality Commission;
- Ethics Committee;
- Disciplinary Commission;
- Complaints Commission;
- Working groups for drafting the strategy;
- Commission for Scientific Research, etc.

### **SWOT analysis for quality management:**

#### **A. Strengths**

- Good relations with industry in the development of study programs;
- New institution with the possibility of starting to create new and modern ways of quality assurance.

#### **B. Weaknesses**

- Implementation of some of the quality assurance standards in Kosovo will take time because they were recently approved by the KAA.

#### **C. Opportunities**

- Use of information management system for student management in conducting student research and managing student performance;
- Use of the student management information system in collecting data with students and staff about the program and the institution.

#### **D. Challenges**

- Resistance of staff and students in supporting the digital way of collecting questionnaires;

Lack of experience in collecting and processing data from digital assessments.



### 2.3. Academic staff

*The table of teachers in the study program*

No	Name and last named	Full Time Part time	Academic title	Duration of the contract	Teaching Workload
1	Muhamed Krasniqi	Full Time	Doctor of Science	30.09.2023	6
2	Ema Berisha Krasniqi	Full Time	Doctor of Science	30.09.2023	6
3	Gëzim Hoxha	Full Time	Doctor of Science	30.09.2023	6
4	Mevlan Bixhaku	Full Time	Doctor of Science	30.09.2023	6
5	Eflorim Hajra	Full Time	Doctor of Science	30.09.2023	6
6	Korab Krasniqi	Full Time	PhD. Candidate	30.09.2023	10
7	Gjelosh Vataj	Full Time	Doctor of Science	30.09.2023	10
8	Fatbardh Xhaferi	Full Time	Master of Science	30.09.2023	10
9	Shpresa Ibrahimimi	Full Time	PhD. Candidate	30.09.2023	10
10	Selami Klaiqi	Full Time	Master of Science	30.09.2023	10
11	Arsim Azemi	Full Time	Master of Science	30.09.2023	10
12	Fitim Shala	Full Time	Doctor of Science	30.09.2023	10

13	Hiflobina Obertinca	Full Time	PhD. Candidate	30.09.2023	10
14	Muhamed Luta	Part time	Master of Science	30.09.2023	10
15	Kastriot Gashi	Part time	Master of Science	30.09.2023	10
16	Emine Krasniqi Maloku	Part time	Master of Science	30.09.2023	10
17	Liridon Hoti	Part time	PhD. Candidate	30.09.2023	10
18	Valerije Bojku	Part time	PhD. Candidate	30.09.2023	10
19	Xhevat Ramosaj	Part time	Master of Science	30.09.2023	10
20	Kushtrim Kastrati	Part time	Master of Science	30.09.2023	10
21	Njazi Selmani	Part time	Master of Science	30.09.2023	10
22	Basri Lenjani	Part time	Doctor of Science	30.09.2023	10
23	Arianit Islami	Part time	Master of Science	30.09.2023	10
24	Shukri Krasniqi	Part time	Master of Science	30.09.2023	10
25	Adem Selmani	Part time	Master of Science	30.09.2023	10
26	Iir Prapashtica	Part time	Master of Science	30.09.2023	10

27	Valdet Drenovci	Part time	Master of Science	30.09.2023	10
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The Academy has now entered into contracts with a total of 27 academic staff of which 13 are full time with the Academy as well as 14 teachers with secondary employment (part time).

Program holders and all academic staff who are engaged in teaching in this program meet the requested criteria in accordance with the Administrative Instruction for Accreditation.

Based on the statements of the regular academic staff engaged in this program, none of them have teaching engagement in more than one regular job at the Tempulli Academy and if they have, they can have one in another teaching institution (on a part-time basis).

Based on the planned engagement in the program, respectively in the Academy, all engaged staff in teaching have a full contract. For the study program are engaged two teachers with regular employment status who are the holders of the program and have the title of Doctor of Science and are leads of the programme, the others with a master degree are engaged as teaching assistants.

Each member of the academic staff is expected to improve the learning environment through guidance, research cases, research activities and services that support the Academy's mission.

Each academic staff has its own space in office, which at the moment can be shared with another colleague in which they can work in preparation for teaching, study and accomplishment of other tasks set by the Academy within the obligations. contractual, as well as can use common spaces and resources (halls, cabinets, equipment, etc.) for the realization of student learning

Tempulli Academy will carry out the evaluation of the academic staff and the teaching process in each semester, while the peer evaluation will be carried out once within the academic year. The results of these reports will be analyzed by the Programm Coordinators of and will be shared with the management of the academy. Furthermore, these reports are placed in the record folder (portfolio) of each teacher, in which will be found all the annual assessment reports.

At the end of the academic year, each academic staff will be subject to annual evaluation by the Program Coordinator (as manager). In this evaluation will be taken into account: student evaluation, peer evaluation, learning activity continuity, scientific engagement and community contribution, etc. In the manager's assessment, the academic staff will have the opportunity to reflect (make his / her self-assessment).

After the first evaluation and creation of the file (portfolio) of each staff, the Program Coordinator, as the first manager of the academic staff, drafts the improvement plan of each staff, and at least twice a year to meet with the staff in question. discuss the development and steps taken to improve teaching by academic staff.

In the Statute of the Tempulli Academy, for the promotion and re-election of the academic staff is required a good performance in teaching. The overview of staff performance comes from the results of evaluation reports.

Any staff who joins the Academy who has no teaching experience, within a short period will be trained to teach according to the expectations of the Academy. Whereas, periodically the Academy will provide trainings for the advancement of teaching with elements which also come from the evaluation reports of students, colleagues and managers.

Each staff member who joins the Tempulli Academy and who has no teaching experience, within a short period will be trained to teach according to the expectations of the Tempulli Academy. Whereas, periodically the Tempulli Academy will offer training for the advancement of teaching with elements which also come from the evaluation reports of students, colleagues and managers.

Part of the contract between the Tempulli Academy and the staff are also his/her obligations towards the institution, students, etc. All academic staff are required to be at the Tempulli Academy for 40 hours per week of which 6-10 (depending on the academic degree) hours are required for teaching. Each staff member has an office in which he prepares for teaching or even other additional jobs which are within the contract without interference from other colleagues in the office. Retirement of staff is done at the age of 65 years and is regulated by the Kosovo law.

At the moment of signing the contract between the two parties, the employee will also be provided with the job description in addition to other obligations which are written in the contract.

The practical part of the teaching will be realized in the Institute which is equipped with laboratories and adequate equipment for the realization of practical teaching/learning processes in the field of traffic and transport and other fields of applied sciences. The Academy has also concluded cooperation agreements with several enterprises/institutions in which in addition to other activities, it will be possible to realize practical training for students.

## **SWOT analysis for academic staff:**

### **A. Strengths**

- The number of academic staff has increased;
- Larger number of young staff and sufficient.

### **A. Weaknesses**

- Academic staff is not accustomed to self-assessment and self-criticism.

### **B. Opportunities**

- Good opportunity to build good staff development practices from the beginning of university development;
- Staff are encouraged to take advantage of the opportunity provided by the Academy laboratories and workshops to conduct scientific and applied research.

### **C. Challenges**

- Staff resistance to changes in access;
- Difficulty adapting to digital learning tools from older staff members.

## **2.4. Content of the educational process**

The study program Traffic Engineering and Road Safety is designed based on the development of skills and abilities required by the labor market for graduates of this program, so they can easily respond to the market demand of local and international businesses for qualified professionals immediately after graduation in the field of traffic and transport engineering. In response, the entire program development process was followed by close consultation with businesses in the respective sectors, to determine the competencies and skills of the graduates in meeting their requirements.

Studies in this program will last two years, and require 120 ECTS points. Upon successful completion of studies, the student receives the academic title "Scientific Master" Traffic Engineering and Road Safety.

The program is designed in accordance with Level 7 of the National Qualifications Framework (NQF) as well as Level 2 of the European Higher Education Area Qualifications Framework (EQEHEA).

The program aims to provide students with more advanced and specialized knowledge in the field of traffic and road safety, including detailed analysis and planning of the road network, design of road infrastructure, traffic regulation through various systems in order to increase the degree of road safety as well as the application of this knowledge in practice by establishing a strong link between theoretical knowledge and their qualification in practice.

Upon completion of this program, students will be provided with specific and general knowledge and general skills as well.

### **General Learning Outcomes**

- Raise various academic, professional and research ethical issues;
- Work individually and in groups on theoretical and practical problems;
- Develop analytical and scientific skills in solving complex problems;
- Develop individual research skills and presentation skills of their professional scientific work.

### **Specific Learning Outcomes** Traffic and Transport Engineering

1. Plan and project traffic flow;
2. Develop local and national policies in traffic management;
3. Use software to build models for simulating traffic flow;
4. Plan and design traffic signals;
5. Assess the economic and environmental feasibility of infrastructure projects.

