



JOHN WESLEY THEOLOGICAL COLLEGE  
COURSE TEMATICS



<b>Course:</b> Protection of Critical Infrastructure	<b>Course type:</b> practical course.	<b>Credits:</b> 4	<b>Course ID:</b> KATK 164
<b>Course responsible:</b> Dr. George Potóczki PhD.	<b>Programme type:</b> Lecture	<b>Hours/Week</b> 2	<b>Assessment:</b> exam
<b>Course objectives:</b> Reasons for protection of critical infrastructure/vital components. Challenges, risks, threats. Familiarization with the legal background, sectoral regulations and the procedure of the practice.			
<b>Competencies to be improved:</b> <u>Knowledge:</u> Gets acquainted with the basic elements and terminological problems of the protection of critical infrastructure/vital system components. International outlook. <u>Ability:</u> Understands and manages the legal background conditions of critical infrastructure, methods of designation, identification and sustainable protection. <u>Attitude:</u> Able to follow the complex way of thinking of the designated professional field, to integrate changes <u>Autonomy and responsibility:</u> He/she is aware of the changing security environment, the assessment of domestic and international situations, he/she knows the process of defense.			



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## Compulsory literature:

### Presentations

Treaty of Lisbon. 2007.

<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2007:306:FULL:EN:PDF> Download: 18th Aug 2021

European Programme for Critical Infrastructure Protection.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3AI33260> Download: 18th Aug 2021

Protecting critical infrastructure. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:jl0013> Download: 18th Aug 2021

Identification and designation of European critical infrastructures and the assessment of the need to improve their protection.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0114> Download: 18th Aug 2021

The ERNCIP Project Platform.

<https://erncip-project.jrc.ec.europa.eu/> Download: 18th Aug 2021

EU and critical infrastructure protection.

<https://www.msb.se/en/about-msb/international-co-operation/cooperation-with-eu/eu-and-protection-of-essential-services/> Download: 18th Aug 2021

CIWIN Critical Infrastructure Warning Information Network.  
[https://ec.europa.eu/home-affairs/what-we-do/networks/critical\\_infrastructure\\_warning\\_information\\_network\\_en](https://ec.europa.eu/home-affairs/what-we-do/networks/critical_infrastructure_warning_information_network_en)  
Download: 18th Aug 2021

CIWIN [https://www.me.government.bg/files/useruploads/files/ciwin\\_en.pdf](https://www.me.government.bg/files/useruploads/files/ciwin_en.pdf) Download: 18th Aug 2021

European Reference Network for Critical Infrastructure Protection Handbook Luxembourg. 2018. ISBN 978-92-79-85967-0 <https://erncip-project.jrc.ec.europa.eu/sites/default/files/ERNcip%20Handbook%202018.pdf>

Download: 18th Aug 2021

Specific Programme: Prevention, preparedness and consequence management of terrorism (2007-2013).

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:l33262> Download: 18th Aug 2021

Critical Foundations. Protecting America's Infrastructures. The Report of the President's Commission on Critical Infrastructures Protection; Washington, 1997. Appendix B, Glossary. B-2. pp.1-192. <https://fas.org/sgp/library/pccip.pdf>  
Download: 8th Febr 2015.

Uniting And Strengthening America By Providing Appropriate Tools Required To Intercept And Obstruct Terrorism (USA Patriot Act) of 2001. Public Law 107-56-Oct. 26, 2001. pp.1-132.  
<http://www.selectagents.gov/resources/USApatriotAct.pdf> Download: 5th Febr 2015.

National Security Strategy 2013. USA. 2013. pp.1-14.



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[https://www.utexas.edu/lbj/sites/default/files/file/news/National%20Security%20Strategy%202013%20\(Final%20Draft\).pdf](https://www.utexas.edu/lbj/sites/default/files/file/news/National%20Security%20Strategy%202013%20(Final%20Draft).pdf) Download: 15th Jan 2015.

Methodologies for the identification of Critical Information Infrastructure assets and services. Enisa. Draft, Version 0.5, TLP Amber, September 2014 ISBN 978-92-9204-106-9. pp.1-43. <http://www.enisa.europa.eu/activities/Resilience-and-CIIP/critical-infrastructure-and-services/Methodologies-for-identification-of-ciis/methodologies-for-the-identification-of-ciis> Download: 7th March 2015.

Science Applications International Corporation /SAIC/. Protecting a country is a full-time job. p.1. <http://www.saic.com/services-solutions/crisis-management-security/critical-infrastructure/> Download: 6th April 2015.

Business insider. Markets. The 10 Biggest Risks The World Faces in 2015. <http://www.businessinsider.com/eurasia-group-10-risks-for-2015-2015-1?op=1> pp.1-4. Read more: <http://www.businessinsider.com/eurasia-group-10-risks-for-2015-2015-1?op=1#ixzz3X15Qx2PW> Download: 23th Febr 2015.

Australian Government: Attorney-General's Department. Emergency Management in Australia. Concepts and Principles. Manual Number 1. Commonwealth of Australia 2004 ISBN 0-9750474-6-9. pp.1-22. <https://www.em.gov.au/Documents/Manual01-EmergencyManagementinAustralia-ConceptsandPrinciples.pdf> Download: 3th April 2015.

Gerhard Emmanuel Lenski: Ecological-Evolutionary Theory: Principles and Applications. Printed and bound in United States of America. ISBN-13: 978-1594511011 pp.1-253. <http://www.amazon.com/Ecological-Evolutionary-Theory-Applications-Gerhard-Lenski/dp/1594511012> Download: 12th Jan 2015.

