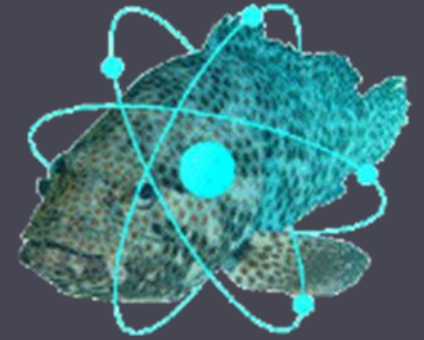




Erasmus+



**International training in nuclear technology and radiation protection with
a good balance between academic and generic employability skills :
Training the future trainers**

Sonja Schreurs, D. Mostacci, L. Tinova, J. Rodenas , S. Soares , U.W. Scherer , S. Economides,
J. Camps, S. Pepin, M. Hult, G. Mulier, H. Schweickert, Wouter Schroeyers, Isabelle Gerardy



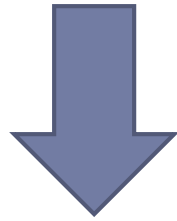
UHASSELT

KU LEUVEN

HE²B
ISIB

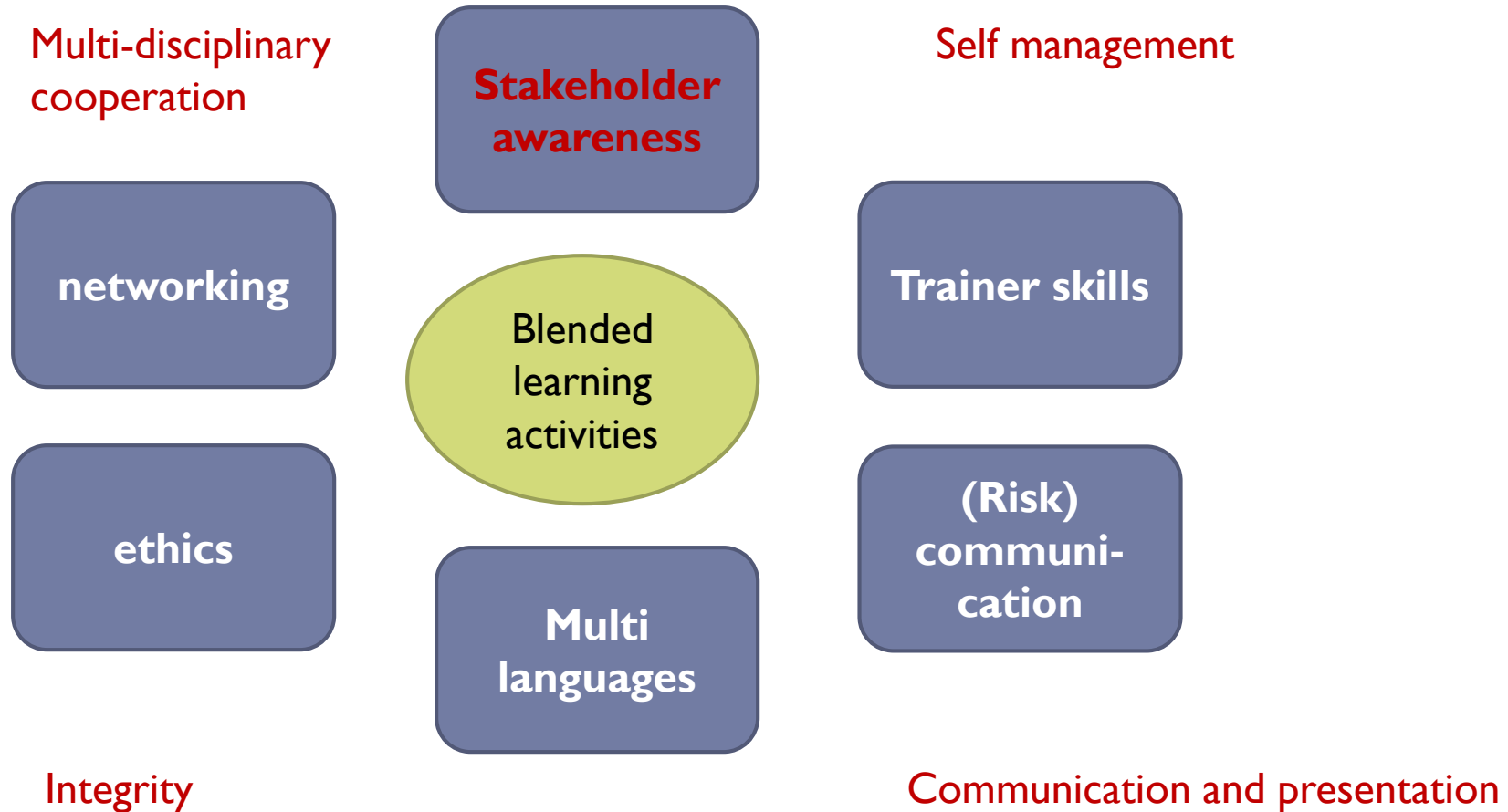