### **Specific Learning Outcomes** Road Safety and Accident Management

1. Analyze and advance traffic safety and traffic rules;
2. Inspect and advise road safety;
3. Analyze the main causes of accidents and recommend measures to prevent them;
4. Simulate the development of accidents through application software;
5. Reconstruct accidents and develop professional expertise;

With the knowledge gained in this program, students will be able to work professionally in a wide range of industries, such as:

- Professional expert on the causes of accidents in insurance companies,;
- Ministry of Infrastructure, Kosovo Courts and other institutions;
- Road network designers for various companies and institutions;
- Examiner in driver's license assessment;
- Lecturer at Driving Schools;
- Traffic management policy developers for relevant Institutions;
- Self-employed;
- Infrastructure and traffic project manager.

The program contains 17 courses distributed in 3 semesters and the last semester is thesis research. For each course are briefly described: Course objectives, teaching outcomes, course content, assessment methods, basic literature and teaching methodology.

The program is offered only in Albanian language.

Tempulli Academy will build such practices that at the beginning of each semester, in the first class, the syllabus of the course is shared with students and all issues about the course are clarified until all students have understood it. Also, the syllabus of each course will be available to students through the SEMS platform.

Each subject has a teaching strategy and methodology, materials used in teaching as well as assessment forms. Teaching in the program will consist of lectures (theoretical and numerical) followed by their connection with the practical aspect, either through work in cabinets or at the Institute.

The evaluation of each course may vary depending on the teaching results of that course. Through assessment forms, it is assessed whether the teaching results of that subject have been achieved.

The program will use a variety of assessment methods, in full compliance with the assessment method set out in the Status of the Academy. The exam will be applied as a regular way, while other ways of assessment will be: Colloquium, Seminar Paper, Professional Practice, Practical Test during Exercises, Presentations, etc.

The forms of assessment are determined by the program while the content of the questions and obligations of the students are part which is developed by the teacher.

The Statute of the Tempulli Academy as well as the Regulation of studies regulates the procedures when it is suspected by the student that the assessment has not been done properly. In this case the academic staff provides the student with the exam materials and informs him/her about the result. If the

student is not satisfied again, he/she is allowed to make a request to take the same exam again within that term. The exam is held by a commission which is appointed by Programme Coordinator. The procedures for the formation of the commission, the time and the way of preparation of the exam by the commission are regulated by special regulations.

If there's noticed violation from the side of the teacher, then the procedure to be undertaken is regulated in the regulation of ethics which defines all the steps that the Tempulli Academy must take in such cases against teachers.

Tempulli Academy has signed several cooperation agreements with companies and institutions in this field. One of the objectives of the agreement is to enable enterprises to provide access for students to carry out: internships, various researches, including diploma theses.

The curriculum is designed to build additional skills and competencies that fit the respective profile. Collaborating with industry and obtaining concrete information about qualifications and the need for additional qualifications make the program have an appropriate curriculum design. The program offers the opportunity to enroll all students who have successfully completed bachelor program.

The Tempulli Academy has developed the electronic learning system (e-learning) as part of the Academy Students Management System. All staff is trained, new staff will be trained in the use of this system and will be a mandatory part of their work. As for the use of modern teaching tools, the Academy has installed in almost all classrooms video projectors and in some places are installed even smart projectors.

Furthermore, as a result of the COVID-19 pandemics, the Academy has adopted the Google Drive and other Google tools, and ZOOM, for online learning and communication with students.

The Tempulli Academy has developed a policy of academic staff development, part of which is the continuous monitoring of the performance of academic staff and their advancements in new teaching methodologies and evaluations of teaching methodology.

In this context, the Academy will conduct training on the use of case studies for all staff. Teachers were obliged to make a case study during the training and use it for teaching purposes.

**2.4.1 The table with information about the study program under evaluation should be completed as follows**

<b>First Year</b>			
<b>First Semester</b>	<b>M/E</b>	<b>ECTS</b>	<b>Hours per week</b>
Traffic Flow	<b>M</b>	<b>6</b>	<b>4</b>



Capacity of Road Infrastructure	M	6	4
Research Methods	M	6	4
Traffic Safety Factors	M	6	4
Environmental Protection	M	6	4
<b>Second Semester</b>	<b>M/E</b>	<b>ECTS</b>	
Urban plans	M	6	4
Project Management and Evaluation	M	6	4
Traffic light control and coordination	M	6	4
Modeling and Optimization	M	6	4
Technological Processes in Traffic and Transport	M	6	4
<b>Second Year - Traffic and Transport Engineering</b>			
<b>Third Semester</b>	<b>M/E</b>	<b>ECTS</b>	<b>Hours per week</b>
Management of Transport Systems	M	5	4
Transportation of Danger Goods	M	5	4
Autobases and Autostations	M	5	4
Traffic Intelligent Systems	M	5	4
Freight techniques	E	5	4
Logistics and Transportation	E	5	4
Vehicle Diagnostics	E	5	4
<b>Fourth Semester</b>	<b>M/E</b>	<b>ECTS</b>	
<b>Thesis</b>	<b>M</b>	<b>30</b>	
<b>Second Year – Road Safety and Accident Management</b>			
<b>Third Semester</b>	<b>M/E</b>	<b>ECTS</b>	<b>Hours per week</b>
Traffic Safety Techniques	M	5	4
Technical Expertise of Accidents	M	5	4
Reconstruction and Simulation of Accidents	M	5	4
Vehicles collision theory in road accidents	M	5	4
Intelligent systems in traffic	E	5	4
Transportation of Danger Goods	E	5	4
Vehicle diagnostics	E	5	4
<b>Fourth Semester</b>	<b>M/E</b>	<b>ECTS</b>	
<b>Thesis</b>	<b>M</b>	<b>30</b>	

## **SWOT analysis for the contents of the educational process:**

### **A. Strengths**

- A unique programme in Kosovo and in the Region;
- High demand for the programme;
- Program designed based on labor market requirements.

### **B. Weaknesses**

- Limited opportunities for the realization of research in the businesses;
- Lack of modern and relevant literature in the Albanian language.

### **C. Opportunities**

- The possibility of employment of students in the industry.

### **D. Challenges**

- Migration of students to the outside world during the study cycle or immediately after graduation;
- Pandemic situation.

## **2.5. Students**

The MSc Traffic Engineering and Road Safety program will be offered for the first time in this academic year so the Academy has no students enrolled so far.

Student admission will be done in accordance with the call for enrollment which will be announced online on Social Media and website and in online news portals in Kosovo. The student selection and admission criteria are dictated by the Tempulli Academy Statutes and are published along with the call for enrollment and also regulated by Kosovo Law. All applicants must fill in the online application form and submit hard copies of the necessary documents to the Tempulli Academy. The Tempulli Academy administration is responsible for the verification of information submitted to the system by students.

Through the SEMS system, the Academy keeps the registration data, respectively the completion of all levels of courses and study program.

Students Education Management System SEMS is a system which establishes all communication between the Tempulli Academy and the students. Through SEMS, exams are presented, elective courses are selected and semesters are registered, student academic records are managed and online learning is managed through the e-learning module.

The learning process is organized in several ways. For theoretical subjects' lectures are held in groups of up to 50 students, practical subjects up to 10 students (subjects such as those held in IT classrooms), whereas for lectures of professional subjects the groups are no larger than 30 students (subjects such as those held in Tempulli Academy workshops).

Exam results are announced on SEMS and students are notified automatically. Students who are not content with the results can refuse the grade on SEMS within 48 hours after its publication. Students who are not content with the assessment are allowed to require a committee assessment, as defined by the Regulations for Studies in the Academy.

As regulated by the legislation currently in force, the graduated student will be provided with the adequate certificates (grade certificate, a diploma and a diploma supplement).

In accordance with the Tempulli Academy Statute and Study Regulations, there is some form of flexibility in the scheduling of exams if the student is part of an international exchange program or if they participate in work or experiential learning abroad (the Tempulli Academy can reschedule exams if companies which it has collaboration agreements with require students to do their experiential learning during the time exams are scheduled to take place. In other cases, exams can be held outside scheduled time for students who participate in various scientific or sport competitions, for which they should provide adequate verification).

The Tempulli Academy stores all data related to registration and completion of all levels of subjects and study programs in SEMS.

Tempulli Academy Statute as well as its regulations are all published on the official Academy website, the Academy has developed a manual which is given to students at the start of their first academic year, and which informs them of all their duties and responsibilities and where they can get more information about.

Student transfer between academic institutions as well as the changing of study programs is regulated by the Statute of the Tempulli Academy and regulation for transfer.

Academic staff is required to be available to students at least twice a week on a scheduled basis for both academic and advisory type counseling.

In its strategic plan, the Academy will also start applying the personal supervisor system, where each student will have a teacher appointed as a personal tutor who must meet with the student at least once a year and follow the development of the student during the whole time of studies.

The Academy does not have an automated way of monitoring student work in a specific subject in the study program. The Programme Coordinator of the respective faculty/programme monitors the passing statistics in each subject and takes the necessary measures to address student difficulties in passing certain subjects.

For the evaluation and monitoring of the achievement of teaching results, the Academy uses the evaluation mechanisms of the evaluation of the academic staff, such as: the evaluation of the students for the professor, the peer evaluation, the evaluation by the manager and the self-evaluation. These activities are performed on an annual basis and in most cases are semester (semester). The academy plans to conduct various trainings in the academic staff development plan, including those on assessment methods.

