

## UČNI NAČRT PREDMETA / COURSE SYLLABUS

**Predmet:** Vodenje infrastrukturnih projektov  
**Course title:** Infrastructure Projects Management

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Pravo in management infrastrukture in nepremičnin - 1. stopnja		2	1
Law and Management of Infrastructure and Real Estate – 1st degree		2	1

**Vrsta predmeta / Course type**

Obvezni/compulsory

**Univerzitetna koda predmeta / University course code:**

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
35	0	30	0	0	85	6

**Nosilec predmeta / Lecturer:**

dr. Lidija Kegljevič Zagorc/Lidija Kegljevič Zagorc, PhD

**Jeziki /  
Languages:**

**Predavanja /  
Lectures:** Slovenski jezik/Slovenian

**Vaje / Tutorial:** Slovenski jezik/Slovenian

**Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:**

Vpis v 2. letnik študija.  
Vsaj 80% prisotnost na predavanjih in na vajah.  
Obvezna je izdelava individualne seminarske naloge.  
K izpitu študent(ka) lahko pristopi ko je njegova seminarska naloga ocenjena pozitivno.

**Prerequisites:**

Enrollment in the 2<sup>nd</sup> year study programme.  
At least 80% attendance at lectures and tutorials.  
It is mandatory to prepare an individual seminar paper.  
A student can take the exam when his/her seminar paper has been evaluated positively.

**Vsebina:**

Predmet na dodiplomski ravni študija obravnava tri osnova področja, ki jih združuje v celovito področje vodenja infrastrukturnih projektov, in sicer področja investicijskih procesov, projektnega menedžmenta ter zakonodaje s področja urejanja prostora in graditve objektov.

V okviru predmeta se študentke in študentje seznanijo s celovitostjo in kompleksnostjo vodenja infrastrukturnih projektov ter njegovimi

**Content (Syllabus outline):**

The course at the undergraduate level of study includes three following basic teams into a comprehensive field of infrastructure project management, namely: investment processes, project management and legislation in the field of spatial planning and building.

Within the course, students get acquainted with the integrity and complexity of infrastructure project management and its characteristics.

značilnostmi.

V okviru investicijskih procesov so obravnavani osnovni pojmi in prvine investicijskega procesa (stroški, koristi, analiza stroškov in koristi, tveganja) ter namen in cilj priprave investicijske dokumentacije. Predavanja vključujejo osnovno razlago investicijskega procesa in investicijskega vrednotenja (neto sedanja vrednost, interna stopnja donosnosti), kot podlage za odločanje in razumevanje infrastrukturnih projektov v kontekstu investicijskih naložb.

Drugo področje predavanj vključuje osnove projektnega menedžmenta, kot organizacijske oblike dela primerne za vodenje infrastrukturnih projektov. Projektni način dela in projektni management postajata stalnica in nepogrešljivo orodje v procesih vodenja projektov, doseganja strateških ciljev in dvigovanja konkurenčnosti organizacij. Skozi predavanja so predstavljene osnove in značilnosti projekta, organizacijska struktura projekta (projektna skupina, vodja projekta, deležniki), osnovne zakonitosti projektnega menedžmenta (faze projektnega menedžmenta, merilo uspešnosti projekta, planiranje, nadzor in kontrola ter obvladovanje tveganj), značilnosti vodenja projektnih timov in vloge deležnikov.

Tretje področje predavanj je povezano s razumevanjem prostorskih načrtov prostorskimi akti in graditvijo infrastrukturnih objektov. Študentke in študentje se seznanijo z osnovnimi pojmi prostorskega načrtovanja in graditve objektov, prostorsko in projektno dokumentacijo, postopki umeščanja infrastrukturnih objektov v prostor ter upravnimi postopki povezanimi z graditvijo objektov.

Na podlagi splošnih znanj s področja vodenja infrastrukturnih projektov, se celotno področje osvetli še z obravnavanjem konkretnih primerov in problemskih situacij. Vsebinsko se obravnavajo vprašanja, ki so vezana na vodenje projektov, investicijsko odločanje in graditev objektov.

Na vajah se študentje srečajo s konkretnimi

Within the investment processes, the basic concepts and elements of the investment process (costs, benefits, cost-benefit analysis and risks) and the purpose and goal of preparing investment documentation are discussed. Lectures include a basic explanation of the investment process and investment valuation (net present value, internal rate of return) as a basis for decision-making and understanding of infrastructure projects in the context of investment.

