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### What is BNEN?

The Belgian Nuclear higher Education Network (BNEN) was formed in 2002 and organises a master-after-master academic programme in nuclear engineering, through a consortium of six Belgian universities and the Belgian Nuclear Research Centre, SCK•CEN. This condensed (60 ECTS in one year, including a master thesis) programme allows the students to acquire all necessary scientific and technical background and skills to develop a career in the field of nuclear applications. BNEN is linked with university research, benefits from the human resources and infrastructure of SCK•CEN and is encouraged and supported by the partners of the nuclear sector.



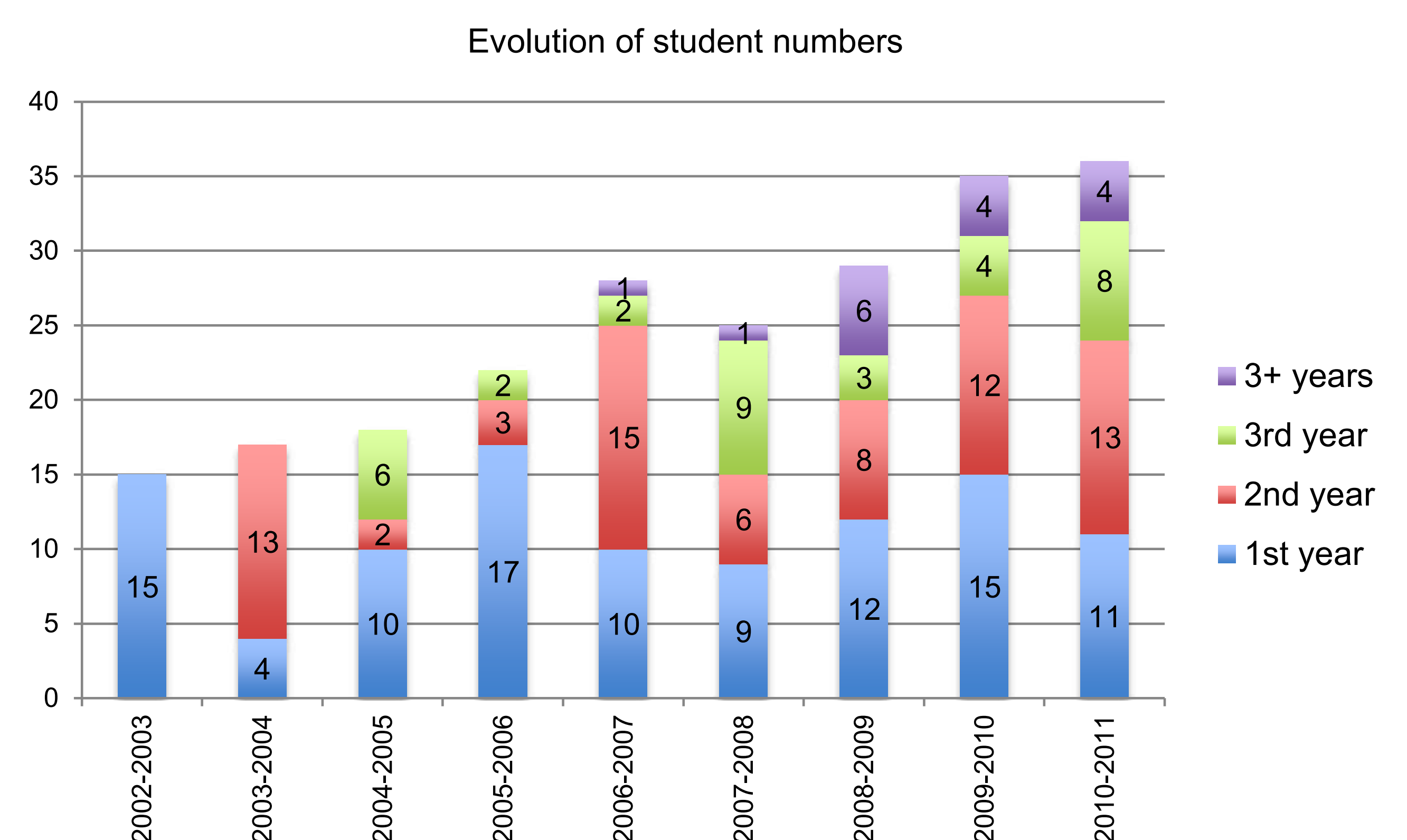
### Programme

All courses are in **English** and take place at the technical domain of SCK•CEN. The **modular structure**, teaching in blocks of one to three weeks for each course, is especially suited to attract young professionals and international students.

