Specialized Master in Nuclear Engineering

The 2022–2023 programme is subject to change. It is provided for information purposes only.

Programme objectives
Registering to this master-after-master program gives access to the Belgian Nuclear higher Education Network (BNEN). The condensed – 60 credits in one year, including a master thesis – BNEN program allows the students to acquire all necessary scientific and technical background and skills to develop a career in the field of nuclear applications, mainly for electricity production.

Students are offered the opportunity to coherently take a part of their basic nuclear education at different places in Europe while cumulating credit units. Practical laboratory sessions and advanced subjects taught in a modular way are also offered to enrich the program.

Programme's added value
BNEN combines the knowledge and experience in nuclear education of six major Belgian universities together with the Belgian nuclear research centre and offers a unique and broad Master-after-Master program in nuclear engineering in close interaction with nuclear research and industry.

Teaching methods
Could you please connect and check http://bnen.sckcen.be/

Job opportunities
Could you please connect and check http://bnen.sckcen.be/

Contacts
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http://bnen.sckcen.be/

Jury President
Pierre-Etienne LABEAU

Jury Secretary
Peter Baeten
Specialized Master in Nuclear Engineering

Could you please connect and check http://bnen.sckcen.be/

Unique year | MS-NUAP

Compulsory courses

**CHIM-Y600**  Nuclear materials

- 3 credits
- academic year
- English
- 2 ECTS - KULeuven; 1 ECTS ULg - Jacqueline LECOMTE-BECKERS, Walter BOGAERTS, Eric VAN WALLE

**ELEC-Y600**  Introduction to nuclear energy

- 3 credits
- academic year
- English
- KULeuven - William D’HAESELEER

**MECA-Y600**  Nuclear thermal hydraulics

- 5 credits
- academic year
- English
- UCL - Yann BARTOSIEWICZ

**PHYS-H602**  Introduction to nuclear physics and measurements

- 3 credits
- academic year
- French
- ULB - Nicolas PAULY, Alain DUBUS

**PHYS-Y601**  Nuclear reactor theory

- 6 credits
- academic year
- English
- 2 ECTS - KULeuven; 2 ECTS - UGent; 2 ECTS - VUB - William D’HAESELEER, Jean-Marie NOTERDAEME, Peter BAETEN

**PHYS-Y602**  Nuclear fuel cycle

- 3 credits
- academic year
- English
- UGent - Hubert DRUENNE, Pierre VAN ISEGHEM

**PHYS-Y603**  Radiation protection

- 3 credits
- academic year
- English
- UGent - Hubert THIERENS, Klaus BACHER

**PHYS-Y608**  Safety of nuclear power plants

- 5 credits
- academic year
- English
- 3 ECTS - UGent; 2 ECTS - ULB; Hubert DRUENNE, Pierre-Elisabeth LABEAU, Greet HANSSENS-MAENHOUT

Elective modules

A total of nine credits chosen from the following

**PHYS-Y605**  Advanced nuclear materials

- 3 credits
- academic year
- English
- 2 ECTS - KULeuven; 1 ECTS - ULg - Walter BOGAERTS, Jacqueline LECOMTE-BECKERS, Eric VAN WALLE

**PHYS-Y607**  Nuclear and radiological risk governance

- 3 credits
- academic year
- English
- 1 ECTS - UGent; 2 ECTS - UCL - Frank HARDEMAN, Greet HANSSENS-MAENHOUT

**PHYS-Y609**  Advanced radiation protection/radiation ecology

- 3 credits
- academic year
- English
- UGent, Klaus BACHER
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