The second area of lectures includes the basics of project management, as organizational forms of work suitable for managing infrastructure projects. The project way of working and project management are becoming a constant and indispensable tool in the processes of managing, achieving strategic goals and raising the competitiveness of organizations. The lectures will present the basics and characteristics of the project, organizational structure of the project (project group, project manager and stakeholders), basic legality of project management (project management phases, project success rate, planning, supervision and control and risk management), management characteristics and the roles of stakeholders.

The third area of lectures is related to understanding spatial planning and building of infrastructure facilities. Students get acquainted with the basic concepts of spatial planning and building of facilities, spatial and project documentation, procedures of spatial planning and administrative procedures related to the building of facilities.

Based on general knowledge in the field of infrastructure project management, the entire field is illuminated by dealing with concrete cases and problem situations. In terms of content, issues related to project management, investment decision-making process and building of facilities are addressed.

primeri vodenja infrastrukturnih projektov. Na svojem primeru določijo vse prvine investicije, opredelijo ustrezno prostorsko plansko podlago in ustrezno dovoljenje za gradnjo. Na vajah izdelajo tudi gantogram oziroma terminski plan izvedbe svoje investicije. Delo na vajah je osnova za pripravo seminarских nalog.

During the exercises, students encounter concrete examples of infrastructure project management. Using their own case, they determine all the elements of the investment, define the appropriate spatial planning basis and the appropriate building permit. During the exercises, they also create a Gantt chart for the implementation of their investment. The work on the exercises is the basis for the preparation of students' seminar papers.

#### **Temeljni literatura in viri / Study Literature:**

1. Andersen, E. S. (2004). Goal directed project management. Effective techniques and strategies. London.
2. Burke, R. (2013). Project Management. Planning and Control Techniques. Založba John Wiley & Sons.
3. Guide to Cost-benefit Analysis of Investment Projects. Economic appraisal tool for Cohesion Policy 2014-2020. Brussels.
4. Hauc, A. (2002). Projektni management, Ljubljana: GV založba.
5. Jones, C. P. (2012). Investments Analysis and Management – 12 th ed. Hoboken (USA): John Wiley & Sons, str 1 do 21.
6. Možina, S., et al. (2002). Management. Nova znanja za uspeh. Didakta, Radovljica.
7. Project Management Institute (2017). A guide to the project management body of knowledge: PMBOK guide. Sixth edition. Newtown Square.
8. Stare, A. (2009). Projektni management. Učno gradivo za študente Evropske pravne fakultete. Evropska pravna fakulteta.
9. Stare, A. (2011). Projektni management. Teorija in praksa. Agencija Poti.
10. Verzuh, E. (2016). The fast forward MBA in Project management. Fifth edition. Založba John Wiley & Sons.
11. Zakonodaja s področja graditve objektov.
12. Zakonodaja s področja javnih financ.
13. Zakonodaja s področja varstva okolja.

#### **Cilji in kompetence:**

Namen predmeta je doseči holistično razumevanje področja vodenja infrastrukturnih projektov, razumevanje principov procesa nastajanja projektov na teoretični ravni ter razumevanje posameznih faz in celote. Razumevanje osnovnih principov študenta vpne v proces vodenja infrastrukturnih projektov, konkretizacija abstraktnih konceptov pa oblikuje povezavo s prakso, ko se projekt preseli na nivo izvedbe. Poleg omenjenega je namen predmeta seznaniti študente s procesom investicijskega odločanja in s projektnim pristopom za uspešno

#### **Objectives and competences:**

The purpose of the course is to achieve a comprehensive understanding of the areas of infrastructure project management, understanding the principles of the project development process at the theoretical level and understanding the individual phases and whole process. Understanding the basic principles involves students in the process of managing infrastructure projects. The concretization of abstract concepts, which is related to the practice, moves the project to the level of implementation. One of the aim of the course is

doseganje ciljev ter z dejavniki uspešne izvedbe projekta, kot so kakovostna priprava, dober projektni tim s sposobnim in izkušenim vodjem projekta ter učinkovita projektna organizacija, podprta z ustrezno projektno kulturo.

V praktičnem delu bodo študentje osvojili metode in tehnike priprave in kontroliranja projekta ter osnove vodenja projektnega tima.

