



VUT

Vaal University of Technology

VAAL UNIVERSITY OF TECHNOLOGY

FACULTY OF

APPLIED AND COMPUTER SCIENCES

DEPARTMENT OF CHEMISTRY

REPORT: WORK INTEGRATED LEARNING

&

UNIVERSITY TRAINING

ANALYTICAL CHEMISTRY

Your world to a better future

FOREWORD

1. TO THE EMPLOYER

Thank you for your indispensable share as training partner in this important area of cooperate educations.

You are undoubtedly aware of the fact that a student must have completed six or twelve months of applicable work integrated learning plus the two or two and a half years prescribed university training before the National Diploma: Analytical Chemistry (215054 or 215090) or Diploma: Analytical Chemistry (D11500) is awarded to him/her.

To ensure the effectiveness of the work integrated learning period the employer must cooperate as equal partners.

Against this background the friendly request is that employer(s) should ensure that the report is kept up to date and is periodically submitted to the Department of Chemistry for evaluation.

2. TO THE STUDENT

The student must register for WIL within three weeks after commencement of industrial project.

To qualify for Diploma or National Diploma: Analytical Chemistry a six or twelve-month period of suitable work integrated learning as well as the prescribed University training must be successfully be completed.

To assist the University in assessing the progress of your work integrated learning, you have to report on a continuing basis to the WIL Coordinator or Head of Department: Chemistry

The report makes it easy to keep a permanent record of all your activities during your work integrated learning period. Your supervisor/mentor must certify that you satisfactorily performed the work reported.

In the event of a change of employer during this period, have your report brought up to date before leaving. The report will inform your new employer about your training programs and activities.

On completion of your work integrated learning program, the report and other documents which may be required must be submitted to the department of chemistry.

Wishing you all the best

PROF. M J MOLOTO
HEAD OF DEPARTMENT: CHEMISTRY
Mr. T B MOEKWA
WIL COORDINATOR
TEL: (016) 950 9603/ 016 950 9667

RECORD OF TRAINING OF STUDENT

SURNAME													
FIRST NAMES													
I. D. NR.													
DATE OF BIRTH													
GENDER	MALE		FEMALE										
TITLE	MR		MRS		MISS		OTHER						
STUDENT NUMBER													

COURSE	DIP or N. DIP: ANALYTICAL CHEMISTRY (D11500 or 215054)
--------	--

PERIODS OF UNIVERSITY TRAINING	FROM	TO	FULL-TIME	PART-TIME
S1				
S2				
S3				
S4				
S5				
PERIODS OF WORK INTEGRATED LEARNING	FROM	TO	EMPLOYER	

OFFICIAL STAMP OF EMPLOYER/COMPANY

GUIDELINES FOR WORK INTEGRATED LEARNING

AIM OF WORK INTEGRATED LEARNING (WIL):

WIL is an integral part of the training and, together with University Training, form a co-operative training unit. It is therefore the aim of WIL to compel the students in his/her work situation, to be actively engaged in the broadening of his/her knowledge and analytical skills. It is also important that the students be exposed to the industrial world and his/her occupational ethics.

The outline for WIL has been drawn up in order that the prescribed requirements can, where possible, fit in with the working environment of each students and his employer.

DURATION OF COURSE:

Five semester University training and one semester applicable work integrated learning for a total minimum duration of three years. Students enroll for WIL by registering for one semester for the subject “Chemical Industry: Practical I”.

Students may register for “Chemical Industry: Practical I” during any semester, even for the semester immediately preceding full-time study.

WHERE IS WORK INTEGRATED LEARNING DONE?

“Chemical Industry: Practical I” must be completed by the student at an accredited employer.

GUIDELINES FOR WORK INTEGRATED LEARNING:

1. REGISTRATION FOR WORK INTEGRATED LEARNING:

It is the responsibility of the student to register at the University for work integrated learning. No students will be registered without proof of employment. Registration takes place at the same time as registration for full-time and part-time students during January and July each year or **soon after the student is employed**. Registration takes place by the

completion of an application form to register that is available at the Head of Department: Chemistry and/ or university website at www.vut.ac.za/cooperative education.

2. REPORTS ON WORK INTEGRATED LEARNING:

The student and his/her employer (training institution) organize his/her work integrated learning according to aspects referred to in this logbook. The employer may appoint a mentor for the student. At the end of the training period the student reports to his/her mentor. The mentor evaluates the report and, using the prescribed form in the logbook, reports to the University.

3. GENERAL

University staff will attempt to visit the student during his/her work integrated learning period, Employers are requested to make contact with the department if they experience any problems or **if they want to make any changes to the training programme.**

NATIONAL DIPLOMA: ANALYTICAL CHEMISTRY (215054) OR DIPLOMA:
ANALYTICAL CHEMISTRY (D11500)

1. Admission Requirements

Senior Certificate to its equivalent. (A pass in Mathematics and Physical Science is recommended).

2. Duration of course

Full-time: Five semesters of class attendance at a University and one semester applicable in-service training. The minimum total of duration is three years and no award will be considered until the complete course (theory and work integrated learning) has been satisfactorily completed.

