

UČNI NAČRT PREDMETA/COURSE SYLLABUS

Predmet:	Poročanje v strojništvu - RRP
Course title:	Engineering reporting - RRP
Članica nosilka/UL Member:	UL FS

Študijski programi in stopnja	Študijska smer	Letnik	Semestri
Strojništvo - razvojno raziskovalni program, prva stopnja, univerzitetni	Ni členitve (študijski program)	2. letnik	1. semester

Univerzitetna koda predmeta/University course code: 0545347

Koda učne enote na članici/UL Member course code: 2023-U

Predavanja	Seminar	Vaje	Klinične vaje	Druge oblike študija	Samostojno delo	ECTS
15		15			45	3

Nosilec predmeta/Lecturer: Franc Majdič, Miha Brojan, Nikola Vukašinović, Rok Vrabič

Vrsta predmeta/Course type: Splošni izbirni predmet /Elective general course

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

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

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Vsebina:

Content (Syllabus outline):

<ol style="list-style-type: none"> Proces nastajanja in posredovanja znanja <ul style="list-style-type: none"> spoznavanja obstoječega znanja proces mišljenja in opredelitev raziskovalnega vprašanja posredovanje informacij (sistematičnost, jedrnatost, nazornost, poštenost) Viri obstoječega znanja <ul style="list-style-type: none"> viri s kvantitativno/kvalitativno informacijo viri z objektivno/subjektivno informacijo primarni, sekundarni in tercialni viri Vrste poročil oz. poročanja <ul style="list-style-type: none"> pisno/ustno strokovna/znanstvena/poljudna poročila 	<ol style="list-style-type: none"> The process of forming and conveying the knowledge <ul style="list-style-type: none"> learning about existing knowledge thinking process and definition of the research question conveying the information (system, conciseness, explicitness, honesty) Sources of existing knowledge <ul style="list-style-type: none"> resources with quantitative/qualitative information sources with objective/subjective information primary, secondary and tertiary sources Types of reports (reporting) <ul style="list-style-type: none"> written / oral
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<ul style="list-style-type: none"> - avtorske pravice in plagiarizem <p>4. Zgradba strokovnih poročil</p> <ul style="list-style-type: none"> - koncept IMRAD (Introduction, Methods, Results And Discussion) - koristni napotki pri pisanju strokovnih poročil - pogoste napake, ki jih pri pisanju poročil naredimo - posebnosti poročanja in komuniciranja v znanosti <p>5. Navajanje virov (citiranje)</p> <ul style="list-style-type: none"> - iskanje virov in literature - citiranje (zakaj, kako, kdaj) - vrste citatov (samostojni citat, vrinjeni citat, izpust iz citata, vrinek v citat) - uporaba citatnih orodij za organizacijo referenc in citiranje (Zotero, EndNote, Mendeley) <p>6. Elektronski viri</p> <ul style="list-style-type: none"> - digitalne knjižnice (IEEE Xplore, ACM Digital Library, ISI Web of Science) - aplikacije in orodja - praktični napotki za delo z elektronskimi viri <p>7. Tehnična ureditev strokovnega poročila</p> <ul style="list-style-type: none"> - urejanje teksta - urejanje grafičnih vsebin <p>8. Predstavitev strokovnega poročila</p> <ul style="list-style-type: none"> - verbalna/neverbalna komunikacija - koristni napotki za primeren govorni nastop <p>9. Časovni vidiki priprave in izvedbe poročil</p> <ul style="list-style-type: none"> - orodja za planiranje časa <p>10. Priprava projektnih predlogov</p> <ul style="list-style-type: none"> - postopki in priprava projektne prijave 	<ul style="list-style-type: none"> - technical / scientific / popular reports - copyright and plagiarism <p>4. Structure of technical reports</p> <ul style="list-style-type: none"> - IMRAD concept (Introduction, Methods, Results And Discussion) - useful guidance when writing technical reports - common mistakes when writing reports - features of reporting and communication in science <p>5. Citation of references</p> <ul style="list-style-type: none"> - searching for references and literature - citation (why, how, when) - types of citations (single quote, inserted citation, omission from citation, insertion to citation) - use of citation tools for reference organization and citation (Zotero, EndNote, Mendeley) <p>6. Electronic resources</p> <ul style="list-style-type: none"> - digital libraries (IEEE Xplore, ACM Digital Library, ISI Web of Science) - apps and tools - practical guidelines for working with electronic resources <p>7. Technical editing of the technical report</p> <ul style="list-style-type: none"> - text editing - editing of graphic content <p>8. Presentation of the technical report</p> <ul style="list-style-type: none"> - verbal / non-verbal communication - useful tips for appropriate oral presentation <p>9. Time aspects of the preparation and implementation of reports</p> <ul style="list-style-type: none"> - time planning tools <p>10. Preparation of project proposals</p> <ul style="list-style-type: none"> - procedures and preparation of project application
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Temeljna literatura in viri/Readings:

1. Choosing & Using Sources: A Guide to Academic Research. The Ohio State University, 2018.
2. R. A. Harris. Using sources effectively : strengthening your writing and avoiding plagiarism. Pyczak Publishing, 2017.
3. P. C. Miller, R. Ruegg, N. Araki, M. F. Agnello, M. de Boer. The concise APA handbook. Information Age Publishing, 2017.

Cilji in kompetence:

Cilji:

1. Spoznati principe pisanja strokovnih poročil in sposobnost pisnega poročanja.
2. Spoznati avtorske pravice in kako se izogniti plagiarizmu.
3. Spoznati pravila citiranja in citatna orodja.
4. Sposobnost učinkovite predstavitve strokovnih poročil.

Kompetence:

Objectives and competences:

Objectives:

1. To learn the principles of writing technical reports and the ability to report in writing.
2. To learn about copyright and how to avoid plagiarism.
3. To learn the rules and tools of citation.
4. To gain the ability to effectively present the technical reports.

Competencies:

1. Razumevanje in uporaba principov pisanja strokovnih poročil. 2. Razumevanje avtorskih pravic in plagiarizma. 3. Uporaba pravilnega citiranja in citatnih orodij. 4. Razumevanje in uporaba principov ustnega poročanja.	1. Understanding and using the principles of writing professional reports. 2. Understanding copyrights and plagiarism. 3. The ability to use of correct citation and citation tools. 4. Understanding and using the principles of oral presentation.
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Predvideni študijski rezultati:

<p>Znanja:</p> <p>Študentje se naučijo principov pisanja strokovnih poročil ter pravil citiranja. Obvladajo pisanje različnih vrst strokovnega poročil ter so usposobljeni za njihovo predstavitev. Seznanijo se z avtorskimi pravicami in plagiarizmom.</p> <p>Z1: Poglobljeno strokovno teoretično in praktično znanje na področju poročanja v inženirstvu, podprto s širšo teoretično in metodološko osnovo.</p> <p>Spretnosti:</p> <p>S1.1 Priprava in pisna/ustna predstavitev strokovnih poročil, ki vključujejo tudi uporabo orodij.</p> <p>S1.4 Kritično refleksija.</p>	<p>Intended learning outcomes:</p> <p>Knowledge:</p> <p>The students learn the principles of writing technical reports and the rules of citation. They are proficient in writing different types of professional reports and are trained to present them. They learn about copyright and plagiarism.</p> <p>Z1: Thorough professional theoretical and practical knowledge in the field of engineering reporting, supported by a broader theoretical and methodological basis.</p> <p>Skills:</p> <p>S1.1 Preparation and written/oral presentation of technical reports, that includes the use of tools.</p> <p>S1.4 Critical reflection.</p>
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Metode poučevanja in učenja:

<p>P1 Avditorna predavanja z reševanjem izbranih - za področje značilnih - teoretičnih in praktično uporabnih primerov.</p> <p>P2 Obravnava snovi po urejeni in vnaprej razloženi sistematiki.</p> <p>P6 Interaktivna predavanja</p> <p>P7 Študij literature in razprava</p> <p>P8 Izdelava in predstavitev aplikativnih seminarskih nalog</p>	<p>Learning and teaching methods:</p> <p>P1 Auditorial lectures with solving selected field-specific theoretical and applied use cases.</p> <p>P2 Presenting the content according to the explained system.</p> <p>P6 Interactive lectures.</p> <p>P7 Literature study and discussion.</p> <p>P8 Making and presenting applied seminar exercises.</p>
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Načini ocenjevanja:

Delež/Weight

Assessment:

Pisni izpit.	100,00 %	Written examination.
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Reference nosilca/Lecturer's references:

doc. dr. Miha Brojan

1. SARKAR, S., ČEBRON, Matjaž, **BROJAN, Miha**, KOŠMRLJ, Andrej. *Elastic multipole method for describing deformation of infinite two-dimensional solids with circular inclusions*. Physical review. E. 2021, vol. 103, iss. 5, str. 1-25, ilustr. ISSN 2470-0053. <https://journals.aps.org/pre/abstract/10.1103/PhysRevE.103.053003> [COBISS.SI-ID 64663811]

2. SARKAR, S., ČEBRON, Matjaž, **BROJAN, Miha**, KOŠMRLJ, Andrej. *Method of image charges for describing deformation of bounded two-dimensional solids with circular inclusions*. Physical review. E. 2021, vol. 103, iss. 5, str. 1-34, ilustr. ISSN 2470-0053. <https://journals.aps.org/pre/abstract/10.1103/PhysRevE.103.053004>, DOI: 10.1103/PhysRevE.103.053004. [COBISS.SI-ID 64657923]

3. VENKATESH, Ragunanth, **BROJAN, Miha**, EMRI, Igor, VOLOSHIN, Arkady S., GOVEKAR, Edvard. *Influence of particle size distribution width on GFA index of uniaxially compressed granular materials*. Powder technology. [Print ed.]. Jan. 2021, vol. 377, str. 666-675, ilustr. ISSN 0032-5910. <https://www.sciencedirect.com/science/article/pii/S0032591020308846?via%3Dihub>, DOI: 10.1016/j.powtec.2020.09.020. [COBISS.SI-ID 30054147]

4. PORENTA, Luka, KABIRIFAR, Parham, ŽEROVNIK, Andrej, ČEBRON, Matjaž, ŽUŽEK, Borut, DOLENEC, Matej, **BROJAN, Miha**, TUŠEK, Jaka. *Thin-walled Ni-Ti tubes under compression: ideal candidates for efficient and fatigue-resistant elastocaloric cooling*. Applied materials today. Sep. 2020, vol. 20, f. 1-9, ilustr. ISSN 2352-9415. <https://www.sciencedirect.com/science/article/pii/S235294072030158X?via%3Dihub>, DOI: 10.1016/j.apmt.2020.100712. [COBISS.SI-ID 18414339]

doc. dr. Franc Majdič

1. STRMČNIK, Ervin, **MAJDIČ, Franc**, KALIN, Mitjan. *Influence of a diamond-like carbon-coated mechanical part on the operation of an orbital hydraulic motor in water*. Metals, ISSN 2075-4701, Apr. 2019, vol. 9, iss. 4, f. 1-14, ilustr. <https://www.mdpi.com/2075-4701/9/4/466>, doi: 10.3390/met9040466. [COBISS.SI-ID 16590107]

2. KALIN, Mitjan, POLAJNAR, Marko, KUS, Maja, **MAJDIČ, Franc**. *Green tribology for the sustainable engineering of the future*. Strojniški vestnik, ISSN 0039-2480, Nov.-Dec. 2019, vol. 65, no. 11/12, str. 709-727, SI 90, ilustr. <https://www.sv-jme.eu/sl/article/green-tribology-for-sustainable-engineering-of-the-future/>, doi: 10.5545/sv-jme.2019.6406. [COBISS.SI-ID 16945179]

3. STRMČNIK, Ervin, **MAJDIČ, Franc**. *The pressure and efficiency characteristic of hydraulic gerotor motor with the floating outer ring*. Tehnički vjesnik : znanstveno-stručni časopis tehničkih fakulteta Sveučilišta u Osijeku, ISSN 1330-3651, Apr. 2018, vol. 25, nr. 2, str. 609-615, ilustr. <https://hrcak.srce.hr/199164>. [COBISS.SI-ID 16015643]