#### Splošne kompetence:

- poznavanje procesov investicijskega odločanja,
- poznavanje projektnega pristopa za doseganje ciljev;
- sposobnost razumevanja procesov priprave, orodij in metod za uspešno izvedbo projekta;
- sposobnost analiziranja, sintetiziranja pridobljenih znanj, predvidevanja rešitev in njihovih posledic;
- sposobnost kritične presoje na različnih stopnjah postopka, interpretiranja podatkov, identifikacije problemov;
- sposobnost uporabiti metodološki pristop od abstraktnega k konkretnemu in obratno;
- pregled nad celovitostjo področja;
- pregled nad zakonodajo;
- sposobnost dela v skupini oz. timu;
- uporaba domače in tuje literature ter drugih virov podatkov;
- obvlada javno predstavitev svojega dela.

#### Predmetno-specifične kompetence:

- sposobnost fleksibilnega prenosa znanj v prakso;
- sposobnost doseganja strateških in operativnih ciljev;
- spretnosti za organiziranje timskega dela;
- komuniciranje s strokovnjaki iz različnih področij ter z različnimi interesnimi skupinami;
- pozna posebnosti načrtovanja, vodenja in izvedbe projekta;
- razume kompleksnost in multidisciplinarnost vodenja projektov in uporablja osvojene tehnike;
- obvlada in razume vpliv posameznih spremenljivk oz. faktorjev;

to acquaint students with the investment decision-making process and the project approach for successfully achieve goals of the project, such as quality preparation, a good project team with a capable and experienced project manager and an effective project organization supported by appropriate project culture.

In the practical part, students will win the methods and techniques of project preparation and supervision and the basic methods of project management.

#### General competences:

- knowledge of investment decision-making processes;
- knowledge of the project approach to achieving the objectives;
- ability to understand the preparation processes, tools and method for successful project implementation;
- ability to analyse, synthesize acquired knowledge, predict the solution and their consequences;
- ability to critically review on various level of procedures, interpret data, identify problems;
- ability to use a methodological approach from the abstract to the concrete and vice versa;
- has an overview of the integrity of the field;
- has an overview of the legislation;
- has ability to work in a group or team;
- uses native and foreign literature and other data sources;
- masters the public presentation of his work.

#### Subject-specific competencies:

- ability to flexibly transfer knowledge into practice;
- ability to achieve strategic and operational goals;
- skills for organizing team work;
- communication with experts from different fields and with different stakeholders;
- knows the special features of the

– delno je sposoben samostojnega odločanja.

planning, managing and implementing the project;

- understands the complexity and multidisciplinary of project management and uses the acquired techniques;
- masters and understands the influence of variables or factors;
- it is partially capable for independent decision-making.

**Predvideni študijski rezultati:**

Študent/študentka:

- razume celovitost, kompleksnost in multidisciplinarnost obravnavnega področja in uporablja osvojene tehnike za njegovo obvladovanje;
- razume povezanost med infrastrukturnimi projekti in investicijskih procesom,
- pozna pojme investicijskega procesa in projektnega menedžmenta;
- razume temeljna načela investicijskega procesa in projektnega menedžmenta;
- pozna metode in tehnike priprave in kontroliranja projekta;
- pozna osnove vodenja projektnega tima;
- pozna postopke s področja urejanja prostora in graditve objektov;
- pozna procese vodenja in doseganja strateških ter operativnih ciljev;
- razvije sposobnosti za uspešno doseganje strateških in operativnih ciljev
- razvije sposobnost za prehajanje od abstraktnih h konkretnim situacijam;
- uporablja kritično vrednotenje posameznih vplivnih faktorjev v razmerju do celote
- je sposoben sodelovati pri načrtovanju in izvedbi projektov kot aktiven subjekt.

**Intended learning outcomes:**

Student:

- understands the complexity and multidisciplinary of the field and use the acquired technique to master it;
- understands the connection between infrastructure projects and investment processes;
- understands the basic principles of project management;
- understands the basic principles of the investment process and project management;
- knows the methods and techniques of preparation and control the project;
- knows the basic of leading project team;
- knows the procedures in the field of spatial planning and building the facilities;
- knows the processes of leadership and achievement of strategic and operational goals;
- develops the abilities for successful achieving strategic and operational objectives;
- develops the ability to move from abstract to concrete situations;
- uses a critical evaluation of individual influencing factors in relation to the whole;
- it is able to participate in the planning and implementation of the projects as an active entity.

