

**UNIVERSITY OF PRETORIA**  
**DEPARTMENT OF CHEMICAL ENGINEERING**

**GUIDELINES FOR PRACTICAL TRAINING**

**A. Training period between the SECOND and THIRD years of study**

1. Process work on a chemical plant. Introduction to process equipment and plant operation, shift-work, control room and investigational work on the plant.
2. Material and energy balance problems and investigations.
3. Process efficiency and economics.
4. Chemical engineering research - preferably of a practical nature.

**B. Training period between the THIRD and FOURTH years of study**

1. General work on a chemical plant - especially production and process orientated  including maintenance planning, investigation into efficiency of production units, general organisation, construction, etc.
2. Design and planning of extensions, including economic aspects.
3. Design and evaluation of possible process changes and/or new projects.
4. Projects of a research and development nature.

**C. General Guidelines**

1. The allocation of a problem which would test the ingenuity of the student would be particularly useful. The substance of such work could then be used in report writing and as a topic for class discussions.
2. It is recommended that a detailed practical training programme be drawn up beforehand and that the student be given a copy of this.
3. Wherever possible, the student should be directly responsible to an engineer. It is in any case necessary that the student should know at all times who his/her immediate supervisor is.
4. The student gains maximum benefit from the practical training if the problem he/she is working on is known and if the aims/objectives are very clearly stated.