Given that the Academy is a new institution and still has no enrolled students, it has not implemented any organized form of student support for non-academic issues. However, the Academy will continue the tradition built by Tempulli College in supporting students in their non-academic activities.

The Tempulli Academy has its library where students can find enough material to fulfill their most basic requirements during their studies. The Tempulli Academy also offers its students access to various online resources.

Furthermore, if for a specific subject there is not enough basic literature in the Albanian language, the teacher is responsible for providing an adequate basic material and will instruct students on other materials used in the subject in question.

The Academy also has its Partner Council that cooperates and identifies development possibilities for new subjects which equip students with additional skills identified by the industry.

## **SWOT analysis for students:**

### **A. Strengths**

- Increasing the number and quality of students who have the Tempulli Academy as their first choice;

- Adequate resources provided by the Academy for student internships.

#### **B. Weaknesses**

- Limited number of titles in the Academy library.

#### **C. Opportunities**

- Apply for more international student mobility projects.

#### **D. Challenges**

- Students lose interest in completing their studies due to the low level of employment in Kosovo.

### **2.6. Research**

The Academy recognizes the importance of research in its development and as such it has included it as one of its strategic objectives of the strategic plan 2021-2025, which includes the spectrum and quality of research also, laboratory work at the Institute for Road Safety and Transport Research involving both staff and students of the Academy.

The part of the institute includes the laboratory for expertise in the field of transport, traffic and road safety.

The Academy has drafted the Regulation for Scientific Research (Appendix 2D. Regulation for Scientific Research), and a Research Strategy (Appendix 2E. Research Strategy). This regulation defines the rules, procedures and other accompanying documents for the organization of scientific research activity of academic staff, researchers and students. Tempulli Academy has put research as an important priority also in its "Development Plan". Thus, among others, these objectives foresee that "Tempulli Academy supports the development and research projects of staff and students in order to enhance the relevance of studies". The same priorities are reflected in all the documents related to research.

These strategic objectives which aims at accomplishing the Tempulli Academy mission and vision, foresees the following measures:

- Fundraising for research projects of Tempulli Academy staff;
- Establish a research fund for Tempulli Academy students;
- Undertake measures for the systematic integration of research into study programs;

- Increase the fund for participation in conferences and publication of articles at home and abroad;
- Build capacity for application to local and international calls for research projects;
- Strengthen and support the journal thesis;
- Raise funds for the organization of International Scientific Conferences;
- Support publishing activities of staff, researchers and creators in Kosovo;
- Strengthen the practical work component.

For each of the above measures there are targets and performance indicators that assist the Academy in tracking the achievement of the strategic objectives. Moreover, as for any other strategic objective, for the objective of scientific research work as well, Tempulli Academy has defined a budget that includes a five-year period (see the annex on Research Strategy). Despite the budget being modest for the initial years, it will continuously increase through the years.

Based on the Regulation for Research Development, the Academy has created policies to support academic staff in scientific research. As for the budget of the academy which is part of the Strategic Plan 2021-2025, the Academy has foreseen the support of the academic staff in scientific publications up to 1000 euros for each academic year for staff. This support will be foreseen for participation in international conferences, payment for publications of papers in journals and other scientific activities provided by the Regulation for Scientific Research.

In order to manage and support research activities, the Academy has established the Scientific Commission which consists of:

- Three members of the academic staff with PhD, with proven experience in the field of scientific research;
- A student representative delegated by the Student Parliament of the Academy;
- A representative of the administration responsible for supporting research.

Scientific Commission, among others, has these responsibilities:

- Propose to the Academic Council individual journals and platforms (databases) of scientific journals for publications of academic staff;
- Approve or reject requests for support scientific and research activities of academic staff, covering the costs of publishing of scientific papers in international scientific journals and

requests of academic staff to cover participation in international conferences, symposia, workshops or international scientific forums, etc.;

- Organizing conferences, symposia, workshops or scientific forums at the Academy.

So the commission for scientific research, continuously evaluates the platforms and journals where the academic staff can publish and proposes to the Academic Council for their approval.

For the advancement of the academic staff, with the statute of the Academy and with the Regulation for the Selection of the Academic Staff, a considerable number of academic and research activities are foreseen. The Academy applies these rules accurately.

With the new administrative instruction no. 01/2018, "Administrative Instruction (MEST), No. 01/2018 Principles of Recognition of International Platforms and Journals with Review<sup>3</sup>", for the selection of academic staff are clearly defined in which databases and houses published or journal papers will be recognized by the Academy for Academic Advancement.

The Academy concludes its research activities by publishing a scientific paper in a journal or participating in scientific conferences.

In addition to the obligations related to the appointment and promotion process, the staff of the Academy will be continuously encouraged to publish and participate in national and international conferences, symposia or congresses with their work as this will be considered during their annual staff evaluation as well as promotion process.

Based on the KAA QA standards as well as on the Regulation for scientific research, each academic staff of the Academy is obliged to publish an average of one paper per year.

<b>2018</b>	<b>2019</b>	<b>2020</b>
11	24	16

Tab. Number of publication in the last three years

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<sup>3</sup> Udhëzim Administrativ(MASHT), nr. 01/2018," Parimet e Njohjes së Platformave dhe Revistave Ndërkombëtare me Recension". <https://masht.rks-gov.net/uploads/2018/01/ua-nr-01-2018-parimet-e-njohjes-se-platoformave-dhe-revistave-nderkombetare-me-recension.pdf>

The Academy has 27 academic staff employed most of whom are with the title Dr.Sc. In the last three years, the number of publications of the academic staff within the Academy is 51 which represents less than one publication per academic staff. Considering that this number of staff is employed in 2020, their scientific contribution should really be taken into account only in 2020 and not in 2018, 2019. However, the Academy has taken into account the contribution of academic staff for 2018 and 2019 knowing that this can affect the reduction of the average work per worker, per year. More details about staff publications are provided in (Appendix 2F list of staff publications).

Based on the Statute of the Academy and the Regulation on recruitment and promotion of academic staff, a considerable number of academic and research activities are foreseen and clearly defined in which databases and publishing houses or journals the published works will be recognized by Academy for Academic Advancement these have been made public on our Academy's website.

All full time staff on the Academy are obliged to publish their scientific works on behalf of the Academy. This process is regulated by Regulations for Scientific Research and by employment contract engagement of staff in research work is used to evaluate their performance, and as well as for the purposes of academic and professional development.

The use of research by academic staff in the teaching process is very important, especially in the contextualization of problems in the context of Kosovo and the region. Relying on the importance of research and its use in the teaching process, the Academy has created a suitable infrastructure for conducting research within the institute and is committed to support it. This, not only enables the use of staff to use research in the teaching process but also enables the involvement of students in the research process.

The Academy as a new institution is in the consolidation phase, within this phase it also includes the creation of intellectual property policies.

Given that the Academy is in the new institution there are no students involved in research work, but if we refer to the retrospective as the College the Academy has a good experience of involving students in research work. The involvement of students in research work is mainly done in the work of diplomas both bachelor and master level.

All staff are encouraged and enjoy institutional support to engage in research and publication.

The Code of Ethics obliges that the research of each member of the Academy be in accordance with the principles of Ethics Code. The regulation on disciplinary measures also clearly describes punitive policies related to processes that do not conform to the principles of ethics.



The Academy has inherited the cooperation from Tempulli College with businesses, organizations and other institutions. The College has been part of several joint projects with the Municipality of Prishtina, in the installation of traffic signs and projects and consulting in the field of traffic and road safety.

### **SWOT analysis for research:**

#### **A. Strengths**

- *Financial support of staff for research and scientific publications;*
- *Conducting scientific research within the Institute for Road Safety and Transport Research;*
- *Research being a strategic objective of Tempulli Academy.*

#### **B. Weaknesses**

- *Limited number of publications in international journals by the Academic staff.*

#### **C. Opportunities**

- *Involvement of students on research projects;*
- *Application on international projects;*
- *The utilization of means offered by different international projects in modernization of the laboratories and the institute.*

#### **D. Threats**

- *Lack of encouragement of staff to apply for projects.*

### **2.7. Infrastructure and resources**

The Academy has a diversity of funding sources, a factor that ensures financial sustainability. The main sources of funding will be:

- Student fees;
- Payments for driving and instructor trainees;
- Expertise and
- Various local and international projects.

The Academy is located in a relatively new building, which has a very convenient, clean and attractive environment for students and staff, both in terms of learning conditions and social spaces. The Academy

is located about 300 meters from the city center, where it provides very easy access for students and staff of the Academy. The building has over 1260 m<sup>2</sup> including the spaces for Institute for Road Safety and the Driving School. The laboratories of the Institute can be used for student's practical work and for commercial activities of the Academy.

The building was purchased by Academy and therefore there is no need to pay rental costs. As a result, the Academy enjoys the freedom to invest all the revenue into

1. Equipment and tools;
2. Expanding of the building;
3. Enriching the library;
4. Building of laboratories etc.

The academy has enough space for the realization of the teaching process and practical teaching. The academy has 5 classes in which theoretical teaching takes place while the practical part is realized in laboratory spaces which includes 114m<sup>2</sup>.

