

Domeinspecifieke leerresultatenkader

datum	Cluster	:	-
10 november 2014			
onderwerp	Opleiding	:	Master of Science in Nuclear Engineering (master-na-master)
Domeinspecifieke leerresultaten			
Master of Science in Nuclear Engineering (master-na-master)	Niveau	:	
	o Vlaamse Kwalificatiestructuur		7
	o Codex Hoger Onderwijs		Master-na-master
	o Europese Hoger Onderwijs Ruimte (Dublin-descriptoren)		2e cyclus
	o Europees Kwalificatiekader voor een Leven Lang Leren		7

Opleiding wordt aangeboden aan de volgende instellingen:

- Katholieke Universiteit Leuven in samenwerking met
 - Vrije Universiteit Brussel
 - Universiteit Gent
- evenals UCL, ULG, ULB en
het Studiecentrum voor Kernenergie – Centre d'étude de l'Energie Nucléaire (SCK•CEN)
(unieke opleiding)

Domeinspecifieke leerresultaten van de opleiding:

1. Situate Belgian and European nuclear fission energy production in its local economic, social and technical context and discuss the place of nuclear energy in its global societal frame.
2. Explain the physical basis of different processes involving the atomic nucleus.
3. Understand the legal framework and operational implementation of radiation protection and detection and apply it to practical problems.
4. Design multidisciplinary solutions and procedures in nuclear engineering to control the different processes involved based on a profound knowledge of reactor physics, thermal hydraulics of a nuclear fission reactor, nuclear reactor safety and material behaviour in a nuclear fission reactor.
5. Elaborate solutions for nuclear waste treatment and disposal based on thorough understanding of the nuclear fuel cycle.
6. Elaborate, plan and execute, to a large extent independently, an engineering project at

the level of a novice research professional. Execute and critically interpret a literature review according to scientific standards and taking into account the conceptual framework and potential applications.

7. Select, adapt or develop advanced research methods, design methods and solutions, based on the acquired discipline-specific and interdisciplinary competences. Adequately apply these methods and scientifically process the results. Reflect and argue on the chosen approach based on fundamental insights in nuclear science and the specific context of a practical nuclear environment.
8. Execute projects in a generic and discipline-specific context: define objectives, monitor goals and progress, operate as a team member in an inter- and multidisciplinary team, operate in an international or multicultural environment.
9. Communicate verbally and in writing about discipline-specific topics in the English language and present scientific or project results to peers.

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