

POROČANJE V STROJNIŠTVU - RRP

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	Izbirnost
Strojništvo - razvojno raziskovalni program, prva stopnja, univerzitetni	Ni členitve (študijski program)	2. letnik	1. semester	izbirni

Univerzitetna koda predmeta/University course code:	0545347
Koda učne enote na članici/UL Member course code:	2023-U

Predavanja /Lectures	Seminar /Seminar	Vaje /Tutorials	Klinične vaje /Clinical tutorials	Druge oblike študija /Other forms of study	Samostojno delo /Individual student work	ECTS
15		15			45	3

Nosilec predmeta/Lecturer:	izr. prof. dr. Miha Brojan, doc. dr. Dominik Kozjek, izr. prof. dr. Franc Majdič, izr. prof. dr. Nikola Vukašinić
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Izvajalci predavanj:	
Izvajalci seminarjev:	
Izvajalci vaj:	
Izvajalci kliničnih vaj:	
Izvajalci drugih oblik:	
Izvajalci praktičnega usposabljanja:	

Vrsta predmeta/Course type:	Splošni izbirni predmet / Elective general course
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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):
1. Proces nastajanja in posredovanja znanja - spoznavanja obstoječega znanja - proces mišljenja in opredelitev raziskovalnega vprašanja - posredovanje informacij (sistematičnost, jedrnatost, nazornost, poštenost) 2. Viri obstoječega znanja	1. The process of forming and conveying the knowledge - learning about existing knowledge - thinking process and definition of the research question - conveying the information (system, conciseness, explicitness, honesty)

- viri s kvantitativno/kvalitativno informacijo - viri z objektivno/subjektivno informacijo - primarni, sekundarni in tercijalni viri 3. Vrste poročil oz. poročanja - pisno/ustno - strokovna/znanstvena/poljudna poročila - avtorske pravice in plagiarizem 4. Zgradba strokovnih poročil - 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 5. Navajanje virov (citiranje) - 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) 6. Elektronski viri - digitalne knjižnice (IEEE Xplore, ACM Digital Library, ISI Web of Science) - aplikacije in orodja - praktični napotki za delo z elektronskimi viri 7. Tehnična ureditev strokovnega poročila - urejanje teksta - urejanje grafičnih vsebin 8. Predstavitev strokovnega poročila - verbalna/neverbalna komunikacija - koristni napotki za primeren govorni nastop 9. Časovni vidiki priprave in izvedbe poročil - orodja za planiranje časa 10. Priprava projektnih predlogov - postopki in priprava projektne prijave	2. Sources of existing knowledge - resources with quantitative/qualitative information - sources with objective/subjective information - primary, secondary and tertiary sources 3. Types of reports (reporting) - written / oral - technical / scientific / popular reports - copyright and plagiarism 4. Structure of technical reports - 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 5. Citation of references - 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) 6. Electronic resources - digital libraries (IEEE Xplore, ACM Digital Library, ISI Web of Science) - apps and tools - practical guidelines for working with electronic resources 7. Technical editing of the technical report - text editing - editing of graphic content 8. Presentation of the technical report - verbal / non-verbal communication - useful tips for appropriate oral presentation 9. Time aspects of the preparation and implementation of reports - time planning tools 10. Preparation of project proposals - procedures and preparation of project application
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Temeljna literatura in viri/Readings:

1. Robert Harris. Using Sources Effectively: Strengthening Your Writing and Avoiding Plagiarism. 5th Edition. Routledge. 2017, ISBN-10: 9781138289680 [COBISS.SI-ID [23745510](#)]
2. Paul Chamness Iida, Rachael Ruegg, Mark de Boer, Naoko Araki. The Concise APA Handbook: APA 7th Edition (NA), 2020, ISBN 978-1-64802-184-8 [COBISS.SI-ID [172591363](#)]
3. Paul Chamness Miller, Rachael Ruegg, Naoko Araki. The Concise APA Handbook, Information Age Publishing (1 Feb. 2017), ISBN-10 : 1681237741 e-knjiga na DIKUL

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.

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. Sposobnost učinkovite predstavitve strokovnih poročil. Kompetence: 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.	4. To gain the ability to effectively present the technical reports. Competencies: 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:

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

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

Delež/Weight

Assessment:

Samostojna projektna naloga.	50,00 %	Independent project work.
Ustna predstavitev.	50,00 %	Oral presentation.

Ocenjevalna lestvica:

Grading system:

5 - 10, pri čemer velja, da je pozitivna ocena od 6 - 10	5 - 10, a student passes the exam if he is graded from 6 to 10
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Reference nosilca/Lecturer's references:

Miha Brojan: 1. SARKAR, S., ČEBRON, Matjaž, BROJAN, Miha, KOŠMRLJ, Andrej. <i>Elastic multipole method for describing deformation of infinite two-dimensional solids with circular inclusions</i>. 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. <i>Method of image charges for describing deformation of bounded two-dimensional solids with circular inclusions</i>. 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](#)]

Franc Majdič:

1. ČEGOVIK, Nejc, **MAJDIČ, Franc**. Preizkušanje hidravličnih filtrov : večprehodni test po standardu ISO 16889:2008. *Ventil : revija za fluidno tehniko in avtomatizacijo*. okt. 2018, letn. 24, št. 5, str. 382-389, ilustr. ISSN 1318-7279. [COBISS.SI-ID [16359451](#)] (1.01)
2. STRMČNIK, Ervin, **MAJDIČ, Franc**. Določitev izkoristkov črpalk in hidravličnih motorjev. *Ventil : revija za fluidno tehniko in avtomatizacijo*. feb. 2017, letn. 23, št. 1, str. 32-39, ilustr. ISSN 1318-7279. [COBISS.SI-ID [15331611](#)] (1.01)
3. ČELIK, Anže, JERMAN, Boris, **MAJDIČ, Franc**. Design guidelines for non-standard plugs. V: LOVREC, Darko (ur.), TIČ, Vito (ur.). *International conference Fluid Power 2023 : conference proceedings : [Maribor, Slovenia, 20th - 21st September 2023]*. 1st ed. Maribor: University of Maribor, University Press, 2023. Str. [135]-152, ilustr. ISBN 978-961-286-782-9. [COBISS.SI-ID [165512963](#)] (1.08)
4. NOVAK, Nejc, TRAJKOVSKI, Ana, BARTOLJ, Jan, PUSTAVRH, Jan, **MAJDIČ, Franc**. Gear pump hydraulic testing and simulation. V: LOVREC, Darko (ur.), TIČ, Vito (ur.). *International conference Fluid Power 2023 : conference proceedings : [Maribor, Slovenia, 20th - 21st September 2023]*. 1st ed. Maribor: University of Maribor, University Press, 2023. Str. [235]-244, ilustr. ISBN 978-961-286-782-9. [COBISS.SI-ID [165516291](#)](1.08)
5. STRMČNIK, Ervin, **MAJDIČ, Franc**. Analytical, numerical and experimental approaches to improving the performance indices of an orbital hydraulic motor : chapter 14. V: SULTAN, Ibrahim A. (ur.), PHUNG, Truong H. (ur.). *Positive displacement machines : modern design innovations and tools*. London: Elsevier, Academic Press, cop. 2019. Str. 399-422, ilustr. ISBN 978-0-12-816998-8. DOI: 10.1016/B978-0-12-816998-8.00014-5. [COBISS.SI-ID [16762395](#)] (1.16)

Dominik Kozjek:

1. **KOZJEK, Dominik**, VRABIČ, Rok, KRALJ, David, BUTALA, Peter. Interpretative identification of the faulty conditions in a cyclic manufacturing process. *Journal of manufacturing systems*. Apr. 2017, vol. 43, part 2, str. 214-224, ilustr. ISSN 0278-6125. <http://www.sciencedirect.com/science/article/pii/S0278612517300304>, Repozitorij Univerze v Ljubljani – RUL, DOI: 10.1016/j.jmsy.2017.03.001. [COBISS.SI-ID [15458075](#)].
2. VRABIČ, Rok, **KOZJEK, Dominik**, MALUS, Andreja, ZALETELJ, Viktor, BUTALA, Peter. Distributed control with rationally bounded agents in cyber-physical production systems. *CIRP annals*. 2018, vol. 67, iss. 1, str. 507-510, ilustr. ISSN 0007-8506. <https://www.sciencedirect.com/science/article/pii/S0007850618300611>, Repozitorij Univerze v Ljubljani – RUL, DOI: 10.1016/j.cirp.2018.04.037. [COBISS.SI-ID [16026651](#)].
3. **KOZJEK, Dominik**, VRABIČ, Rok, KRALJ, David, BUTALA, Peter. A data-driven holistic approach to fault prognostics in a cyclic manufacturing process. V: *The 50th CIRP Conference on Manufacturing Systems*, May 3rd - 5th, Taichung, Taiwan. The 50th CIRP Conference on Manufacturing Systems, May 3rd - 5th, Taichung, Taiwan. Taichung: International school of technology and management: Feng Chia Universtiy, 2017. Vol. 63, f. 664-669, ilustr. *Procedia CIRP*, vol. 63. ISSN 2212-8271. <https://www.sciencedirect.com/science/article/pii/S221282711730255X?via%3Dihub>, Repozitorij Univerze v Ljubljani – RUL, DOI: 10.1016/j.procir.2017.03.109. [COBISS.SI-ID [15509787](#)].
4. VRABIČ, Rok, **KOZJEK, Dominik**, ÖZTÜRK, Erdem, TUNCER TUNÇ, L., MALUS, Andreja, BUTALA, Peter. Identification of the CIRP expertise network based on public data. V: *WANG, Lihui (ur.). 51st CIRP Conference on Manufacturing Systems*, 16-18 May, 2018, Stockholm, Sweden. 51st CIRP Conference on Manufacturing Systems, 16-18 May, 2018, Stockholm, Sweden. [Amsterdam etc.]: Elsevier,

2018. Vol. 72, f. 165-168, ilustr. Procedia CIRP, Vol. 72. ISSN 2212-8271.

<https://www.sciencedirect.com/science/article/pii/S2212827118302622?via%3Dihub>, Repozitorij Univerze v Ljubljani – RUL, DOI: 10.1016/j.procir.2018.03.107. [COBISS.SI-ID [16189979](#)].

5. HOZDIĆ, Elvis, **KOZJEK, Dominik**, BUTALA, Peter. A cyber-physical approach to the management and control of manufacturing systems. Strojniški vestnik. Jan. 2020, vol. 66, no. 1, str. 61-70, si 8, ilustr. ISSN 0039-2480. <https://www.sv-jme.eu/article/a-cyber-physical-approach-to-the-management-and-control-of-manufacturing-systems/>, Digitalna knjižnica Slovenije - dLib.si, Repozitorij Univerze v Ljubljani – RUL, DOI: 10.5545/sv-jme.2019.6156. [COBISS.SI-ID [17016347](#)].

Nikola Vukašinović:

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**. *Handkühbengerät 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](#)]