**Erasmus + Strategic Partnership
'Blended learning in radioecology and
radiation protection'
01-09-2015 until 31-08-2017
6 e-learning modules – 6 training schools
Marawas training school**



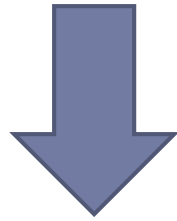
Integration of academic and soft skills
Training skills
Employability skills

Soft skills & Employability skills



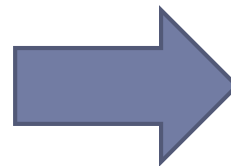


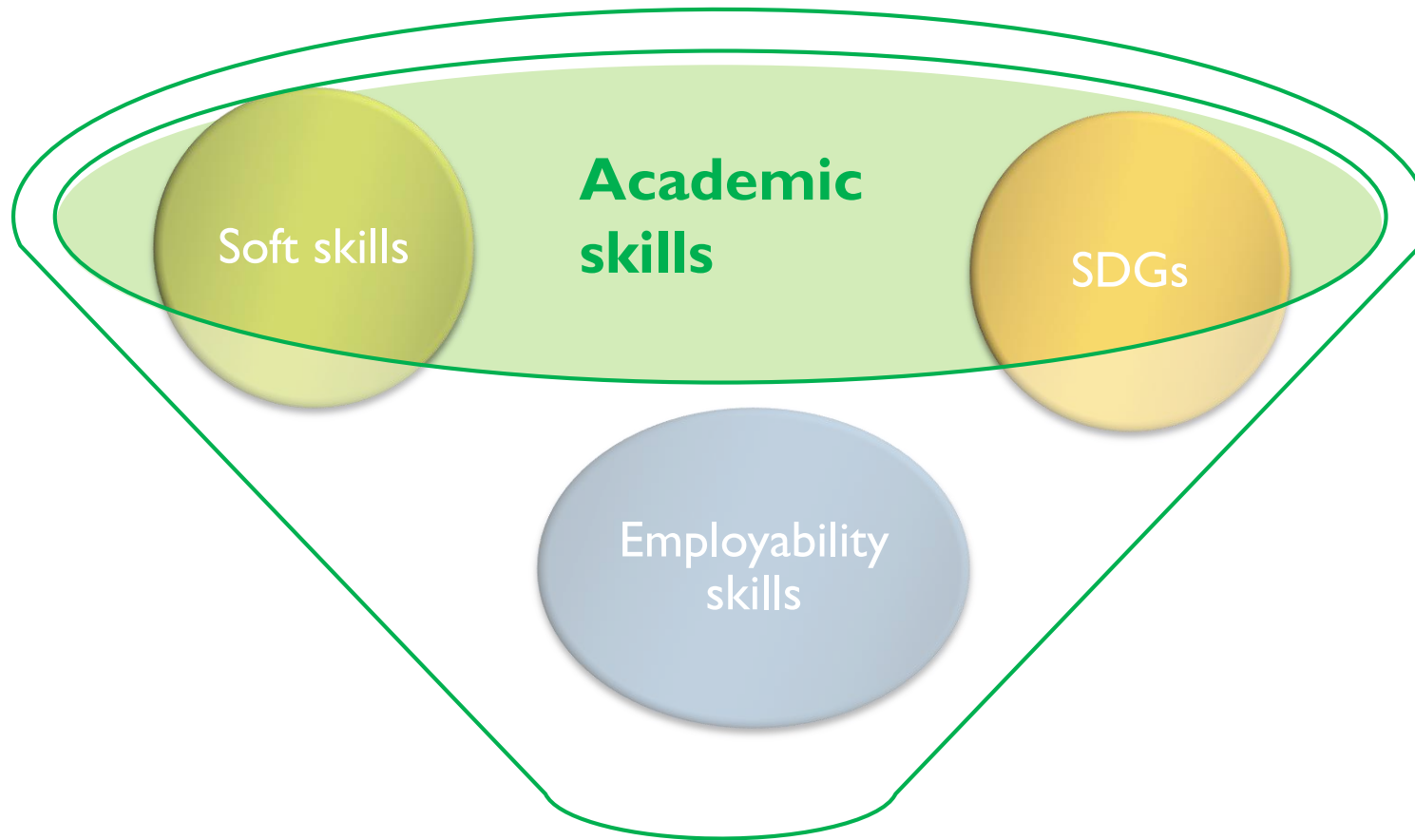
**Erasmus + Strategic Partnership
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Integration of academic and soft skills
Training skills
Employability skills

