



MS-NUAP | 2023-2024

Specialized Master in Nuclear Engineering

Programme mnemonic

MS-NUAP

Studies level

Advanced master

Learning language

english

Schedule

office hours

Studies category / subcategory

Sciences and technics / Engineering sciences

Campus

Other campus

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/>

Programme objectives

Registering to this master-after-master program gives access to the Belgian Nuclear higher Education Network (BNEN).

The condensed - 60 crédits 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.

Contacts

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 <http://bnen.sckcen.be/>

Jury President

Pierre-Etienne LABEAU

Jury Secretary

Peter Baeten

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Unique year | MS-NUAP

Compulsory courses

CHIM-Y600	Nuclear materials Marc SCIBETTA ⌚ 3 credits 📅 academic year 🗨 English KU Leuven : 2 ECTS - ULiège: 1 ECTS
ELEC-Y600	Introduction to nuclear energy Geert VAN DEN BRANDEN ⌚ 3 credits 📅 academic year 🗨 English KULeuven - 3 ECTS
MECA-Y600	Nuclear thermal hydraulics Yann BARTOSIEWCZ ⌚ 5 credits 📅 academic year 🗨 English UCLouvain : 5 ECTS
PHYS-H602	Introduction to nuclear physics and measurements Nicolas PAULY ⌚ 3 credits 📅 academic year 🗨 French ULB - 3 ECTS
PHYS-Y601	Nuclear reactor theory Peter BAETEN, Geert VAN DEN BRANDEN and Matthias VANDERHAEGEN ⌚ 6 credits 📅 academic year 🗨 English KULeuven : 2 ECTS - UGent : 2 ECTS - VUB : 2 ECTS
PHYS-Y602	Nuclear fuel cycle Christophe BRUGGEMAN and Kevin GOVERS ⌚ 3 credits 📅 academic year 🗨 English ULiège : 3 ECTS
PHYS-Y603	Radiation protection Klaus BACHER ⌚ 3 credits 📅 academic year 🗨 English UGent : 3 ECTS
PHYS-Y608	Safety of nuclear power plants Greet JANSSENS-MAENHOUT, Pierre-Etienne LABEAU and Matthias VANDERHAEGEN ⌚ 5 credits 📅 academic year 🗨 English UGent : 3 ECTS - ULB : 2 ECTS

Elective modules

A total of nine credits chosen from the following

PHYS-Y605 (optional)	Advanced nuclear materials Steven Van Dijck ⌚ 3 credits 📅 academic year 🗨 English KULeuven : 2 ECTS - ULiège : 1 ECTS
PHYS-Y607 (optional)	Nuclear and radiological risk governance Greet JANSSENS-MAENHOUT and Fernand VERMEERSCH ⌚ 3 credits 📅 academic year 🗨 English UGent : 1 ECTS - UCLouvain : 2 ECTS
PHYS-Y609 (optional)	Advanced radiation protection/radiation ecology Klaus BACHER ⌚ 3 credits 📅 academic year 🗨 English UGent : 3 ECTS

PHYS-Y610
(optional)

[Advanced courses of the nuclear fuel cycle](#) | Christophe BRUGGEMAN and Kevin GOVERS

🕒 3 credits 📅 academic year

ULiège : 3 ECTS

PHYS-Y611
(optional)

[Advanced course elective topic](#) | Peter BAETEN

🕒 3 credits 📅 academic year

VUB : 3 ECTS

PHYS-Y616
(optional)

[Advanced nuclear reactor physics and technology](#) | Hamid Ait ABDERRAHIM

🕒 3 credits 📅 academic year 🗨 English

UCLouvain : 3 ECTS

Memory

MEMO-H601

[Master thesis](#)

🕒 20 credits 📅 academic year 🗨 English