## Recommended literature:

Key Truths About Critical Infrastructure Protection. <https://www.itbusinessedge.com/security/critical-infrastructure-protection/> Download: 18th aug 2021

Critical Infrastructure Protection Challenges in 2018. <https://www.lanner-america.com/blog/critical-infrastructure-protection-challenges-2018-2/> Download: 18th aug 2021

Critical Infrastructure Protection. <https://www.thelightningpress.com/critical-infrastructure-protection/> Download: 18th aug 2021

Protection of critical infrastructure. <https://www.kurtsec.com/our-solutions/protection-of-critical-infrastructure/> Download: 18th aug 2021

Critical Infrastructure Protection. <https://globalcomva.com/critical-infrastructure-protection/> Download: 18th aug 2021

Critical Infrastructure Protection Looks Inward. <https://www.afcea.org/content/critical-infrastructure-protection-looks-inward> Download: 18th aug 2021

Critical Infrastructure Protection: Why it is Essential Today. <https://infopulse-scm.com/articles/critical-infrastructure-protection-why-it-is-essential-today/> Download: 18th aug 2021

Defending Quality of Life through Critical Infrastructure Protection. <http://f3magazine.unicri.it/?p=335> Download: 18th aug 2021

What	Value	Can	AI	Create	in	Critical	Infrastructure	Protection?
<a href="https://www.securityworldmarket.com/int/News/Advert/what-value-can-ai-create-in-critical-infrastructure-protection">https://www.securityworldmarket.com/int/News/Advert/what-value-can-ai-create-in-critical-infrastructure-protection</a> Download: 18th aug 2021								
Process of critical infrastructure protection. <a href="https://www.researchgate.net/figure/Process-of-critical-infrastructure-protection_fig1_319130983">https://www.researchgate.net/figure/Process-of-critical-infrastructure-protection_fig1_319130983</a> Download: 18th Aug 2021								
Critical	Infrastructure	Protection	and	Uncertainty	Analysis.	file:///C:/Users/user/Downloads/Chap.8.Mosadeghi_et_al_2c_Critical_infrastructure_protection_and_uncertainty_analysis%20(1).pdf Download: 18th aug 2021		
Strategies to Secure Critical Infrastructure. <a href="https://www.bankinfosecurity.asia/strategies-to-secure-critical-infrastructure-a-8575">https://www.bankinfosecurity.asia/strategies-to-secure-critical-infrastructure-a-8575</a> Download: 18th aug 2021								
How IT Resilience Gaps Impact Your Business. <a href="https://www.bankinfosecurity.asia/whitepapers/how-resilience-gaps-impact-your-business-w-7733">https://www.bankinfosecurity.asia/whitepapers/how-resilience-gaps-impact-your-business-w-7733</a> Download: 18th aug 2021								
The first ECSCI Workshop on Critical Infrastructure Protection. <a href="http://www.resistoproject.eu/eventi/the-first-ecsci-workshop-on-critical-infrastructure-protection/">http://www.resistoproject.eu/eventi/the-first-ecsci-workshop-on-critical-infrastructure-protection/</a> Download: 18th aug 2021								
Symantec 2010 Critical Infrastructure Protection Study <a href="https://www.slideshare.net/symantec/symantec-2010-critical-infrastructure-protection-study?next_slideshow=1">https://www.slideshare.net/symantec/symantec-2010-critical-infrastructure-protection-study?next_slideshow=1</a> Download: 18th aug 2021								
Principles of Critical Infrastructure Protection in Switzerland. <a href="https://www.researchgate.net/figure/Principles-of-Critical-Infrastructure-Protection-in-Switzerland_fig12_329450349">https://www.researchgate.net/figure/Principles-of-Critical-Infrastructure-Protection-in-Switzerland_fig12_329450349</a> Download: 18th aug 2021								
Guidance on the production of a water security plan for drinking water supply. <a href="https://erncip-project.jrc.ec.europa.eu/sites/default/files/2019.4805_EN_JRC116548.pdf">https://erncip-project.jrc.ec.europa.eu/sites/default/files/2019.4805_EN_JRC116548.pdf</a> Download: 18th aug 2021								

**Course content:**

- ▷ Challenges, risks, threats and their systematization,
- ▷ Early History
- ▷ Brief history of KI protection, milestones, changing environment
- ▷ Conceptual foundation of the infrastructure
- ▷ The components of criticality, the formation of a critical state
- ▷ Related terminologies (security, protection, threat, chance, opportunity, risk, network), probability-based assumptions
- ▷ Integration theories, strategies, interdependencies, dominances, public services
- ▷ Economic aspects of sustainability, defense financing
- ▷ Insurance considerations



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- ▷ Population training
- ▷ Legal background (international, EU regulations, domestic framework)
- ▷ Legal environment. Laws and Regulations.
- ▷ Tasks and powers of the professional disaster management body
- ▷ Public/Private Partnerships
- ▷ Subsector criteria, procedural differences
- ▷ Methods of Risk Assessment
- ▷ Authority procedures (identification-designation, revocation, correction, continuity, security liaison, operator security plan)
- ▷ Security systems (organization, risk methodology, event management, business continuity, material and technical supply)
- ▷ Information security tasks in Critical Infrastructure Protection

### Course requirements:

The condition for admission to the exam is the signature, the conditions of which are explained by the instructor to the students at the first lecture / consultation. Personal presence is required. Maximum absence up to 50% of performances.

### Grading scale:

Evaluation:

0-50% insufficient

From 51% pass the exam, grades vary up to 100% performance.

A prerequisite for obtaining credit points is a successful colloquium.

#### Course Programme:

WJLF ENVIRONMENTAL SCIENCE

#### Semester:

2022\_2023\_1

#### Lecturers:

[Dr. George Potóczki PhD.](#)