**Current Ba/Ma students are
about 35 in 2030**





**New Erasmus + Strategic Partnership
“Train the future trainers/trainees”
01-10-2018 until 30-09-2020**

ERASMUS + STRATEGIC PARTNERSHIP

“Train the future trainers/trainees”

8 Partners (from the CHERNE network)

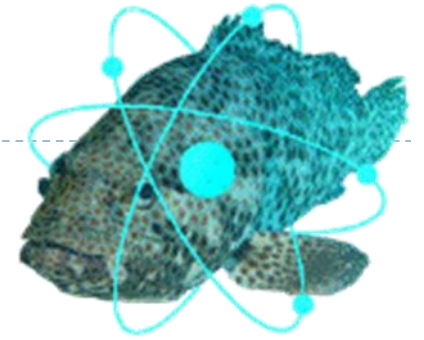
- ▶ HE2B-ISIB– **BELGIUM**
- ▶ UNIVERSITEIT HASSELT - **BELGIUM**
- ▶ HOCHSCHULE MANNHEIM - **GERMANY**
- ▶ UNIVERSITA DI BOLOGNA - **ITALY**
- ▶ UNIVERSIDADE DA BEIRA INTERIOR (Covilha)- **PORTUGAL**
- ▶ CZECH TECHNICAL UNIVERSITY IN PRAGUE – **CZECH REPUBLIC**
- ▶ UNIVERSITAT POLITECNICA DE VALENCIA - **SPAIN**
- ▶ GREEK ATOMIC ENERGY COMMISSION - **GREECE**

3 associate partners

- ▶ JRC (JRC-Geel)
- ▶ Tecnubel/ECS/Transnubel
- ▶ FANC – Belgium

Ad-hoc partners in the training activities

**Target group for training schools : master students of each partner :
Different background in knowledge and practical skills**



<http://www.cherne.ntua.gr/>

Starting from the previous developed blended learning environment with

6 E-modules (Moodle)

6 Training schools @ 6 different partners



New methodology

- How can we integrate soft skills, employability skills and SDGs?
- What adaptations are needed in the E-modules and the training schools?
- How can we improve the blended learning process?

Basics nuclear and radiation physics	Basics of measurement and dosimetry	Radiation protection
General safety principles	Basics radiochemistry	Medical applications
Practical radiation protection in medical field	Environmental radioactivity	Safe industrial applications of radiation and radionuclides
Radiochemistry	Probability Risk Assessment	Management of radioactive waste

<http://edu.eeae.gr>



3 days dedicated workshop for current trainers

Kick-off meeting + workshop @ UHasselt 10-12 Oct 2018

21 participants

JRC (Geel – Ispra – Karlsruhe) : Expertise, facilities and opportunities in nuclear research and education

FANC : legal aspect of RPO and RPE training in transition to implement the new EU-BSS regulation