The library is an important unit that supports the academic and teaching process, therefore special attention has been paid to this sector for many years. The mission of the Library is to provide services and materials in order to meet the needs of students, professors and other staff. The library as a unit of this institution is at the service of all users of the Academy and for all other affiliated users. Users have several ways of accessing different literature in the Library:

a) Physical Library;

b) Electronic library (electronic catalogue) and online academic and scientific journals. Through the National University Library the Academy will have access to more than 700, 000 electronic databases as well as access to other open access journals. In relation to the number of students the library area has doubled with physical space and now meets the needs and requirements of the students.

Tempulli Academy students have access to the electronic library that is available for students and academic staff: <https://www.ciltuk.org.uk/Knowledge.aspx>).

Although our Academy offers programmes from specific fields, the Academy has managed to ensure plenty of literature in Albanian language, which was published by local authors, but also translated books, mainly from English language. Furthermore, the Academy has worked hard in order to translate specific literature and materials from different languages, and delivering it to the students, thus ensuring that the students are equipped with the adequate literature, and the learning outcomes are met. The Academy is equipped with 1862 physical books, and several electronic books. Our Academy enjoys

many advantages since we are full members of International Road Union – [IRU](#) Academy, The Chartered Institute of Logistics and Transport ([CILT](#)), which grants our students the possibility to use, for free, all the publications and journals that are related to Traffic and Transport. The Academy (via the institute) is already subscribed to several journals such as: The Knowledge Center, the students will have constant access.

The Academy has two reading spaces with about 50 seats for students. The Academy has also allocated separate reading rooms where students can read as well as work in groups or individually. All materials in the library are accessible to all staff and students of the Academy. In addition to the library and reading room, within the premises of the Academy there are separate areas in which students can discuss and work in groups.

The Academy has also created the means for students and staff to use the electronic learning platform (e-Learning). This platform will be populated with programs and modules once they are accredited.

The Academy has computer rooms with a total number of 80 computers which are accessible to all students, while the Institute has equipped laboratories with modern equipment in which in addition to the execution of expertise in the field of traffic and transport, student practical work as well as scientific research can be realized.

The library is open and accessible from 07:00-19:00, every day of the week, thus ensuring easy access for students who want to use either the physical books, or the computers which grant them access to the electronic library. Furthermore, via their user account which is created using the domain of the Academy, students can access different electronic libraries and journals, as made possible by the agreements of the Academy with these libraries/journals.

As part of the annual evaluation by staff and students, one of the areas that will be evaluated is infrastructure. The evaluation of student satisfaction regarding the use of infrastructure and other support resources will be done once a year. The Secretary General and Director of the Academy will analyze the results from the evaluation of students and staff for aspects of infrastructure, and based on the findings, an action plan will be drafted to address issues (findings) for the infrastructure.

Given that the Academy is located in the urbanized part of the city, students' access to food services outside the facility is very easy. However, the Academy within its premises has allocated a canteen where students and staff can enjoy lunch and have drinks.

The Academy will pay special attention to the promotion of its students through extracurricular activities. The spirit of supporting these activities is also included in the budget planning which is part of the Strategic Plan 2021-2025.

Continuously improving the quality of infrastructure will be one of the priorities of the Academy, also it is worth mentioning that we are in the process of building a new campus.

The location for building the Campus is in the new part of the city, which has access into wider roads of the new part of Pristina, street B and C, (Appendix 2G Pictures of the New Campus). The new campus offers better physical conditions for work (building new objects, plan, construction, equipment, laboratories, inventory), etc.

Within its evaluation mechanisms, the Academy will also research student satisfaction related to infrastructure, research findings will be addressed by its competent persons.

All the full-time staff of the Academy own their offices together with the support equipment to carry out research work.

The Academy employs an IT office which is available to students and academic staff. The IT Officer together with the other staff of the Academy will train the new staff and students regarding the use of the SEMS system.

#### **SWOT analysis for learning resources and facilities:**

##### **A. Strengths**

- *Suitable space for the implementation of the theoretical and practical part of the courses;*
- *Suitable space for reading.*

##### **B. Weaknesses**

- *Lack of sports and recreative spaces for students;*
- *Limited number of titles in Albanian language in the library.*

##### **C. Opportunities**

- *Utilization of the city central location of the Academy;*
- *Signing of new agreements with renowned European libraries to grant access to our students and academic staff to further literature.*

##### **D. Threats**

- *Students preferring to go to the city center instead of using the physical or electronic library for reading.*

## **2.8 Appendix**

Appendix 2A. List of participants from the meeting of the Program Committee

Appendix 2B. Meeting agenda, list of participants and meeting extract

Appendix 2C Quality assurance regulation

Appendix 2D Regulation for Scientific Research

Appendix 2E Research Strategy

Appendix 2F List of Staff Publications

Appendix 2G Pictures of the New Campus

Appendix 3 Syllabuses

## **2.9 Course descriptions**

General subjects for two specializations: Traffic and Transport Engineering, Road Safety and Accident Management

**Specialization: Traffic and Transport Engineering**

### **FIRST YEAR**

#### **First semester**

**Course title: Traffic Flow**

**Course description:**

Basic elements of transport flow: transport routes (capacities, utilization rates, cycle duration, practical definition of expected outcome); branching of roads-directions (partially or completely, in two or an indefinite number of directions); general elements of transport flows. Presentation of transport flows in models: types of models, algorithms, graphs, material-flow matrices (shorter roads, loads, transport and evaluation); use of matrices in establishing the number of transport systems.

**Goals and expected results:**

Acquiring knowledge regarding basic elements of planning, distribution, systems and linkage of transport flow. Upon completion of the course, the student will be able to: 1) recognize basic elements of transport flow, 2) present transport flow in models, 3) plan transport flow, 4) recognize provisions

of transport systems, 5) practical definition of outcome, 6) analyze and provide concrete measures to improve the traffic movement, 7) identify the role of each participant in traffic and their impact on the movement of traffic.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. F. Sinani: "Planifikimi dhe rrjedha e transportit", Prishtinë 2016
2. M. Mikula: "Razvoj telekomunikacija, Školska knjiga", Zagreb 2015
3. L. Elefteriadou: "An Introduction to Traffic Flow Theory, Springer 2014

**Course title: Capacity of Road Infrastructure**

**Course description:**

Intersections with illuminated signaling. Capacity and level of service at intersections with illuminated signalization. Roundabouts (design and capacity). Intersections at different levels. Filling and unloading ramps at different levels. Capacity and service level of crossroads at different levels. Road infrastructure design criteria.

**Goals and expected results:**

After completing this course (students) students will be able to: - Express their ideas through road projects, underpasses and overpasses, roundabouts and various forms of intersections - Calculate traffic, capacity and level of service , - The calculated and verified proportions of the roads make their optimal choice.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and

achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Dr. sc. Nijazi Ibrahim, Mr.sc. Mevlan Bixhaku, Kapaciteti dhe niveli i shërbimit i infrastruktures rrugore, Prishtinë 2015.
2. Dr. sc. Nijazi Ibrahim, Mr.sc. Mevlan Bixhaku, “Teoria e qarkullimit në komunikacion dhe kapaciteti i rrugëve” , Prishtinë 2019.
3. HCM 2010-Highway Capacity Manual.

**Course title: Research Methods**

**Course description:**

Establishing, routing and planning; prediction techniques; research design; designing sample, postal, interview and experimental surveys; methods and techniques; methods and procedures including quantitative and qualitative research techniques; data handling: organizing, recording, analyzing; statistical software; theoretical considerations; literature revision; secondary source of data; books and journals revision; governmental and business statistics, etc.

**Goals and expected results:**

The main objective of this course is to familiarise the student with transport and logistics related modern research methods and their implementation. Upon completion of the course, the student will be able to: 1) apply research methods and statistical techniques for analyzing and solving problems within an organization; 2) use forecasting techniques and methods; 3) organize research and design/implement surveys; 4) identify and define the research purpose and lead the research; 5) organize, record and analyze the data.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. M. Krasniqi: “Metodat e hulumtimit në trafikun rrugor”, Prishtinë 2016
2. [Road Research Laboratory](#): “Research on road traffic”, Geneva 2014
3. [Organization for Transport Co-operation and Development](#): “Statistical Methods in the Analysis of Road Accidents”, Geneva 2014.

**Course title: Traffic Safety Factors****Course description:**

Causes of accidents. Analyses and accident blackspots along the road. The basic principles of accident causes. Traffic Safety Factors. Time factor and human factor. Road factor and other aspects. Road factor. Vehicle factor. Incident factor. Road traffic factor.

**Goals and expected results:**

Upon completion of this course, students will be able to: recognize the main road accident victims. Know the road traffic safety factors.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. On this basis, it is provided the possibility for knowledge transfer, improvement of students’ abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Ahmet Geca,”Faktorët e sigurisë ne Trafik”, Prishtinë 2016.
2. Sh. Gjevori: “Siguria rrugore”, Prishtinë 2016.
3. R.Elvik: “The Handbook of Road Safety Measures”, second edition, Bingley 2014.
4. WHO:” Road Safety Annual Report 2018”, OECD 2018.

