

DEPARTMENT OF CHEMICAL ENGINEERING



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UNDERGRADUATE PRACTICAL TRAINING : STUDENTS IN CHEMICAL ENGINEERING

This letter serves to introduce to you:

Surname & Initials:

Student No:

who is a registered second/third year student in the Department of Chemical Engineering at the University of Pretoria, Pretoria, South Africa.

All undergraduate students have to complete two periods of practical training of six weeks' duration each, during the university holidays. The practical training forms a compulsory and very important part of the experiential learning of our students and your willingness to assist is very much appreciated. Students have to make their own arrangements for this practical training.

The type of work the student needs to do is explained in the attached documentation.

Within one week of registration in the year following the practical training, the student is expected to submit a report on his/her practical training. For the student to gain maximum benefit from this training and to ensure that the report is as useful as possible, the following is suggested.

- Early in the training period, the student should be introduced to the problem on which he/she will be working.
- The aims/objectives of the work should be explained to the student and should be clearly understood by him/her.
- The student should be encouraged to work as independently as possible, but feedback to a responsible person/supervisor on a regular basis will be required to guide the student's work.
- Wherever possible the student should be given challenging tasks, in keeping with his/her level of development. Routine tasks should preferably not be performed for extended periods.
- A log-sheet/book where the student records the daily activities is expected to be checked and signed weekly by his/her supervisor during the practical training.

Thank you again for your understanding of the importance of practical training in the development of the student and for your kind assistance in making this possible. Should there be any additional information that you may require, please do not hesitate to contact me.

Yours sincerely,

PROFESSOR MO DARAMOLA
PROFESSOR & HEAD: DEPARTMENT OF CHEMICAL ENGINEERING

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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.