Visit to training centre :
ECS – Tecnubel associate partner



EEAE workshop
Moodles tools



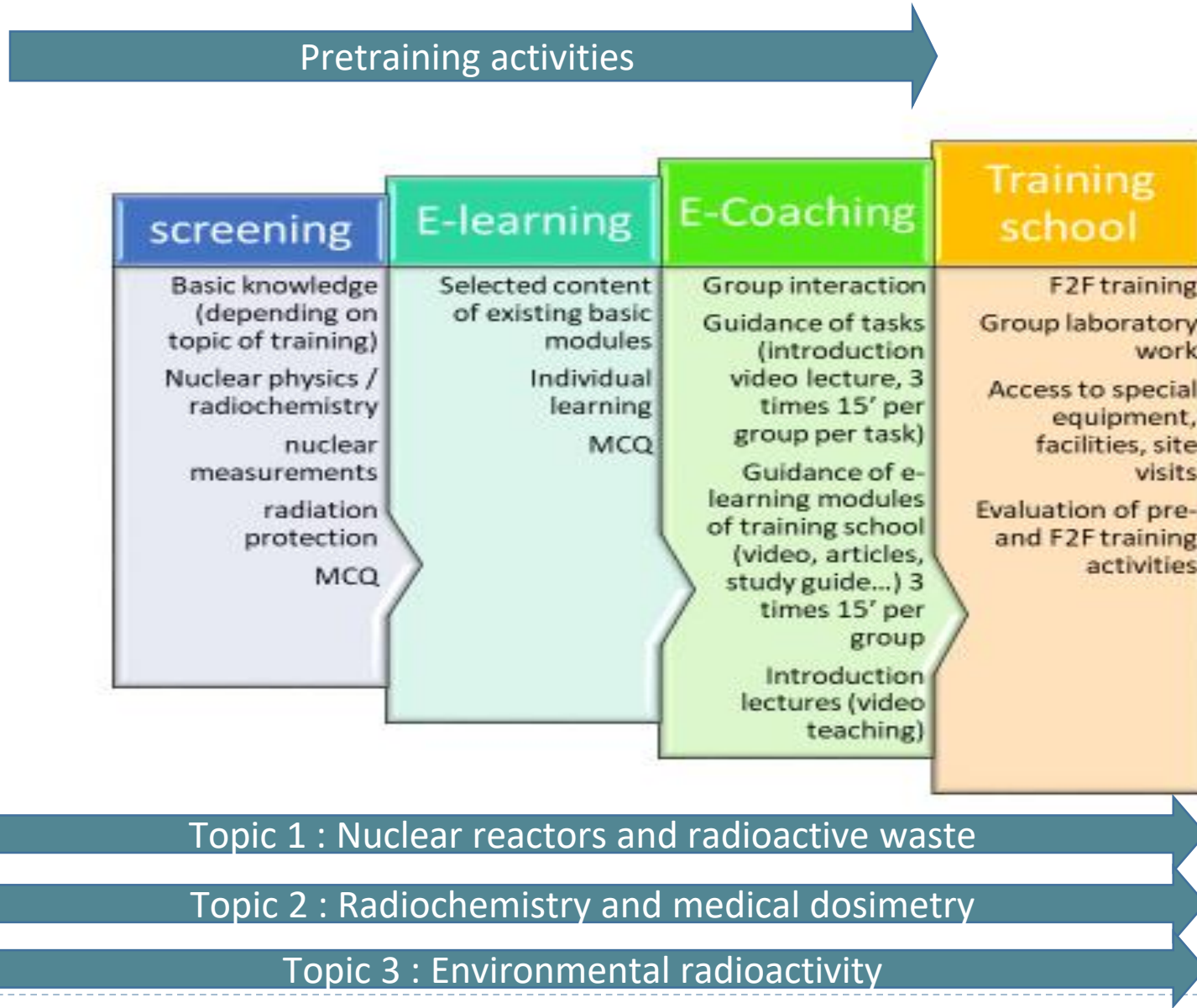
Cifal
SDG workshop

Tips and tricks for teleteaching
Prof dr Koen Vanlaer
Hasselt University



Methodological approach and the project activities of the first year

Optimal blended learning activities



CTU Prague 8-12/04/2019

HS Mannheim 4-8/03/2019

He2B-ISIB 6-13/03/2019

UHasselt

Integration of soft skills, employability skills and SDG's

Environmental radioactivity

He2B/UHasselt
UBI/UPV
SDGs
Trainer skills
Stakeholder awareness
Multi-languages

Nuclear reactors and waste management

CTU/
UHasselt
Ethics
Team work
Networking
Multi-languages

Radiochemistry and medical dosimetry

HS Mannheim/
Unibo
Risk communication
SDGs
Trainer skills
Multi-languages

New teaching activities in action

Starting 1 month before the training school

- ▶ 2 Moodle modules : self study
 - ▶ MCQ : self assessment : 2 attempts
- ▶ Tasks in advance in small mixed groups (3-4 students)
 - ▶ Video lectures on SDGs