**Course title: Environmental Protection****Course description:**

Knowledge of the environment and pollution, types of pollution, analysis and the possibility of reducing and avoiding them, pollution from combustion, pollution from thermal power plants, pollution from traffic, LCA-life of a product, effects, acoustic pollution, radioactive pollution, biological pollution , thermal pollution.

**Goals and expected results:**



Upon completion of the course the student will be able to: 1) recognize and categorize environmental pollutants. 2) to categorize transport vehicles according to the degree of pollution 3) Establish, analyze and evaluate preventive measures against environmental pollution. 4) Develops and drafts policies from the perspective of traffic participants in order to create a more ecological environment, 5) makes a strategic assessment of the impact of development policies.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Muriqi, Ali, (2018): Mbrojtja e ambientit, (ligjerata te autorizuar), FIM, Prishtinë.

**FIRST YEAR**

**Second semester**

**Course title: Urban Planning**

**Course description:**

Analysis and evaluation of relevant alternatives for the development of road traffic system (alternative corridors to main roads, impact of relevant factors in traffic planning). In this course, contemporary methods on movement planning will be applied.

**Goals and expected results:**

Introduce students to basic concepts of road traffic planning and transport systems required for urban mobility.

Upon completion of this course, students will be able to:

1. Know the basic concepts of traffic planning.
2. Calculate the demand for movement in different urban areas.
3. Collect and evaluate information related to daily travel requirements.
4. Offer traffic planning alternatives,
5. Understand the role and importance of urban planning,
6. Understand urban plans and know how to clarify such plans

Know the basic criteria for road network planning and provide alternative traffic planning.

**Teaching methodology:**

The content of this course is elaborated through electronic lectures, discussions with students, seminars and visits to production organizations.

**Literature:**

1. M.Bixhaku “Planifikimi në komunikacion” Prishtinë, 2011- dispencë.
2. M.Bixhaku “Detyra të zgjidhura nga planifikimi në komunikacion” Prishtinë, 2016- dispencë.
3. Cvitanic.D.; “Prometna tehnika i prostorno planiranje prometa”, Građevinskoarhitektonski fakultet, Split.
4. Jovic.J. “Saobracajno planiranje”- Beograd.

**Course title: Project Management and Evaluation****Course description:**

Investment and project management is an integration of investment planning, analysis and evaluation and project management, respectively the project cycle focusing on real investments as opposed to financial investments treated in other subjects. Understanding the project. Understanding investments and the investment process. Investment Study: technological solutions, location and organizational aspects of management. Financial analysis. Social and economic analysis. Sensitivity and risk analysis. Project Implementation Management - Introduction to project management. WBS and time spent planning. Project organization and control, reporting, evaluation. Introduction and exercises in Microsoft Project Management.

**Goals and expected results:**

The aim of this course is to build the capacity (knowledge and skills) to effectively manage projects in accordance with international standards and methodologies, as well as to provide ideas for problem solving by presenting possible choices at different stages of the cycle. project life.

**Teaching methodology:**

The content of this course is elaborated through electronic lectures, discussions with students, seminars and visits to production organizations.

**Literature:**

1. Muhamet Mustafa: Menaxhimi i Investimeve
2. S. Panariti, Menaxhimi i projekteve, Tiranë 2017
3. Handbook on Economic Analyses of Investment Operations, World Bank
4. UNIDO: Manual for Preparation and Appraisal of Industrial Projects ;
5. Daynanada & Irons&Harrison, Herbohn, Capital Budgeting,
6. Financial Appraisal Of Investment Projects, Cambridge

## 7. Ralph Tiffin: Practical Techniques for Effective Project Investment Appraisal (IFC)

### **Course title: Directing Traffic**

**Course description:** Efficacy indicators of crossroads with illuminating signals. The fundamental factors of the performance of crossroads with illumination signals. Project processing of Illuminating signals. Calculating the alterations of green time. Elements for improving traffic directing in urbanized areas. Current international practices. Current practices in developed countries

**Goals and expected results:** Provide knowledge on the directing of compound systems as well as the most sophisticated programs implemented in the world today. Review signaling plans and programs of synchronous corridors. Finally, provide estimates of service levels for crossroads in those corridors, etc.

**Identify Compound Traffic Systems:** Simulate the various programs that are being implemented in the world today for directing compound systems. On the basis of measured traffic loads, prepare signaling plans for any corridor with coordinated signaling. Based on the results obtained above, related to the coordinated corridor, evaluate the level of services, etc.

Introduction to direction of compound systems and the more sophisticated programs that are being implemented today. After attending this course, the student will be able to: 1) handle and develop synchronized corridor signaling plans and programs, 2) provide assessment of service levels for crossroads in those corridors, etc. 3) identify compound traffic systems, 4) Simulate the various programs that are implemented today in the direction of compound systems, 5) understand and analyze the basis of measured traffic loads, 6) Prepare draft signaling plans for any corridor with coordinated signaling, 7) depending on the results obtained for the coordinated corridor, the student is able to assess the level of services

**Teaching methodology:** Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills.

Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:** Perjuci Xh., Sinjalizimi në trafik, Prishtinë, 2012.

Perjuci Xh., Leksione nga Rregullimi dhe Dirigjimi i Qarkullimit në Trafik, Prishtinë, 2014.

Osova M., etj., Upravljanje Saobraćajem Pomocu Svetlosnih Signala,

Akcelik R., Traffic Signals-Capacity and Timing Analysis Victoria.

### **Course title: Modeling and Optimization**

#### **Course description:**

One dimensional optimization; Approximation of polynomials; Uniformed research: Newton's method, Gradient's method; Unlimited optimization problem; Kosh's method, Newton's method, the gravity method and supplementary directions method, DFP methods; Optimality condition; Linear programming; Convex programming; Fraction and square binomials; Optimal alignment of information; Special Algorithms.

#### **Goals and expected results:**

The main objective of this course is to equip the student with essential knowledge on modelling and optimization. Upon completion of the course, the student will be able to: 1) master the one-dimensional optimization; 2) recognize Newton, Koshi, Gravient methods and complementary methods; 3) apply linear and convex programming; 4) recognize algorithms; 5) recognize programs for optimal management solution, 6) gain significant general knowledge about optimization and modeling, 7) apply in practice solutions resulting from modeling and optimization processes.

#### **Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

#### **Literature:**

1. TURK, L. BUDIN: Analiza primjenom računala, Tehnička knjiga, Zagreb,2010
2. D. G. LUENBERGER: Linear and Nonlinear programming, 2nd Edition, Addison – Wesley,
3. R. K. AHUJA, L. MAGNANTI, J. B. ORLIN: Network lows, Prentice – Hall

## **Course title: Technological Processes in Traffic and Transport**

### **Course description:**

Introduction; Substrate transport as a traffic technology subsystem; Transportation equipment; Manipulative tools; Transportation tools; Infrastructure as an element of traffic technology; Base technology for road traffic; Warehouses, as logistics subsystems, the quality of their activities, the efficiency of material flows and implementation of logistics processes; Logistics costs, specific functions of warehouse, storage processes under new conditions of economy functioning and globalization, continuous research, application of sophisticated technical and technological innovations.

### **Goals and expected results:**

The main objective of this course is to familiarise the student with technological processes in transport. Upon completion the course the student will be able to: 1) analyze and determine the most favourable transport means; 2) identify all systems and subsystems and elements of transport technology; 3) manage storage processes and recognize the storage cost; 4) develop and recognize devices of transport technology development, 5) recognize patterns for managing technological processes in transport.

### **Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

### **Literature:**

1. M. Bajraktari: "Proceset teknologjike në trafik", Prishtinë 2016
2. L. Rijeka: „Buduća generacija kapaciteta terminala“, Beograd 2014
- F.Klügl: "Applications of Technology in Traffic and Transportation", Berlin 2014

## Specific subjects of Traffic Engineering and Infrastructure specialization

### SECOND YEAR

#### Third Semester

#### Course title: Management of Transport Systems

##### Course description:

Basic principles of management. Concept of planning, strategic planning, organization, personnel. Leadership; team, motivation, communication. Decision making; implementation of decisions and problem solving. Management system; change management, future management, management as a key resource, etc. The role and importance of projects in traffic. Methodology of project work. Communication networks (meaning and classification). Key efficiency indicators. Application of information technologies.

##### Goals and expected results:

The course aims to provide students with the necessary theoretical and practical knowledge of contemporary management in communication systems, research methods and management techniques. For successful management and maintenance of traffic activities it is necessary to systematically develop and implement business principles, adapting as needed modern (process-oriented) management methods.

