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| **UČNI NAČRT PREDMETA / COURSE SYLLABUS** | | | | | | | | | | | | | | | | | |
| **Predmet:** | | | Seminar iz elektroenergetike | | | | | | | | | | | | | | |
| **Course title:** | | | Seminar in Electrical Power Engineering | | | | | | | | | | | | | | |
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| **Študijski program in stopnja**  **Study programme and level** | | | | | **Študijska smer**  **Study field** | | | | | | | | **Letnik**  **Academic year** | | **Semester**  **Semester** | | |
| Podiplomski magistrski študijski program druge stopnje Elektrotehnika | | | | | Elektroenergetika | | | | | | | | 2 | | 1 | | |
| 2nd cycle masters study programme in Electrical Engineering | | | | | Electrical Power Engineering | | | | | | | | 2 | | 1 | | |
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| **Vrsta predmeta / Course type** | | | | | | | | | | | | Obvezni-strokovni / Compulsory professional | | | | | |
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| **Univerzitetna koda predmeta / University course code:** | | | | | | | | | | | | 64286 | | | | | |
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| **Predavanja**  **Lectures** | **Seminar**  **Seminar** | | | **Vaje**  **Tutorial** | | | **Klinične vaje**  **work** | | | | **Druge oblike študija** | | | **Samost. delo**  **Individ. work** | |  | **ECTS** |
| 15 |  | | | 60 | | |  | | | |  | | | 75 | |  | 6 |
|  | | | | | | | | | | | | | | | | | |
| **Nosilec predmeta / Lecturer:** | | | | | Marko Čepin | | | | | | | | | | | | |
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| **Jeziki /**  **Languages:** | | **Predavanja / Lectures:** | | | | slovenski in po potrebi angleški / Slovenian and English, if necessary | | | | | | | | | | | |
| **Vaje / Tutorial:** | | | | slovenski in po potrebi angleški / Slovenian and English, if necessary | | | | | | | | | | | |
| **Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:** | | | | | | | | |  | **Prerequisits:** | | | | | | | |
| Vpis v letnik predmeta | | | | | | | | |  | Enrolment in the year of the course | | | | | | | |
| **Vsebina:** | | | | | | | |  | | **Content (Syllabus outline):** | | | | | | | |
| Identifikacija problemov na področju elektroenergetike.  Zbiranje podatkov o problemih in možnih rešitvah v strokovni literaturi v knjižničnih zbirkah, v bazah podatkov na internetu, ter pri ustreznih poslovnih subjektih.  Izbira metod za reševanje problemov.  Določitev potrebnih korakov za rešitev problemov.  Preverjanje možnih rešitev problemov z uporabo pridobljenih znanj in računalniških in drugih orodij.  Izdelava in ustna predstavitev pisnega poročila o opravljenem delu. | | | | | | | |  | | Identification of problems in the area of ​​electric power systems.  The collection of data about problems and possible solutions in the literature: library collections, databases on Internet, and at the relevant business entities.  The selection of methods to solve problems.  Determination of the necessary steps to solve the problems.  Verifying the possible solutions with the use of acquired knowledge, computer codes and other tools.  Preparation and oral presentation of a written report on the work done. | | | | | | | |

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| **Temeljni literatura in viri / Readings:** | | | | | |
| 1. Encyclopedia of Energy, Elsevier Inc, 2004 2. Adrian Wallwork, English for Writing Research Papers, Springer, 2011 3. ČEPIN, Marko. Assessment of power system reliability. London: Springer, 2011. | | | | | |
| **Cilji in kompetence:** | |  | | **Objectives and competences:** | |
| Cilj seminarja je študenta vključiti v raziskovalno in razvojno delo ter ga naučiti povezati in ustrezno uporabiti pridobljena strokovna znanja s področja elektroenergetike na realnih primerih. Študent si bo z izdelavo in predstavitvijo seminarja nabral izkušnje, ki mu bodo koristile pri samostojni izdelavi diplomske naloge. | |  | | The objective of the seminar is to enable students to participate in research and development, and to teach them how to connect the acquired skills in the field of electric power industry with solving of the real problems. The student will get the experience for writing the thesis. | |
| **Predvideni študijski rezultati:** | | |  | **Intended learning outcomes:** | |
| Znanje in razumevanje  Študent se bo na konkretnem primeru iz prakse naučil identificirati problem, poiskati ustrezno rešitev in jo preveriti z uporabo inženirskega znanja in ustreznih pripomočkov.  Uporaba  Pridobljena znanja in izkušnje bo lahko uporabil najprej pri izdelavi diplomske naloge, kasneje pa pri reševanju problemov s katerimi se bo srečal v svojem poklicnem življenju.  Refleksija  Študent bo ustrezno ovrednotil med študijem pridobljena strokovna znanja in ocenil njihovo uporabnost pri reševanju problemov. Spoznal bo tudi način prenosa pridobljenega teoretičnega znanja v rešitve praktičnih primerov.  Prenosljive spretnosti  Študent bo znal identificirati problem in poiskati ter preveriti ustrezno rešitev. Poleg tega bo znal rezultate svojega dela tudi podati v pisnem poročilu in jih ustno predstaviti. | | |  | Knowledge and understanding  The student will be able to identify problem from practice, to check the use of engineering knowledge and relevant literature and to find a solution.  Application  Acquired knowledge and experience will be used for writing of thesis, and later in solving the problems that will face in their professional life.  Reflection  Students will evaluate the acquired skills during the study and will assess their usefulness for solving problems. They will learn how to use the theoretical knowledge when finding the solutions of practical problems.  Transferable skills  Students will be able to identify the problem and find the solution. Student will be able to prepare a written report documenting the problem. | |
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| **Metode poučevanja in učenja:** | | |  | **Learning and teaching methods:** | |
| Predavanja, seminarsko delo oz. laboratorijske vaje oz. mentorsko vodeno projektno delo. | | |  | Lectures, seminar work or laboratory work or project oriented work. | |
| **Načini ocenjevanja:** | Delež (v %) /  Weight (in %) | | | | **Assessment:** |
| Ocena napisanega seminarja in njegov zagovor. | 100% | | | | Assessment of written seminar and its presentation. |
| **Reference nosilca / Lecturer's references:** | | | | | |
| 1. ČEPIN, Marko. Assessment of power system reliability. London: Springer, 2011. 2. ČEPIN, Marko. Advantages and difficulties with the application of methods of probabilistic safety assessment to the power systems reliability. Nucl. Eng. Des., 2012, vol. 246, str. 134-140 3. BRICMAN REJC, Živa, ČEPIN, Marko. Izboljšana metoda za oceno zanesljivosti proizvodnje v elektroenergetskem sistemu. Elektrotehniški vestnik., 2013, letn. 80, št. 1/2, str. 57-63. 4. BRICMAN REJC, Živa, ČEPIN, Marko. Estimating the additional operating reserve in power systems with installed renewable energy sources. *International journal of electrical power & energy systems*, Nov. 2014, vol. 62, str. 654-664. 5. GJORGIEV, Blaže, KANČEV, Duško, ČEPIN, Marko, VOLKANOVSKI, Andrija. Multi-objective unit commitment with introduction of a methodology for probabilistic assessment of generating capacities availability. *Engineering applications of artificial intelligence*, jan. 2015, vol. 37, str. 236-249. | | | | | |