

**UČNI NAČRT PREDMETA / COURSE SYLLABUS**

**Predmet:** Sodobne metode poučevanja tehnike  
**Course title:** Advance methods for technical/technological education

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Tehnika – področje izobraževanja, 3. stopnja		2	1/3/4
Education in Engineering, 3rd cycle		2	1/3/4

**Vrsta predmeta / Course type** Izbirni/elective

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

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
15	10				155	6

**Nosilec predmeta / Lecturer:** Kosta Dolenc

**Jeziki / Languages:**  
**Predavanja / Lectures:** Slovenščina / Slovene  
**Vaje / Tutorial:**

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

Osnovno znanje iz didaktike, pedagogike in psihologije.

**Prerequisites:**

Basic knowledge from didactics, pedagogy and psychology.

**Vsebina:**

**Content (Syllabus outline):**

### Predavanja:

Osnovna izhodišča sodobnih poučevalnih metod na področju tehniško-tehnoloških študijev;  
Visokošolska didaktika in tehnično/tehnološki študiji;  
Sodobne metode tehniških študijev v evropskih kurikulih;  
Sodobni inženirski praktikum - idejna zasnova, makro in mikro priprava,  
Organizacija praktičnega izobraževanja v delovnih procesih;  
Načrtovanje in izvajanje učnega procesa;  
Uporaba sodobnih metod in tehnologij pri izvajanju učnega procesa;  
Sodobni načini priprave učnih gradiv;

### Seminar:

Seminar aplikativno dopolnjuje vsebino predavanj z reševanjem praktičnih problemov iz izobraževalnega procesa v inženirski praksi .

### Lectures:

base origin of contemporary methods at technical-technological studies;  
High School didactics in face of technical/technological studies;  
contemporary methods of trechnical studies in the European Curriculum;  
contemporary Engineer practicum - planning of ideas, macro and micro plan;  
organize practical education and training in working process;  
planning and executing educational and training process;  
use of advance methods and technologies for executing educational and training process;  
Contemporary methods for preparing learning materials.

### Seminar:

The seminar applicatively completes the contents of lectures through the solution of practical problems from educational process in Engineers practice.

### **Temeljni literatura in viri / Readings:**

Aberšek, B. (2012). *Didaktika tehniškega izobraževanja med teorijo in prakso* (1. izd., str. 323). Zavod Republike Slovenije za šolstvo.  
Dolenc, K. (2012). *3D modeliranje in vizualizacija s programom SketchUp* (str. 205). Izotech.  
Zapri  
Marentič-Požarnik, B. (2024). *Psihologija učenja in pouka: od poučevanja k učenju* (2. prenovljena izd., str. 320). DZS.

### **Cilji in kompetence:**

- podati poglobljeno teoretično znanje s področja prepoznavanja osnovnih značilnosti delovne, tehničnega in proizvodno – tehničnega usposabljanja za delo,
- ugotoviti mesto inženirske pedagogike v visokošolski didaktiki;
- podati sodobne opredelitve konceptov in modelov v inženirski pedagogiki;
- prikazati praktično uporabo strategij vzgojno – izobraževalnih strategij pri usposabljanju za delo;
- razviti sposobnost za uspešno načrtovanje različnih oblik izobraževanja;

### **Objectives and competences:**

- to represent profound theoretical knowledge in the field of recognizing the basic characteristics of working, technical and production – technical education and training for work;
- found and located the place of Engineers pedagogy in high school didactics;
- to represent modern concept and model definitions of teaching and training in Engineers pedagogy;
- to show practical usage of training – educational strategies to qualify someone for work ;
- develop capability for successful planning

- razviti sposobnosti ljudi za samostojno in kompetentno reševanje praktičnih primerov načrtovanja in vrednotenja učinkov izobraževalnega dela.

and executing different form of education and training;

- to develop the peoples abilities for an independent and competent for solving of practical examples with regard to planning and evaluating the effects of educational work.

#### **Predvideni študijski rezultati:**

##### Znanje in razumevanje:

- poznavanje splošnih kriterijev za načrtovanje delovnih, tehničnih in proizvodno – tehničnih usposabljanj;
- poznavanje osnovnih opredelitev, ki se nanašajo na koncepte in modele v inženirski pedagogiki;
- razumevanje pomena uporabe in priprave strokovne literature ter sodobnih pripomočkov za učinkovit in kakovosten izobraževalni proces.

##### Prenesljive/ključne spretnosti in drugi atributi:

- načrtovanje, priprava in izvedba različnih oblik usposabljanj;
- kombiniranje uporab različnih znanj za praktično načrtovanje strategije izobraževalnega dela;
- izdelava celotnega kurikula za določeno usposabljanje.

#### **Intended learning outcomes:**

##### Knowledge and understanding:

- knowledge of general criteria for planning the working, technical and production – technical training and education;
- knowledge of basic definitions, relating to the concepts and models in Engineers pedagogy;
- understanding of the meaning of using and developing professional literature and modern, as well as working teaching aids for a successful and qualitative training and educational process.

##### Transferable/Key Skills and other attributes:

- planning, preparing and executing different forms of education and training;
- combined usage of various knowledge for planning practical strategy for training – educational work;
- elaboration of complete curriculum for concrete course.

#### **Metode poučevanja in učenja:**

frontalna predavanja,  
vodeno raziskovanje.

#### **Learning and teaching methods:**

frontal lectures,  
guided research.

#### **Načini ocenjevanja:**

Delež (v %) /

Weight (in %) **Assessment:**

Izdelek, individualno raziskovalno delo	<b>50%</b> <b>50%</b>	Output, individual research work.
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**Reference nosilca / Lecturer's references:**

- Dolenc, K., & Brumen, M. (2024). Exploring social and computer science students' perceptions of AI integration in (foreign) language instruction. *Computers and education*, 7(100285), 13. <https://www.sciencedirect.com/science/article/pii/S2666920X24000882>
- Dolenc, K., & Fošnarič, S. (2024). Understanding and responding to generational differences in digital skills in the educational environment. V *Education and society in transition: addressing the challenges of youth and technology* (str. 25–54). Dr. Kovač.
- Dolenc, K., Šorgo, A., & Ploj Virtič, M. (2022). Perspectives on lessons from the COVID-19 outbreak for post-pandemic higher education: continuance intention model of forced online distance teaching. *European journal of educational research*, 11(1), 163–177. [https://pdf.eu-jer.com/EU-JER\\_11\\_1\\_163.pdf](https://pdf.eu-jer.com/EU-JER_11_1_163.pdf)