##### Teaching methodology:

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

##### Literature:

1. Introduction to Transportation Engineering James H. Banks: San Diego State University.
2. Handbook of Transport Modelling . David A. Hensher & Kenneth J. Button Institute of Transport Studies University of Sydney & George Mason University .
3. Transportation Engineering & Planning C.S. Papacostas & P.D. Prevedouros University of Hawaii at Manoa Honolulu , Hawaii

4. Inxhinjeria dhe Planifikimi i Transportit Sh Zeqo Universiteti Veror i Prishtinë.

**Course title: Transportation of Dangerous Goods**

**Course description:**

Law on transportation of dangerous goods; Preparation for transportation of dangerous goods; The vehicle for transportation of dangerous goods; Special security measures; Actions in case of accident; Measures of controlling the transportation of dangerous goods; Classification and labelling; International agreements; The necessary documentation to carry out the transportation of dangerous goods; Security measures/rejection of transportation of dangerous goods; Transportation of dangerous goods by road (in conformity to ADR rules) and railway (COTIF and RID).

**Goals and expected results:**

Upon completion the course, the student will be able to: 1) manage risk in transportation of dangerous goods system; 2) monitor the implementation of dangerous goods transport; 3) set up an internal control system in transport; 4) help in prevention of incidents; 5) implement security measures for the transport of dangerous goods, 5) 2) apply some of the methods of preventive action, especially those related to route selection that minimizes the risk in the transport of dangerous goods, 6) analyze the procedures applicable in case of adverse events in the database relating to prevention in this field, 7) minimize the expected damage to the environment from potential adverse effects,

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. M. A. Chowdhury, A. Sadek, Fundamentals of Intelligent Transportation Systems Planning, Artech House, 2013.
2. R. Bishop, Intelligent Vehicle Technology and Trends, Artech House, 2015.

**Course title: Autobases and Autostations****Course description:**

Aspects of the urban development of the park; Movement and types of roads; Parking problems; Parking characteristics; Elements of spatial infrastructure; Parking operating characteristics; Budget elements; Parking requirement; Parking requirements under vehicle structure; Requirements for parking along the road; Requirements for parking in the cities; Control and management of parking in cities and populated areas; The concept and importance; Establishing the state park; Parking types; Elements of the research process.

**Goals and expected results:**

Upon completion of the course, the student will be able to: 1) determine the distribution, 2) determine the capacity of the spatial structure of building elements, 3) determine the situation in terminal premises in accordance with the technological process that takes place in the terminal, 4) rationalize the structure of transport system; 5) analyze and determine the purpose and the need for parking structure in order to define a set of measures to solve parking problems, 6) recognize the operating characteristics of parking, 7) recognize factors that affect parking.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Putnik N.:Autobaze i autostanice, osnovni udžbenik, Saobraćajni fakultet, Bg.2014.
2. N.Lajçi: "Autobazat dhe autostacionet",Prishtinë 2016.
3. Dr. sc.Ymer Shurdha, "Autobazat dhe autostacionet", Prishtinë 2009.

**Course title: Traffic Intelligent Systems****Course description:**

Intelligent transportation systems; Definition of the systems; Information and communications (cyberspace); Strengthening traffic performance, a more efficient passengers and goods



transportation; Improving road safety; The role of telecommunications systems in transport systems; Implementation of public broadcasting in traffic; Usage of cable and mobile public communications networks; Radio links; Design of systems for safe transport.

**Goals and expected results:**

Upon completion of the course, the student will be able to: 1) determine and evaluate system effects, write technical reports; 2) design flexible systems of light signals; 3) determine the need for introduction of an intelligent transportation system by designing it at a conceptual level; 4) design conceptual level of traffic management systems in network using software simulations, 5) design systems for safe transport, 6) Explain accurately the benefits of applying intelligent systems, 7) Monitor the work of intelligent systems, and prepare relevant reports

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. M. A. Chowdhury, A. Sadek, Fundamentals of Intelligent Transportation Systems Planning, Artech House, 2013.
2. R. Bishop, Intelligent Vehicle Technology and Trends, Artech House, 2010.

**Course title: Freight Techniques**

**Course description:**

Meanings and general characteristics for forwarding. Jobs of forwarding sector. Organization of forwarding. Special organizations forwarding. International League of Associations forwarding. Works of export and import forwarding. Special Jobs forwarding. Provide transportation. Custom Action. Forwarding documentation. Jobs activation. Market research. Submission of tenders. Pre calculation of forwarding works. Subcontracting. Provision. Acceptance of goods. Storage of the goods. Calculation of costs. Billing, etc.

**Goals and expected results:**

Student wins enough competence regarding the principles and characteristics of forwarding. After completion of the course the student will be able to: 1) analyze the relationship between the forwarding and transportation, 2) compare and schedule forwarding techniques, 3) organize and manage the affairs of forwarding, 4) create forwarding strategy in the works, 5) be proficient in the implementation of contracts, 6) supervise the success of shipping companies; 7) solves considerable issues by providing explanations for the completion of customs documentation.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Bytyqi: "Teknika e shpedicionit", Prishtinë 2016
2. M. A. Krajewska: "Potentials for Efficiency Increase in Modern Freight Forwarding", Frankfurt 2014.
3. Frankfurt 2014.
4. F. Taderera: "The Pillars of Shipping and Forwarding", Germany 2014.

**Course title: Logistic and Transportation****Course description:**

Physical distribution and distribution channels; Tasks of distribution logistics; Distribution logistics in customized manufacturing; Stock distribution logistics; Distribution systems of the goods and services; Relation between production and distribution; Costs and outcome of distribution and goods; Distribution in supply chain management system; Determinants of choosing channels distribution system.

**Goals and expected results:**

The main objective of this course is to familiarize the student more closely with distribution logistics and equip with necessary knowledge on distribution logistics. Upon completion of the course, the student will be able to: 1) recognize the basic theory of logistics distribution systems, 2) understand

the distribution systems of goods and services, 3) manage supply chain system, 4) select programming tasks associated with logistic operations, 5) recognize the relations between production and distribution, 6) make the formation of basic static documentation, 7) research and apply static and dynamic elements of the line of passengers.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Xh. Krasniqi: "Statistika dhe probabiliteti", Prishtinë 2016.
2. M.Sullivan: "Statistics: Informed Decisions Using Data", Cambridge 2014.  
J. T.McClave "Probability and Statistics: Pearson New International Edition", Cambridge 2014.

**Course title: Vehicle Diagnostics**

**Course description:**

Diagnosis theory, technical systems working ability, theoretical diagnosis actions, general principles of diagnosis, the correlation between diagnostic parameters and damage characteristics; basic methods for testing/checking parts of transport vehicles; actions for surface diagnosis, visual controls, optical devices, roughness measuring, measuring temperatures with touch, temperature sensors, pyrometer, temperature measuring temperatures by touching; diagnostic actions under working conditions, vibration measurement, diagnosis by analyzing the spread of sound, planning criteria and implementation of maintenance concept in logistic- oriented organizations.

**Goals and expected results:**

The main objective of this course is to familiarize the student with diagnosis of road transport vehicles. Upon completion the course, the student will: 1) have knowledge on diagnosis theory; 2) recognize methods for testing, 3) do checking parts of transport vehicles; 4) know the actions for surface diagnosis, 5) implement and establish methods for control of working parameters, 6)

recognize the requirements for developing maintenance concepts, 7) do inspection of technical checking of vehicle.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. M. Palnikaj: "Diagnostifikimi i automjeteve", Prishtinë 2016.
2. T.Denton: "Advanced Automotive Fault Diagnosis, 4th ed: Automotive Technology: Vehicle Maintenance and Repair 4th Edition", New York 2015.
3. J. Čupera: "Automobily - Diagnostika motorových vozidel I", Brno 2014.

**SECOND YEAR**

**Fourth Semester**

**Course title: Urban Planning**

**Course description:**

Analysis and evaluation of relevant alternatives for the development of road traffic system (alternative corridors to main roads, impact of relevant factors in traffic planning). In this course, contemporary methods on movement planning will be applied.

**Goals and expected results:**

Introduce students to basic concepts of road traffic planning and transport systems required for urban mobility.

Upon completion of this course, students will be able to:

1. Know the basic concepts of traffic planning.
2. Calculate the demand for movement in different urban areas.
3. Collect and evaluate information related to daily travel requirements.
4. Offer traffic planning alternatives,

5. Understand the role and importance of urban planning,
6. Understand urban plans and know how to clarify such plans

Know the basic criteria for road network planning and provide alternative traffic planning.

**Teaching methodology:**

The content of this course is elaborated through electronic lectures, discussions with students, seminars and visits to production organizations.

**Literature:**

- 1.M.Bixhaku “Planifikimi në komunikacion” Prishtinë, 2011- dispencë
- 2.M.Bixhaku “Detyra të zgjidhura nga planifikimi në komunikacion” Prishtinë, 2016- dispencë
- 3.Cvitanic.D.: “Prometna tehnika i prostorno planiranje prometa”, Građevinskoarhitektonski fakultet, Split
4. Jovic.J. “Saobracajno planiranje”- Beograd

**Course title: Road Traffic Safety**

**Course description:**

Modern approach to traffic safety research. Basic knowledge. Road traffic safety factors. The main causes of traffic accidents. Degree of traffic safety. Man as a factor of traffic safety. Vehicle as a factor of traffic safety. Road as a factor of traffic safety.

