The Virtual Environment for Radiotherapy Training (VERT), a 3D virtual reality learning suite, was recently installed at Cumberland Campus.

VERT provides opportunities for clinical skill development and research.

ABOUT VERT
The VERT system uses immersive visualisation technology to simulate a radiation therapy treatment room containing a life-size 3D virtual linear accelerator and treatment couch. The hybrid learning environment allows users to operate the virtual linear accelerator using an actual hand pendant, simulating radiation therapy clinical scenarios.

This project is funded by the Australian Government Department of Health and Ageing under a joint submission from the University of Sydney, the University of South Australia, the University of Newcastle, Queensland University of Technology, Monash University and Royal Melbourne Institute of Technology University. The collaboration aims to share learning resources through the creation of an academic community of practice, and to build partnerships with clinical departments to encourage the use of VERT for research, education and quality assurance programs from the wider professional community.

REVOLUTIONISING LEARNING, TEACHING AND RESEARCH
The University of Sydney gratefully acknowledges the support of the Australian Government in establishing the Virtual Environment for Radiotherapy Training suite.

LOCATION
FACULTY OF HEALTH SCIENCES
Cumberland Campus
University of Sydney
75 East Street
Lidcombe, NSW, 2141

MORE INFORMATION
sydney.edu.au/health_sciences/medical_radiation/VERT

BENEFITS TO STUDENT LEARNING
The technology provides students with a safe environment that is free from time pressures commonly encountered in busy radiation therapy departments, thus increasing students' confidence and competence prior to attending clinical placements. VERT will also be used to reinforce key radiation therapy concepts to help bridge the gap between theory and practice.

OTHER POTENTIAL USES
- Research projects (see overleaf)
- Radiation therapists returning to practise or retraining
- Radiation therapy technique development and/or evaluation
- Staff in-services
- Patient information sessions
- Medical physics registrar training
- Radiation oncology registrar training
- Sectional anatomy training
CURRENT RESEARCH
The Faculty of Health Sciences is currently undertaking a range of research projects in radiation therapy covering topics such as:

- Effects of radiation therapy on the latest generation of pacemakers and implantable defibrillators
- Comparing conventional planning techniques and dose homogeneity with emerging techniques in breast radiation therapy
- Onset of lymphoedema in breast cancer patients receiving radiation therapy treatment
- Radiation therapists’ perceptions of students at their first clinical placement

Research collaborators include:
- Liverpool Hospital
- Monash University
- Nepean Hospital
- RMIT University
- Royal North Shore Hospital
- Royal Prince Alfred Hospital
- St. George Hospital
- Queensland University of Technology
- The University of Newcastle
- The University of South Australia
- Westmead Hospital

RESEARCH POTENTIAL
The Virtual Environment for Radiotherapy Training presents opportunities for new research in a number of areas.

Some potential ideas include;

- VERT’s impact on student clinical placements, enhancing radiation therapy training, attrition, admission rates, assisting at-risk students (VERT Academic Community of Practice objectives)
- Evaluation of a patient education intervention in reducing patient anxiety
- As above for paediatric patients, families and carers
- Multidisciplinary projects

In year two of the project we will be inviting interest from external organisations. We invite you to consider opportunities for you and your staff to use the VERT system and we would be happy to discuss any future research projects you would like to undertake using VERT. Please feel free to contact our staff to discuss collaboration opportunities.

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