Course title: IT and knowledge management

Teacher(s): Marija D. Blagojević, Miloš Ž. Papić

Course status: elective

Number of ECTS credits: 10

Condition: None

Course objectives

Objectives are defined by innovations in the spiral of product life cycle (for example, IT, systems and knowledge management) to: 1) familiarize candidates with the needs of planning knowledge upgrades; 2) research on the innovation of knowledge sources, on projects that include practical problems, including the finalization of part of the knowledge from the relevant sub / area; 3) checking the independence of the candidate in the chosen field of knowledge; 4) improving the solution of the problem.

Learning outcomes

The candidate is able to research and manage knowledge (for example and by life stages of IT products / systems / processes) so that independently: 1) plans continuous improvement of knowledge, 2) implements research project, organizes processes, compares index parameters of innovation, applies acquired knowledge in solving real problems, 3) self-assesses the level of (and its) scientific results (by clusters of knowledge innovation), 4) contributes to the improvement of the expected level.

Contents

Theoretical classes

The process of research work (in addition to getting acquainted with the methodology, in the selected sub / area and in comparison with IT and other areas of greatest intensity of innovation) includes:

1- selection of thematic sub-areas (according to the standardized SRPS and international ISO / IEC classification of all areas of work and creativity - ICS = 01 to 99, for IT - ICS = 35, [4], [5]),

2- defining the subject of work, methodology of work, goals of work (in accordance with the goals of the subject), realization of research (data collection, processing and analysis of results),

3- defining clusters for self-assessment of needs, possibilities and outcomes in the realization of knowledge innovation (daily, weekly, monthly and annually),

4- analyzing the contribution to the improvement of problem solving (on examples of modeling excellence): systems, products, processes, activities and tasks.

Practical classes

It is performed through consultations and research work in the chosen domain, with sources of knowledge (on examples of IT products - software and design services), including standardized phases:

1- project planning according to the lines of innovation trends of knowledge sources in selected sub-areas,

2- preparation of the paper with determination and comparison of quantitative indices (quantities and values of knowledge sources),

3- checking the results of work, metrics, evaluation and quantitative evaluation of results,

4- proposals for improving the "critical" elements of the model of excellence.

Recommended literature

[1] Micić, Ž., IT in integrated systems, Decision of the Scientific-Teaching Council of the Technical Faculty, No. VIII-1232/14 of 13 June 2007, COBISS.SR-ID 146094860, ISBN 978-86-901809-6-7 , Technical Faculty Čačak, 2008

[2] Micic Zivadin, Micic Milos, Blagojevic Marija, "ICT innovations at the platform of standardization for knowledge quality in PDCA", Computer Standards and Interfaces, Volume 36, Issue 1, (2013) pp. 231-243. ISSN 0920-5489

[3] Micić Živadin, Blagojević Marija, Micić Miloš, "Innovation and knowledge trends through standardization of IT applications", Computer Standards and Interfaces, Volume 36, Issue 2, Issue 2, (2014) pp. 423-434. ISSN 0920-5489

[4] *** ISO, ISO Store, Standards catalog, 35: IT, http://www.iso.org/iso/home/store/catalogue_ics.htm,

[5] *** ISS - Institute for Standardization of Serbia: http://www.iss.rs/, http://www.iss.rs/standard/advance_search.php

Number of active classes: 7	Theory: 5	Practice: 2

Teaching methods

Lectures, consultations and study research work with the realization of theoretical and practical interactive hybrid teaching, with cooperative study research and problem solving in the chosen domain of knowledge.

Evaluation (maximum number of points 100)

Prerequisites: 50 points

Final part of the exam: 50 points

Ways of testing the knowledge may vary: (written tests, oral exam, project presentation, seminars etc.)

*maximum length 1 A4 page