

## Manufacturing Students & Adventure Sports Project

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**As part of the B. Eng Degree in Manufacturing and Design Engineering, 3<sup>rd</sup> year Design and Team Building students design and install engineering solutions for various community partners.**

**This project is in part facilitated by Derek Cleary, Director of Services, Peace Corps-Localise**

In 2010 students worked with Dublin Simon Community Homeless Shelter and the Lourdes Day-Care Centre, both on Sean McDermott Street, Dublin 1 and St Mary's Hospital in Phoenix Park, Dublin 8. The projects were all 12 weeks long. The students worked in teams (of up to five people) and each team was responsible for a project. The teams agreed on a project title and outline design and did this in consultation and agreement with their lecturer and community partner. The project choices were design, design and build, software or an analysis/feasibility study.

One group worked on the project in St Mary's Hospital and they looked at the redesign of a mobile armchair used to move patients around the hospital.

Four groups carried out projects in the Lourdes Day-Care Centre. Three of the projects worked on storage facilities and layout of the bathroom. The fourth group looked at the energy losses in the centre. One group worked with the Simon homeless shelter. They looked at the layout and use of the laundry room and built and installed a storage area for the clients clothing.



In 2009 students worked with the Adventure Sports Project at the School on Stilts, Rutland Street in Inner City Dublin. One group of students repaired and secured the heavy steel garage door of the centre, another group of students secured the parameter railing and provided secure stairs for the balcony storage area, another group made secure equipment storage racks and a final group of students manufactured game console theft proof storage units and game storage shelving. Each team also made a presentation outlining and assessing the project. Click on the following presentations to see the students work.

- [Presentation One](#)
- [Presentation Two](#)
- [Presentation Three](#)
- [Presentation Four](#)

### **What do the students get from it?**

The projects allow manufacturing engineering students to put into practice many of the engineering skills learned in college. They also get to work in teams, make an assessment of the community's needs, develop a design plan, manufacture and install solutions and make presentations of their results.

According to lecturer Anne-Marie McCarrick 'students get to put into practise the skills they are learning throughout the entire course:

- Design and drawing, workshop practise, safety audits, compliance with regulations, health and safety procedures, insurance issues
- Communicating with clients and contractors, specifying contracts, agreeing deliverables, project management, team work, running meetings, time management
- Students' social conscience is stimulated / influenced.'

### **What do the community get from it?**

According to one community partner Adventure Sports Project Director James O'Callaghan:

'Our involvement has enabled us to provide a far better and safer service to our young people. The students formed project teams that identified particular engineering needs within the project. Two groups provide engineering solution to safety concerns. The other groups provide secure storage solutions.

Throughout the process the Bolton Street students engaged with us as partners using a problem solving approach. They were highly energetic and motivated. They communicated regularly and

effectively throughout the design process and took on board all our suggestions. They seemed to gain great learning from the practical nature of the project.

We would have no hesitation in recommending to other youth groups that they participate in similar projects. Groups that operate in the voluntary sector where resources and expertise is in short supply can only gain from their involvement. We feel that there is huge potential for other community based projects to benefit and use this programme to improve their facilities and the service they offer.'

**Community Partners:**

- [Dublin Simon Community](#)
- Lourdes Day Care Centre
- St Mary's Hospital
- [Peace Corps – Localise](#)
- Adventure Sports Project, School on Stilts, Rutland Street