**Goals and expected results:**

The main objective of this course is that the student after attending this course will be able to: 1) have knowledge of the most common causes of accidents, 2) to know the main safety factors, 3) to know the preventive measures to avoid road accidents 4) to know the active and passive elements of vehicle safety, 5) to know the main elements of roads and the environment that are related to traffic safety

**Teaching methodology:**

The form of teaching is planned and synchronized between the teacher and the assistant. On this basis, the opportunity is created to transfer knowledge, increase the skills and abilities of students. The form of learning focuses on competencies and learning outcomes. These activities are related to the content of the relevant subject based on the competencies to be acquired. In order to achieve forms and objectives in learning enables greater inclusion of practical training through projects and professional practice, promoting research and better linking between theory and practice.

**Literature:**

1. Ahmet Geca, ” Siguria ne trafik I”, Prishtinë 2016,

2. Ahmet Geca, "Teknikat e sigurisë në trafik I", Prishtinë 2016
3. Ahmet Geca, "Ekspertizat teknike ne Trafik", Prishtinë 2017
4. PIARC: "Road Safety Manual", 2015
5. E. Rune: "The Handbook of Road Safety Measures", Bingley 2015
6. Group of authors, Technician - Building Manual 6, Building Book, Belgrade, 2013.

**Course title: Environmental Engineering**

**Course description:**

Global factors. Theories and models. Characteristics of information management. External information. Global markets. International agreements and conventions. WTO, GATT, free trade zone

**Goals and expected results:**

The main objective of this course is that the student to achieve to the requirements of the global environment.

After completion of the course the student will be able to: 1) recognize factors affecting a global organization, 2) evaluate alternative models for analyzing global business environment, 3) devise a strategy for compliance needs for a foreign intelligence organization, 4) examine the strengths and shortcomings of involvement with a global share, 5) have knowledge about collection, classification and recycling of waste, 6) manage solid waste, 7) recognize the importance of national and international legal regulations in this field, 8) know about the types of impacts on the environment.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills.

Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Naunović, Z., Jaćimović, N., Kostić, D., Ivetić, M., Fundamentals of Environmental Engineering, 2014.
2. Written teaching materials and presentations, from lectures on the subject page.

**Course title: Road Infrastructure****Course description:**

Modern road vehicles. Classification of road vehicles. Systems based on road vehicles. Definitions of engines. Short History of the engines. Separation of engines. Auxiliary systems. Main parts of engines. Cycle of engines. Characteristics of the axis of engines (ecological, energy, exploitation). Types of characteristics. Characteristics of gear. Load characteristics. Universal characteristics. The fuel system of Otto-engines. Systems of gasoline engines. Systems based on the engine. Power transmission systems. Management system. Elements of the system. Separation systems. Braking system. Significance and tasks of the system. Basic characteristics of the braking system. Other equipment in the vehicle.

**Goals and expected results:**

The main objective of this course is to increase student's performance on motor vehicles in traffic. After completion of the course the student will be able to: 1) examine the technical situation regarding road vehicle, 2) identify the technical aspects of road vehicles, 3) examine the technical condition of vehicles 4) develop strategy work in all systems and mechanisms of vehicles, 5) present the main systems of road vehicles, 6) recognize the role and functioning of all road vehicle equipment.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills.

Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Prof.dr.Heset Cakolli, Automjetet Motorike, Prishtine,2015.
2. P. Hamilton: "Vehicle Maintenance and Repair", Geneva 2014.
3. V. Papić: "Održavanje motornih vozila" Saobraćajni Fakultet, Beograd 2013.

**Course title: Traffic Flow Theory****Course description:**

Vehicle classification according to ECE, Vehicle Performance, Technical Characteristics, Wheels and Pneumatics, Power Transmission Process, System and Brake Process Advanced Electronic Systems

**Goals and expected results:**

Familiarization of students with the classification of vehicles according to European norms, Construction of wheels and tires, their technical characteristics, Forces and resistances which act on the vehicle, Braking process, braking forces.

Protrusion results:

Upon completion of this course (subject) students will be able to:

- To know the types of vehicles, their role, the processes they perform, etc.
- To calculate the technical characteristics,
- To calculate the external forces, resistance forces,
- To calculate the forces and moments of braking.

**Teaching methodology:**

Lectures through presentations, exercises with tasks and concrete examples, exercises in the laboratory, seminar papers, tests, discussions.

**Literature:**

1. Dr. sc. Hestet Cakolli, Teoria e lëvizjes së automjeteve, Prishtinë, 2015
2. Dr. sc. Hestet Cakolli, Teoria e lëvizjes së automjeteve, Praktikum, Prishtinë, 2009
3. Reza N. Jazar, Vehicle Dynamics Theory and Application ,Manhattan College,2018

**Course title: German Language I****Course description:**

Themen neu I dhe Themen neu II

Lecture 1-15. Oral and written practice, conversation, grammar (preposition, the past tense of verbs, adjectives - comparison of adjectives, the perfect tense of regular verbs, active and passive voice; subordinated clauses).

**Goals and expected results:**

The objective of this course is students to have knowledge of literature and grammar of German.. After completion of the course the student will be able to: 1) have a solid knowledge of German, 2) write and read in German, 3) communicate to a certain level, 4) acknowledge the fundamental elements of communication, 5) recognize the advanced technologies applied in transportation, 6) the benefits derived from proper application of contemporary transportation technologies.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. On this basis, it is



provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part

**Literature:**

1. G.Stern: "Essential German Grammar", New York 2015
2. P.Coggle: "Willkommen!: Student's Book: A Course in German for Adult Beginners", Berlin 2015
3. Dialog Beruf Starter, Krs und Arbeitsbuch, CD, Fachliteratur fuer Verkehrswissenschaft,2015

**Course title: Drainage System**

**Course description:**

Types of drainage systems (surface and subsurface) and analysis of problems solved by constructing them. Mechanical-physical properties of the soil required for the calculation of drainage. Methods for calculating vertical infiltration. Conditions for the application of subsurface drainage. Elements of subsurface drainage systems based on the horizontal drainage of pipes and classification according to the provisions. Criteria for designing the horizontal drainage of pipes and calculation of drainage system elements: the distance between the, the diameter and drainage fall. The criteria for designing protective filters. Elements and availability of vertical drainage systems (wells) and the criteria for dimensioning. Calculation of vertical drainage elements in stationary and non-stationary conditions. Proof for the calculation of unknown parameters of porous medium. Drainage of buildings in the construction phase. Results of drainage construction in different soil surfaces. Elements of the surface drainage system. Drainage of roads, railways and airports: calculation of system elements. Application of rational theory.

**Goals and expected results:**

The main objective of this course is to acquaint the student with the basic drainage types, characteristics and elements of water drainage systems. Calculation methods of surface and subsurface water drainage. After completing the course, students will be able to: 1) carry out a preliminary solution to the drainage system, 2) hydrological analyses of respective precipitation, 3) calculation of porous medium parameters based on the given results of the research and system based solutions, 4) hydraulic calculations and dimensioning of drainage system elements,5) dimensioning

elements of the drainage system; 6) knowledge of drainage of roads, railways and airports; 7) calculate system elements and apply rational theory.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills.

Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Dimitrije Avakumović, Hydrotechnical Melioration - Elements, Faculty of Civil Engineering, Novi Sad, 2013.
2. Dimitrije Avakumović, Hydrotechnical Melioration - Drainage, Faculty of Civil Engineering, Novi Sad, 2013.  
Dimitrije Avakumović, Miloš Stanić, Hydrotehnic Melioration - a collection of tasks, Faculty of Civil Engineering, Novi Sad, 2015.

**SECOND YEAR**

**Fourth Semester**

**Independent project - thesis**

In the last semester the student is obliged to prepare and publicly defend an independent project, which is evaluated with 30 ECTS credit points. The student should be determined in what field he / she will develop this project and then this project should come as a result of his / her research during the internship in the partner institutions / companies of the Tempulli Academy. Upon successful completion of this project, the student is obliged to write his research work in the form of a dissertation and defend it publicly, which is considered that the student completes the registered studies in full.

## **Specific subjects of Road Safety and Management of Accidents specialization**

### **SECOND YEAR**

#### **Third Semester**

##### **Course title: Traffic Safety Techniques**

###### **Course description:**

Causes of accidents. Analyses and accident blackspots along the road. The basic principles of accident causes. Traffic Safety Factors. Time factor and human factor. Road factor and other aspects. Road factor. Vehicle factor. Incident factor. Road traffic factor.

###### **Goals and expected results:**

Upon completion of this course, students will be able to: 1) recognize the main road accident victims, 2) provided the possibility for knowledge transfer, improvement of students' abilities and skills, 3) provided activities related to the relevant subject content, based on the competencies to be acquired, 4) knows out learning methods and achieving objectives, 5) allow a greater inclusion of practical training through projects, 6) know the road traffic safety factors, 7) analyses and accident blackspots along the road.

