

Information sheet for the course

ELECTRONIC AND COMMUNICATION SYSTEMS AND EQUIPMENT IN SECURITY AND SAFETY SCIENCE

University:	Technical University in Zvolen
Faculty:	Faculty of Wood Science and Technology
Course unit code:	EKSBV-D
Course unit title:	Electronic and Communication Systems and Equipment in Security and Safety Science

Planned learning activities and teaching methods:

lecture 2 hours weekly / 26 hours per semester of study (on-site method)
26 hours per semester of study (combined method)

Credits allocated:	7
Recommended semester/trimester:	Fire Safety and Fire Protection – doctor (profilový, part-time) Fire Safety and Fire Protection – doctor (profilový, full-time)
Level of study:	3.
Prerequisites for registration:	none

Assesment methods:

Students will be credited with a minimum of 60 points out of a total of 100 points for the course's rating. Rating of the course: 30 points for elaborating the written project, 10 points for elaborating the presentation based on a literary research on the issue solved in connection with the dissertation thesis, and 60 points for an exam – oral answer. To obtain an A rating, it is necessary to obtain at least 95 points, to obtain B rating at least 85 points, C rating at least 75 points, D rating at least 65 points and E rating at least 60 points.

Learning outcomes of the course unit:

The student has knowledge of electronic communication systems and means used in rescue services as well as of electronic systems for increasing of fire protection and safety. He will be able to use the acquired knowledge in solving his dissertation and in performing complex tasks in the field of safe and security sciences.

Course contents:

Integrated Rescue System SR (IRS), structure and importance of IRS. Telecommunication infrastructure (LAN, Internet, SITNO radio network, GSM mobile network, 112 emergency call system, GIS system, satellite navigation systems-GPS, Galileo, e-Call systems, upcoming NSDI and e-Health systems). Legislative framework, main parts and topology of electrical fire signaling systems (EPS). Rules for the installation and fitting of EPS in buildings.

Planned learning activities:	Direct contact – daily form (participation in lectures 26 hours, consultations 26 hours). Indirect contact-daily form (60 hours of self-study, 15 hours of literature review, development of the project 30 hours, 18 hours of exam preparation). Direct contact-external form (participation in lectures 26 hours, consultations 26 hours). Indirect contact-external form (self-study 60 hours, 15 hours of literature review, development of the project 30 hours, exam preparation 18 hours).
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Recommended or required reading:**Recommended:**

Data sharing between Emergency Services [online]. Brussel, 2015. Dostupné na: <http://www.eena.org/publications/data-sharing-between-emergency-services#>. VxDR JjCLSUK.

DOBOŠ, Ľ., DÚHA, J., MARCHEVSKÝ, S., WIESER, W. 2002. Mobilné rádiové siete. Žilina: EDIS vydavateľstvo ŽU. 312 s. ISBN 80-7100-936-9.

DUDÁČEK, A. 2008. Automatická detekce požáru. Ostrava: VŠB. 98 s. ISBN: 978-80-7385-060-9.

NATO, 2009, STANAG 4609 JAIS (Edition 3) – NATO Digital Motion Imagery Standard, NATO Standardization Agency
PRASDANA, R. 2017. Information systems architecture for fire emergency response. Journal of Enterprise Information Management 30(4): 605-624. DOI: 10.1108/JEIM-12-2015-0120.

U.S. Fire Administration. Voice Radio Communications Guide for the Fire Service. Washington DC, 2016, 109 p.

VAN PERSIE, M., OOSTDIJK, A., FIX, J., VAN SIJL, M.C., EDGARDH, L. 2012. Real-time UAV based geospatial video integrated into the fire brigades crisis management GIS system. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences – ISPRS Archives, 38(1): 173-175. Dostupné na: <https://doi.org/10.5194/isprsarchives-XXXVIII-1-C22-173-2011>.

Zákon NR SR č. 129/2002 Z.z. o Integrovanom záchrannom systéme (v znení neskorších noviel).

Language of instruction:

Slovak, English

Notes:**Courses evaluation:**

Assessed students in total: 0

Name of lecturer(s):

doc. Ing. Ivan Kubovský, PhD. (examiner, instructor, lecturer, person responsible for course, tutor) - slovak, english

Last modification:

22. 8. 2022

Supervisor:

doc. Ing. Ivan Kubovský, PhD. and programme supervisor