 - ▶ 3 Google meet sessions (15' per group)
 - ▶ Group negotiation / consensus – stakeholders survey
- ▶ Training school : Team work in the same mixed groups
 - ▶ E-modules to prepare the lab activities and background information
 - ▶ 'Trainer' activities (micro/co-teaching), role play activities, debate
 - ▶ Group task presentation : innovative presentation techniques
 - ▶ Peer assessment (Prof Dochy method)
 - ▶ 'Trainer' presentations about lab experiments
 - ▶ Final MCQ

Mixture of activating learning activities

- ▶ Screening / E-modules : self determined/controlled, individual differences, constructive (levelling background gaps)
- ▶ Group task / E-coaching : collaboration and interaction, cumulative, goal oriented
- ▶ Face2face training school : team work, interaction, integrated tasks, trainer

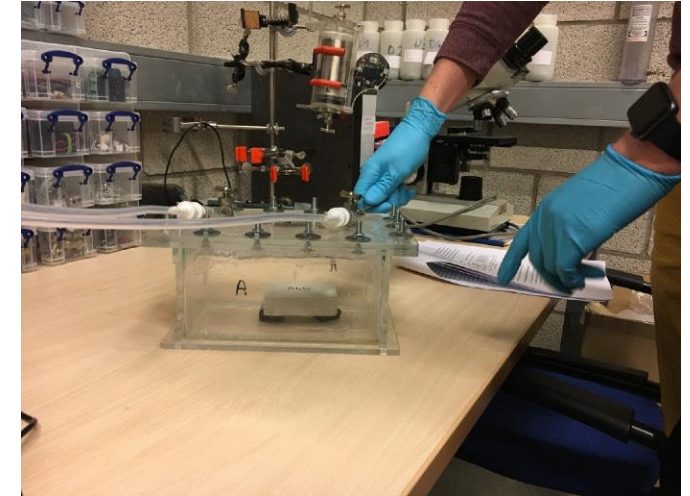
MERADE : Environmental radioactivity

Fieldtrip Demerbroeken



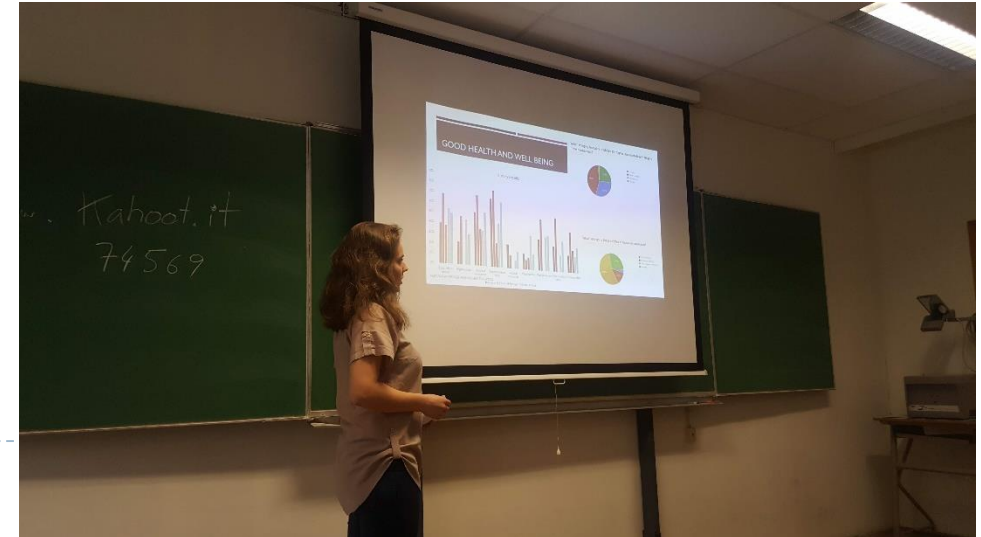
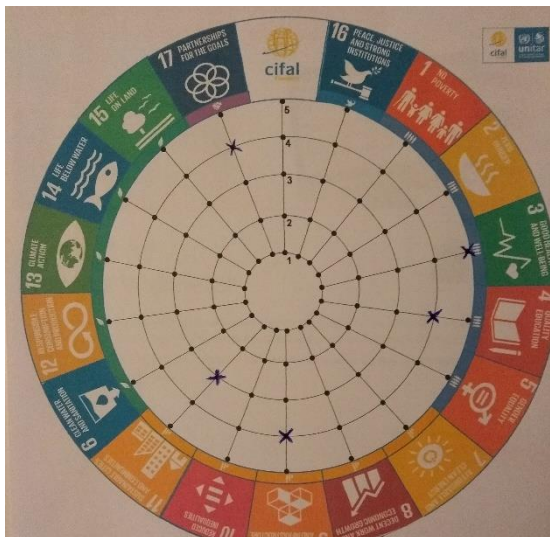
MERADE : Environmental radioactivity