###### **Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

###### **Literature:**

1. -Ahmet Geca,"Faktorët e sigurisë ne Trafik", Prishtinë 2016.
2. -Sh. Gjevori: "Siguria rrugore", Prishtinë 2016
3. -R.Elvik: "The Handbook of Road Safety Measures", second edition, Bingley 2014
4. -WHO:" Road Safety Annual Report 2018", OECD 2018.

##### **Course title: Technical Expertise of Accidents**

###### **Course description:**

General information on accidents and their consequences. Breakdown and classification of accidents. Elements of site inspection during traffic accidents. The plan of the scene of accident (graphical

presentation of the place of occurrence). Recognition and sketching (surveillance, review, observation) of the traffic accident location.

Road traffic accident trails, calculating the speeds of vehicles involved in the accident. Graphic-analytical Method - Slibar Diagram. Calculation of lost speed (change of speed) in the process of vehicle deformation during impact with another vehicle or with a barrier. Energy raster.

### **Goals and expected results:**

The purpose of this subject is to provide knowledge and deepen understanding in the analysis and prevention of traffic accidents. After completing this course, the students will be able to: 1) analyze the crash process, 2) know the methods for determining the relevant speeds during the crash process, 3) know the driving elements of the vehicle, 4) be able to use the appropriate methods for determining the degree of damage that is caused during accidents, 5) be able to use the appropriate methods for determining the degree of damage caused during accidents, 6) know the graphical and analytical methods and the Slibar Diagram, 7) determine the collision force and damage caused to the vehicles involved, determine technical issues in traffic accidents.

### **Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

### **Literature:**

1. Geca, A.: Analiza dhe parandalimi i aksidenteve, Prishtinë 2011.
2. Geca, A.: Siguria në trafik II-Teknika e sigurisë në trafik, Prishtinë 2017.
3. Dr.sc. Ahmet Geca: Dinamika, Prishtinë, 2013.  
Mr.ing. Ahmet Geca: Nelineorne oscilacije vozila "Zastava 101" u nestacionarnim uvjetima kretanja (Doktorska disertacija), Prishtinë, 2017.

### **Course title: Reconstruction and Simulation of Accidents**

#### **Course description:**

Application of "Virtual Crash" software in accident analysis. Simulation of vehicle to vehicle accidents. Simulation of accidents involving pedestrians and vehicles. Simulation of accidents

involving vehicle and motorcycle. Determine the speed of motion using software tools. Analyzing deformations and energy raster using software. Introduction to roads with different geometric and sloping parameters.

**Goals and expected results:**

The purpose of this subject is to provide knowledge and deeper understanding for analyzing and simulating software accidents. Upon completion of this course, students will be able to use accident simulation software and to analyze the various technical parameters of importance in the investigation of accidents. 1) Use accident-simulation software, 2) analyze the various technical parameters relevant to accident investigation, 3) engage as experts in case reconstruction of the accident, 4) conduct analysis and expertise of traffic accidents, 5) simulate the design of traffic accidents, 6) present to institutions traffic accident issues, 7) gain significant skills on the use of software systems for the visualization of traffic accidents.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Virtual-Crash (2016) A Simulation Program for Vehicle Accidents.
2. Vehicle vs. Child Pedestrian Collision– Full Scale Crash Tests and Mathematical Simulation, EVU 2017.

**Course title: Vehicles collision theory in road accidents**

**Course description:**

General information on crash or collision analysis in traffic accidents. The process of collision between two vehicles. Determination of direction of impact through relative speed. Classification of crashes between two vehicles according to the direction of impact. The eccentric impact. Impact coefficient during collision of vehicles. Kinematics of pedestrian impact by a vehicle.

**Goals and expected results:**

Introduce students to the specific and dynamic processes of different collision cases between two vehicles and between pedestrian and vehicle. After completing the course, the student will be able to:

1) analyze the collision dynamics, 2) analyze the important parameters covered in the theory of collision between vehicle, 3) know the theory of traffic accidents, 4) know in significant level the kinematics of pedestrian impact by a vehicle, 5) make differences between accidents, 6) know and implement learning methods and to achieve objectives, 7) understanding better connection between theory and practical part.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. Geca, A.: Analiza dhe parandalimi i aksidenteve-Pjesa II, Prishtinë 2011.
2. Dr.sc. Ahmet Geca: Dinamika, Prishtinë, 2013.
3. Mr.ing. Ahmet Geca: Nelineorne oscilacije vozila " Zastava 101" u nestacionarnim uvjetima kretanja (Doktorska disertacija), Prishtinë.

**Course title: Intelligent systems in traffic**

**Course description:**

Intelligent transportation systems; Definition of the systems; Information and communications (cyberspace); Strengthening traffic performance, a more efficient passengers and goods transportation; Improving road safety; The role of telecommunications systems in transport systems; Implementation of public broadcasting in traffic; Usage of cable and mobile public communications networks; Radio links; Design of systems for safe transport.

**Goals and expected results:**

Upon completion of the course, the student will be able to: 1) determine and evaluate system effects, write technical reports; 2) design flexible systems of light signals; 3) determine the need for introduction of an intelligent transportation system by designing it at a conceptual level; 4) design conceptual level of traffic management systems in network using software simulations, 5) design

systems for safe transport, 6) Explain accurately the benefits of applying intelligent systems, 7) Monitor the work of intelligent systems, and prepare relevant reports.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. M. A. Chowdhury, A. Sadek, Fundamentals of Intelligent Transportation Systems Planning, Artech House, 2013.
2. R. Bishop, Intelligent Vehicle Technology and Trends, Artech House, 2010.

**Course title: Transportation of Dangerous Goods**

**Course description:**

Law on transportation of dangerous goods; Preparation for transportation of dangerous goods; The vehicle for transportation of dangerous goods; Special security measures; Actions in case of accident; Measures of controlling the transportation of dangerous goods; Classification and labelling; International agreements; The necessary documentation to carry out the transportation of dangerous goods; Security measures/rejection of transportation of dangerous goods; Transportation of dangerous goods by road (in conformity to ADR rules) and railway (COTIF and RID).

**Goals and expected results:**

Upon completion the course, the student will be able to: 1) manage risk in transportation of dangerous goods system; 2) monitor the implementation of dangerous goods transport; 3) set up an internal control system in transport; 4) help in prevention of incidents; 5) implement security measures for the transport of dangerous goods, 5) 2) apply some of the methods of preventive action, especially those related to route selection that minimizes the risk in the transport of dangerous goods, 6) analyze the procedures applicable in case of adverse events in the database relating to prevention in this field, 7) minimize the expected damage to the environment from potential adverse effects.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods,

such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. M. A. Chowdhury, A. Sadek, Fundamentals of Intelligent Transportation Systems Planning, Artech House, 2013.
2. R. Bishop, Intelligent Vehicle Technology and Trends, Artech House, 2015.

**Course title: Vehicle Diagnostics**

**Course description:**

Diagnosis theory, technical systems working ability, theoretical diagnosis actions, general principles of diagnosis, the correlation between diagnostic parameters and damage characteristics; basic methods for testing/checking parts of transport vehicles; actions for surface diagnosis, visual controls, optical devices, roughness measuring, measuring temperatures with touch, temperature sensors, pyrometer, temperature measuring temperatures by touching; diagnostic actions under working conditions, vibration measurement, diagnosis by analyzing the spread of sound, planning criteria and implementation of maintenance concept in logistic- oriented organizations.

**Goals and expected results:**

The main objective of this course is to familiarize the student with diagnosis of road transport vehicles. Upon completion the course, the student will: 1) have knowledge on diagnosis theory; 2) recognize methods for testing, 3) do checking parts of transport vehicles; 4) know the actions for surface diagnosis, 5) implement and establish methods for control of working parameters, 6) recognize the requirements for developing maintenance concepts, 7) do inspection of technical checking of vehicle.

**Teaching methodology:**

Teaching method is planned and synchronized between the teacher and assistant. Teaching methods, such as lectures and exercises, in methodological and substantive plan are in conformity with the syllabus and based on acquiring necessary knowledge. On this basis, it is provided the possibility for knowledge transfer, improvement of students' abilities and skills. Learning method focuses on



competencies and learning outcome. These activities are related to the relevant subject content, based on the competencies to be acquired. In order to carry out learning methods and achieving objectives, it is allowed a greater inclusion of practical training through projects and professional practice, research promotion and a better connection between theory and practical part.

**Literature:**

1. M. Palnikaj: “Diagnostifikimi i automjeteve”, Prishtinë 2016.
2. T.Denton: “Advanced Automotive Fault Diagnosis, 4th ed: Automotive Technology: Vehicle Maintenance and Repair 4th Edition”, New York 2015.
3. J. Čupera: “Automobily - Diagnostika motorových vozidel I”, Brno 2014.

**SECOND YEAR**

**Fourth Semester**

**Independent project - thesis**

In the last semester the student is obliged to prepare and publicly defend an independent project, which is evaluated with 30 ECTS credit points. The student should be determined in what field he / she will develop this project and then this project should come as a result of his / her research during the internship in the partner institutions / companies of the Tempulli Academy. Upon successful completion of this project, the student is obliged to write his research work in the form of a dissertation and defend it publicly, which is considered that the student completes the registered studies in full.