4. **MAJDIČ, Franc**, VELKAVRH, Igor, KALIN, Mitjan. *Improving the performance of a proportional 4/3 waterhydraulic valve by using a diamond-like-carbon coating*. Wear, ISSN 0043-1648. [Print ed.], Jan. 2013, vol. 297, iss. 1/2, str. 1016-1024, ilustr., doi: 10.1016/j.wear.2012.11.060. [COBISS.SI-ID 12595995]

doc. dr. Rok Vrabčič

1. URBAS, Uroš, **VRABIČ, Rok**, **VUKAŠINOVIĆ, Nikola**. *Displaying product manufacturing information in augmented reality for inspection*. V: BUTALA, Peter (ur.), GOVEKAR, Edvard (ur.), VRABIČ, Rok (ur.). 52nd CIRP Conference on Manufacturing Systems (CMS), Ljubljana, Slovenia, June 12-14, 2019, (Procedia CIRP, ISSN 2212-8271, vol. 81). Amsterdam: Elsevier. 2019, vol. 81, f. 832-837, ilustr. <https://www.sciencedirect.com/science/article/pii/S221282711930513X>, doi: 10.1016/j.procir.2019.03.208. [COBISS.SI-ID 16675611]

2. ZALETELJ, Viktor, **VRABIČ, Rok**, HOZDIČ, Elvis, BUTALA, Peter. *A Foundational ontology for the modelling of manufacturing systems*. Advanced engineering informatics : the science of supporting knowledge-intensive activities, ISSN 1474-0346, Oct. 2018, vol. 38, str. 129-141, ilustr. <https://www.sciencedirect.com/science/article/pii/S1474034616301264>, doi: 10.1016/j.aei.2018.06.009. [COBISS.SI-ID 16126491]

3. ERKOYUNCU, John Ahmet, AMO, Iñigo Fernández del, ARIANSYAH, Dedy, BULKA, Dominik, **VRABIČ, Rok**, ROY, Rajkumar. *A design framework for adaptive digital twins*. CIRP annals, ISSN 0007-8506, 2020, vol. 69, iss. 1, str. 145-148, ilustr. <https://www.sciencedirect.com/science/article/pii/S0007850620301086?via%3Dihub>, doi: 10.1016/j.cirp.2020.04.086. [COBISS.SI-ID 24173827]

4. KOZJEK, Dominik, **VRABIČ, Rok**, ERŽEN, Gregor, BUTALA, Peter. *Identifying the business and social networks in the domain of production by merging the data from heterogeneous internet sources*. International journal of production

economics, ISSN 0925-5273. [Print ed.], Jun. 2018, vol. 200, str. 181-191, ilustr. <https://www.sciencedirect.com/science/article/pii/S0925527318301518>, doi: 10.1016/j.ijpe.2018.03.026. [COBISS.SI-ID 15977243]

doc. dr. Nikola Vukašinić

1. URBAS, Uroš, **VUKAŠINOVIĆ, Nikola**, DEMŠAR, Ivan. *Prehod v celovito opredelitev CAD-modela (MBD)*. Ventil : revija za fluidno tehniko in avtomatizacijo, ISSN 1318-7279. [Tiskana izd.], feb. 2020, letn. 26, št. 1, str. 38-43, ilustr. [COBISS.SI-ID 17062939]

2. **VUKAŠINOVIĆ, Nikola**, DUHOVNIK, Jože. *Advanced CAD modeling : explicit, parametric, free-form CAD and re-engineering, (Springer tracts in mechanical engineering)*. Cham: Springer, cop. 2019. XI, 253 str., ilustr. ISBN 978-3-030-02398-0. ISBN 978-3-030-02399-7, doi: 10.1007/978-3-030-02399-7. [COBISS.SI-ID 16369947]

3. ČAKŠ, Žiga, ČORLUKA, Željko, DUHOVNIK, Jože, KOKELJ, Gašper, KRAJNC, Matija, LEJLA, Vida, OSELI, Alen, SOMOGYVÁRI, Mónika, VERDEGUER LOPEZ, Javier, **VUKAŠINOVIĆ, Nikola**. *Handküchengerät mit zwei Abtrieben = Hand-held kitchen appliance with two drives : Europäische Patentschrift EP2394546 (B1)*, 2018-08-08. München: Europäisches Patentamt, 2018. 17 f., ilustr. [COBISS.SI-ID 12125723]

4. URBAS, Uroš, VLAH, Daria, **VUKAŠINOVIĆ, Nikola**. *Machine learning method for predicting the influence of scanning parameters on random measurement error*. Measurement science & technology, ISSN 0957-0233. [Print ed.], 2020, str. 1-7, ilustr. <https://iopscience.iop.org/article/10.1088/1361-6501/abd57a>, doi: 10.1088/1361-6501/abd57a. [COBISS.SI-ID 49131523]