Lab exercises

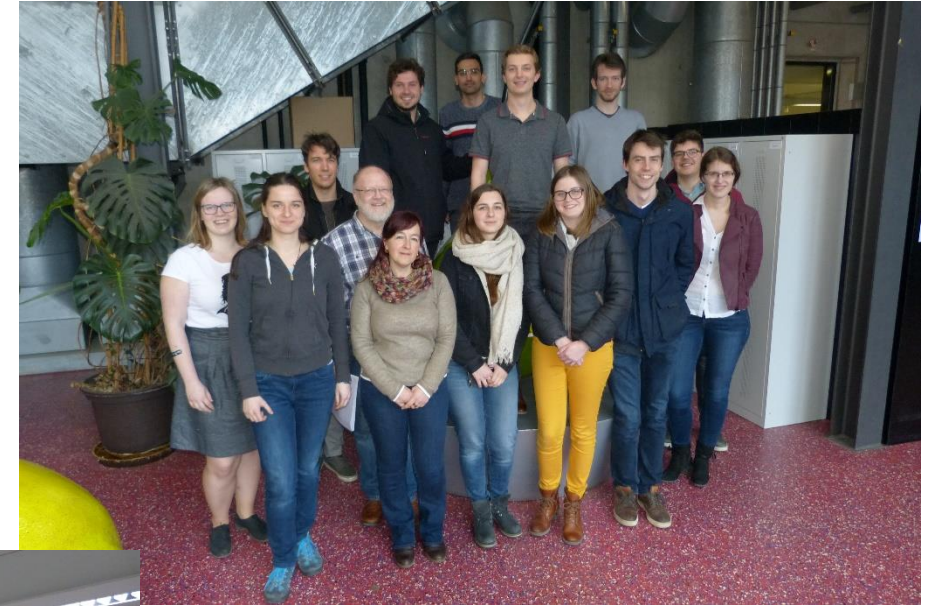


MERADE : Environmental radioactivity

SDG task



Radiochemistry and medical dosimetry



Conclusion :

Our role as trainer in integrating and activating soft skills and SDG

Expert :

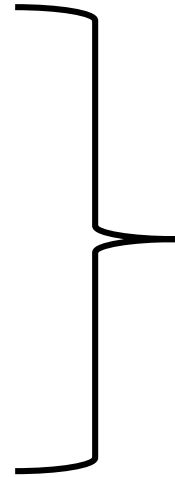
- Content, tools, MCQ screening,...

E-Coach :

- Time management
- Constructive feedback
- Increase autonomous motivation

Organiser/evaluator :

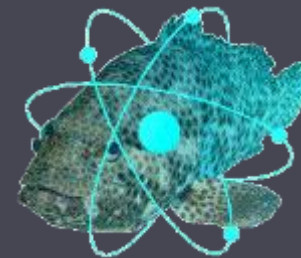
- New educational approaches : role plays, multidisciplinary tasks, micro teaching, peer assessment.....



Next challenges for the second year

Multisite synchronous teaching

Coaching on the job : preparing students for real training sessions for targeted groups



Thank you for your attention !

Acknowledgements :

All external experts during the technical visits/fieldtrips

All students and professors of the partnership

Financial support Erasmus+