**Metode poučevanja in učenja:**

**Learning and teaching methods:**

<p><b>Oblike dela:</b></p> <input checked="" type="checkbox"/> Frontalna oblika poučevanja <input checked="" type="checkbox"/> Delo v manjših skupinah oz. v dvojicah <input checked="" type="checkbox"/> Samostojno delo študentov <input checked="" type="checkbox"/> e-učenje <input checked="" type="checkbox"/> Kombiniran način študija <input type="checkbox"/> drugo (vpišite) _____	<p><b>Types of learning/teaching:</b></p> <input checked="" type="checkbox"/> Frontal teaching <input checked="" type="checkbox"/> Work in smaller groups or pair work <input checked="" type="checkbox"/> Independent students work <input checked="" type="checkbox"/> e-learning <input checked="" type="checkbox"/> Combined study mode <input type="checkbox"/> other _____
<p><b>Metode (načini) dela:</b></p> <input checked="" type="checkbox"/> Razlaga <input checked="" type="checkbox"/> Razgovor/ diskusija/debata <input checked="" type="checkbox"/> Delo z besedilom <input checked="" type="checkbox"/> Proučevanje primera <input checked="" type="checkbox"/> Igra vlog <input type="checkbox"/> Druge vrste nastopov študentov <input type="checkbox"/> Reševanje nalog <input type="checkbox"/> Študijski obiski podjetij ipd. <input type="checkbox"/> Vključevanje gostov iz prakse <input type="checkbox"/> Udeležba na okrogli mizi, na konferenci	<p><b>Teaching methods:</b></p> <input checked="" type="checkbox"/> Explanation <input checked="" type="checkbox"/> Conversation/discussion/debate <input checked="" type="checkbox"/> Work with texts <input checked="" type="checkbox"/> Case studies <input checked="" type="checkbox"/> Role-play <input type="checkbox"/> Different presentation <input type="checkbox"/> Solving exercises <input type="checkbox"/> Field work (e.g. company visits) <input type="checkbox"/> Inviting guests from companies <input type="checkbox"/> Attending round table and conference

Delež (v %) /

Načini ocenjevanja:	Weight (in %)	Assessment:
Način (pisni izpit, ustno izpraševanje, seminarska naloga)		Type (examination, oral, seminar paper):
Pisni izpit ali ustni izpit	75%	Written and oral examination; and seminar paper.
Pozitivno ocenjena seminarska naloga	25%	

**Reference nosilca / Lecturer's references:**

Lidija Kegljevič Zagorc je diplomirala na Fakulteti za gradbeništvo in geodezijo v Ljubljani, Univerza v Ljubljani ter študij nadaljevala na področju ekonomije in upravljanja. Leta 2017 je doktorirala iz področja investicij in trajnostnega razvoja, na Fakulteti za poslovne in upravne vede na Univerzi v Novem mestu. Ima reference in kompetence s področja vodenja infrastrukturnih projektov. Kot članica uprave DARS, d. d. je skrbela za področje gradenj in obnov avtocestnega omrežja v RS.

Trenutno je državna sekretarka na ministrstvu za naravne vire in prostor in je zadolžena za področje varovanja, urejanja in upravljanje voda, za izvajanje evropskih projektov na vodni in gospodarski komunalni infrastrukturi ter za odpravo škod na vodotokih povzročeno z ujmami.

Je avtorica strokovnih in znanstvenih člankov v katerih prepleta področje gradbeništva in ekonomije in s svojimi prispevki sodeluje na domačih in mednarodnih konferencah tako na področju področjih gradbeništva, kot področju ekonomskih ved.

Lidija Kegljevič Zagorc graduated from the Faculty of Civil Engineering and Geodesy in Ljubljana, University of Ljubljana in 1994. After that she continued her economics and management studies and she completed her PhD in the Faculty of Business and Administrative Sciences at the University in Novo mesto . She has references and competences in the field of infrastructure project management. As a member of the management board of DARS, d. d., she was responsible for the construction and

renovation of the motorway network in the Republic of Slovenia. She is currently State Secretary at the Ministry of Natural Resources and Spatial Planning and is responsible for the protection, regulation and management of water, the implementation of European projects on water and economic municipal infrastructure, and the elimination of damage to watercourses caused by floods.

She is the author of professional and scientific articles in which she intertwines the field of construction and economics, and she participates in domestic and international building or economics conferences with her contributions.