	BNEN Module	ECTS		
BNEN block I	Introduction to nuclear energy	3	First Semester (October to January)	
	Introduction to nuclear physics	3		
	Nuclear materials I	3		
	Nuclear fuel cycle and applied radiochemistry	3		
	Nuclear materials II	3		
	Advanced courses	4		
BNEN block II (ENEN block)	Nuclear reactor theory	8	Second semester (February to June)	
	Nuclear thermal hydraulics	6		
	Radiation protection and nuclear measurements	6		
BNEN block III (ENEN block)	Operation and control	3		Reliability and safety
	Thesis/Internship	15		

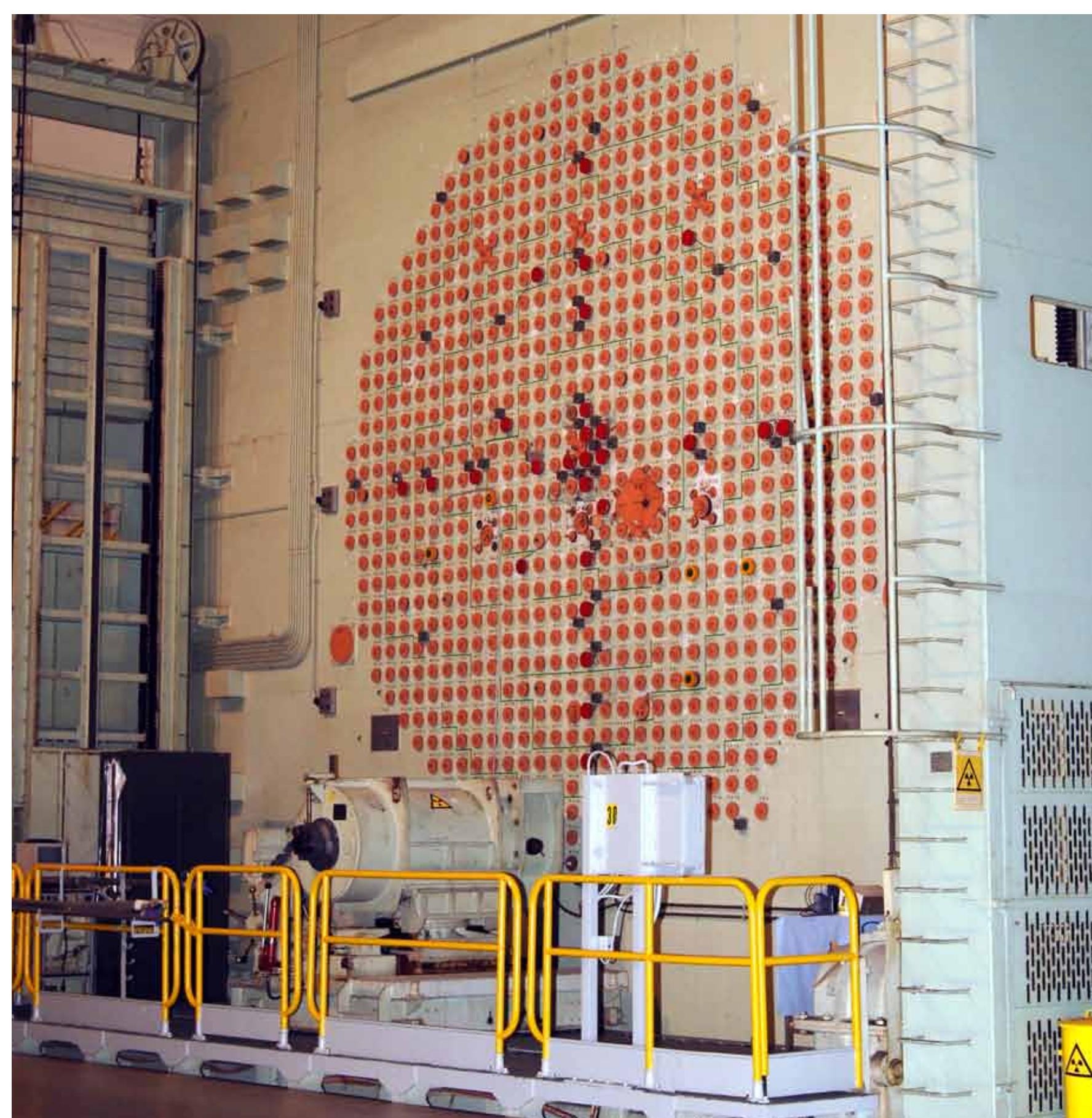
### BNEN audience

The BNEN programme is open to people holding a 5-year master degree in engineering. People having a master degree in sciences or industrial sciences are accepted upon successful completion of a make-up programme of approximately 30 ECTS.



### Use of SCK•CEN research infrastructures

Compulsory exercises and hands-on sessions in the specialised laboratories of SCK•CEN complement the theoretical classes, bring the students into contact with all facets of nuclear energy, and are therefore a clear added value to the programme. SCK•CEN also offers BNEN students the possibility to perform their master thesis at its laboratories on topics which are of priority to the Centre's R&D.



### Conclusions

After almost a decade of successful operation and on-going improvements, the Belgian Nuclear higher Education Network has progressively become a major actor on the Belgian and European nuclear scene. Every year it delivers a new class of top-level nuclear engineers, ready to ensure safe operation of current and future nuclear power plants, research infrastructures, waste treatment and disposal facilities. The use of the research infrastructures of SCK•CEN for the practical sessions is an important and indispensable asset.

For more information visit: <http://www.sckcen.be/bnen>