Part-time: Over a minimum period of three to four years for persons who are employed in order that the required work integrated learning may be completed.

3. Curriculum

Semester 1

Chemistry I	AAACHA 1C
Physics I	APFSG 1A
Mathematics I	AMATH 1S
Applied Communication Skills (Module 1)	HKACX 1A
ICT Skills I	AIICT 1A
EDL	HKEDL 1A

Semester 2

Analytical Chemistry I	AAACA 1B
Analytical Chemistry: Practical I	AAACP 1A
Inorganic Chemistry II	AAICA 2C
Physical Chemistry II	AAFCA 2B
Organic Chemistry II	AAOCA 2B
Applied Communication skills (Module 2)	HKACY 1A

Semester 3

Analytical Chemistry II	AAACA 2B
Analytical Chemistry: Practical II	AAACP 2A
Inorganic Chemistry III	AAICA 3B
Physical Chemistry III	AAFCA 3B
Organic Chemistry III	AAOCA 3B

Semester 4

Analytical Chemistry III	AAACA 3B
Analytical Chemistry: Practical III	AAACP 3B
Chemical Quality Assurance	AACKV 2B

Mathematics II or Physics II

AMATH 2S or APPHP 2A and APPHT 2A

Semester 5

Chemical Process Industries I

EHCPA 2B

Entrepreneurial Skills 1

BBENT 1A

Mathematics II or Physics II

AMATH 2S or APPHP 2A and APPHT 2A

Industrial Chemical Analysis

AAIAC 2A

OR

Chemical Industry: Practical I

AACNP 1A

Semester 6

Chemical Industry: Practical I

AACIP 1A

OR

Chemical Industry: Practical II

AACPR 2A

Remarks:

- (1) Compulsory instructional offerings:
All instructional offerings are compulsory
- (2) Prerequisite instructional offerings:
Chemistry I for Inorganic Chemistry II,
Physical Chemistry II and Organic Chemistry II

RECORD OF UNIVERSITY TRAINING

REPORT OF WORK INTEGRATED LEARNING PERFORMED AT (Name of
company).....
.....FROM..... TO

WORK INTEGRATED LEARNING

For Chemical Industry: Practical I (AACIP 1A or AACNP 1A (old qualification)) the student is expected to write a report on the following topics;

- Brief information on the origin of the company
- Type of samples used
- Sample preparation (i.e., what happens to the sample before the actual analysis).
- Preparation of standards (i.e., how were your standards prepared and their final concentration).
- Health and Safety in the laboratory, this must include fire and chemical hazards.
- General laboratory organization and management, the organogram and/ or reporting line of the laboratory must be stated.
- How the reports of the laboratory are prepared or how results are reported and how is the data handled.
- Statistical treatment of results (e.g. RSD, Standard deviation, mean, etc).
- Quality assurance in your laboratory.
- Laboratory budget (i.e., where you introduced to budgeting and for what?).
- Handling of Chemical literature.
- Types of meeting and frequency.
- Wet Chemical analysis, this include a **full report on gravimetric and titrimetric analysis.**

INSTRUMENTAL ANALYSIS

The following information must be supplied on the choice of instrument:

- Manufacturer,
- Model
- Last serviced date
- Type of analysis
- Experimental, Results and Discussion, Conclusion and Recommendations.

EVALUATION REPORT

		Excel-lent	Good	Acceptable	Insufficient	Weak
1.	Dexterity					
2.	Knowledge of techniques, procedures and materials					
3.	Safety awareness					
4.	Willingness to learn new skills					
5.	Initiative					
6.	Human relations					
7.	Attitude					
8.	Efficiency as employee/ Standard of work					
9.	Neatness					
10.	Proficiency					

.....

SIGNATURE

.....

DATE

RANK/DESIGNATION:

OFFICIAL STAMP OF EMPLOYER/COMPANY

DECLARATION BY EMPLOYER

I,

associated with (company).....

in the capacity of

hereby certifies that (name of student)

Was a permanent employee of the company/concern for the past semester and performed the practical training as required by the University.

I further certify that the work performed by the above mentioned person, was to the benefit of the company/concern.

Finally I declare that the accompanying report, carrying my signature, is the student's own as well as the work set out therein.

.....
SIGNATURE

.....
DATE

RECOMMENDATION BY EMPLOYER RE WORK INTEGRATED LEARNING

Candidate

Successfully/unsuccessfully completed his/her work integrated learning.

Mark allocated for Chemical Industry: Practical I AACIP 1A: %

.....

TRAINING OFFICIAL

OFFICIAL STAMP OF EMPLOYER

.....

DATE

RECOMMENDATION BY UNIVERSITY RE ISSUING OF DIPLOMA

Candidate

successfully completed his/her Chemical Industry: Practical I. It is recommended that the

National Diploma: Analytical Chemistry

is issued to him/her with effect from 20.....

.....
HEAD OF DEPARTMENT: CHEMISTRY

.....
DATE