Benefits of the participation of PhD students in practical lessons of Radiation Protection

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Background UPV

- Universitat Politècnica de València, Spain
  - 40,000 students
  - 11 faculties/schools
  - 42 departments
Background DIQN

- Department of Chemical and **Nuclear Engineering**
  - 15 professors
    (11 Full professors + 4 Associated professors)
  - 14 Bachelor courses
    (5 Radiation Protection courses)
  - 29 Master courses
    (9 Radiation protection courses)
  - 5 Degrees
  - 6 Masters
Department of Chemical and Nuclear Engineering

Radiation Protection courses

- Bachelor Degree in Energy Engineering
  - Nuclear Technology (6 ECTS)
  - Radiation Protection (4.5 ECTS)
  - Nuclear Safety (4.5 ECTS)
- Bachelor Degree in Chemical Engineering
  - Nuclear Chemical Technology (4.5 ECTS)
- Bachelor Degree in Biomedical Engineering
  - Radiotherapy and Radiation Protection (4.5 ECTS)
Department of Chemical and Nuclear Engineering

Radiation Protection courses

- Master in Industrial and Environmental Safety
  - Radiation Dosimetry (3 ECTS)
  - Radioactive Facilities (3 ECTS)
  - Methods and Applications In Radiochemistry (3 ECTS)
  - Environmental Problems of Nuclear Energy (3 ECTS)
  - Natural Radioactivity (3 ECTS)
- Master in Energy Technologies for Sustainable Development
  - Radiological Protection and Nuclear Safety (4.5 ECTS)
- Master in Industrial Engineering
  - Nuclear Energy and Radiations (6 ECTS)
  - Environmental Impact of Radiation (4.5 ECTS)
  - Radiological Protection In Radioactive and Nuclear Facilities (4.5 ECTS)
The Universitat Politècnica de València (UPV) encourages teaching in the university among PhD students.

60 hours (6 ECTS) per year of practical lessons:

- Pre doctoral: Bachelor courses.
- Post doctoral: Bachelor and Master courses.

Supervision by an associated or full professor.
13th Workshop on European Collaboration for Higher Education and Research in Radiological and Nuclear Engineering
Objectives

▪ Participation of PhD students in practical lessons of Radiation Protection in the UPV.

▪ Benefits of the participation for:
  ▪ Professors
  ▪ PhD students
  ▪ Bachelor students
  ▪ Improvements.
In the last years the participation of PhD students in practical lessons is increasing.

Participation in all Bachelor courses (approximately 50% have participated in radiation protection related courses).
Benefits

- Improve their doctoral training as it helps to revise concepts learned during their studies, enhancing their knowledge in the field of Radiation Protection.
- Provide teaching experience to the PhD students, learning from consolidated professors in the field.
- Professional merit highly regarded in the curriculum vitae in case of applying for a teaching position at the university.
Benefits

- Help professors and make their work easier.
- Improve the teaching quality, as the needs of more Bachelor students are met in less time.
- Young people can provide new ideas or methodologies to improve the lessons.
Benefits

PhD students are a link between professors and Bachelor students due to the proximity of age.

Generate trust between Bachelor students and PhD students.

Learn from PhD students experience.

PhD students know the needs of the Bachelor students because they were in their situation few years ago.
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Improvements

▪ Extend students participation in theoretical lessons.
▪ Include PhD students in education and innovation projects to increase the level of involvement in radiation protection courses.
▪ Participation of post-doctoral fellowships in radiation protection courses.
Conclusions

- The Universitat Politècnica de València (UPV) encourages teaching in the University among PhD students.
- The participation of PhD students is only possible in Bachelor courses.
- Participation in the Department of Chemical and Nuclear Engineering is increasing over the years.
- Generate benefits for PhD students, Professors and Bachelor students.
- In summary, it serves as a motivation for PhD students to continue their teaching career and to be more interested in the radiation protection field, makes the professor work easier and improves the teaching quality helping to students of radiation protection courses.
Thank you for your attention!!!