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LEARNER GUIDE

Faculty	APPLIED AND COMPUTER SCIENCES
Department	BIOTECHNOLOGY
Course	LABORATORY PRACTISE 1 & 2
Title	ABBPA1A & ABBPA2A
Compiled By	S. Viljoen
Year	2022
NQF Level	6 – ABBPA1A, 7 – ABBPA2A
Credits	60

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1.1 WORD OF WELCOME

The Department of Biotechnology welcomes you as a learner to the Faculty of Applied and Computer Sciences at the Vaal University of Technology. Although Work Integrated Learning is industry based, the institution is still responsible for your training. The department hopes you will make a positive contribution to the biotechnology industry and apply the theoretical knowledge that you have gained.

1.2 CONTACT PERSONS

Responsible Persons	Department	Contact details	Office location
Sandra Viljoen	BIOTECHNOLOGY	viljoens@vut.ac.za	F104a
WIL-COORDINATOR		016 950 9329	
		Whatts App ONLY	
		0824985476	
Grace Mbola	BIOTECHNOLOGY	graceml@vut.ac.za	F112
PA HOD		016 950 9648	
Simon Mohlala	COOPERATIVE-	simonmo@vut.ac.za	N203
Industry- liaison officer	EDUCATION	016 950 9343	
Carlen dos Santos	COOPERATIVE-	carlen@vut.ac.za	N213
(submission of assessments)	EDUCATION	016 950 9161	
Malejone Moqhoba	STUDENT	malejone@vut.ac.za	CW 25
(Registration)	ADMISSION AND	016 950 9781	
(11061311411011)	REGISTRATION		

IT IS ADVISABLE THAT YOU REQUEST AN APPOINTMENT IF BASED IN INDUSTRY TO ENSURE AVAILABILITY OF THE RELEVANT PERSON REQUIRED

1.3 RATIONALE

Work integrated learning is aimed at the integration and application of the theoretical knowledge

gained at the University into the workplace environment. It should be clearly understood that the

student, when he/ she arrives at your institution he/she has only completed four semesters of

theoretical and laboratory training and is initially not capable of making a substantial contribution to

your business. It is only through the assistance and training they receive from you that they will

become useful assets during their training period. Thus be prepared to invest in preparing this student

to become competent.

1.4 PREREQUISITES

The student must have completed all the subjects from semester 1 up to and including semester 4 to

enroll for work integrated learning.

1.5 REGISTRATION

Registration for WIL must be done within six weeks after training has commenced.

WIL registration takes place at CW-25 (Student Admission & Registration). For more information

regarding WIL registration, please contact:

Ms Malejone Moqhoba

Tel: 27(0)16-950-6730

Fax: 27(0)16-950-9772

Email: malejone@vut.ac.za

The following documents are COMPULSORY for WIL registration:

1. Registration form

2. Appointment / Confirmation letter from company

3. Proof of payment

Certified copy of ID

5. Proof of residence

6. Certified copy of Gr 12 certificate

7. International students must also submit the checklist

The WIL registration form (downloadable) must be completed and signed by the mentor and student.

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REGISTRATION IS REQUIRED FOR LABORATORY PRACTICE 1 AND LABORATORY PRACTICE 2 TRAINING CANNOT BE BACKDATED.

1.6 LEARNING MATERIAL

The learning guide serves as a guideline for WIL for the duration of 12 months.

Learning material required will vary based on the industry of placement. The materials gathered during studies at the University as well as any material that may be supplied/required by therespective employer/training institution will be of benefit to the learner. The learner must also seek information through the available resources to be better equipped to fulfil expectations of the employer. Continuous reading is advised.

1.7 ASSESSMENTS

Assessment event #	Assessment n	Mark allocation		
1	Adaptation and communication skills	10 -	1	
2	Progress report	10	P1	
3	General evaluation of student proficiency	10	Assessments	
4	P1 FINAL REPORT	20 _		
5	P2 Final report/oral presentations	50		

- The first and second assessments must be submitted within the first twelve weeks (3 months) of commencement of WIL.
- This only needs to be done once if the student remains at one company. If not: a progress
 report needs to be submitted after three months every time a student starts at a new
 company.
- Supervisor's evaluation report (General evaluation of student proficiency) must be completed and authenticated with the company's stamp.
- The employer is mandated to conduct the third assessment (General evaluation of student proficiency).

- The contents of the reports and presentation must be scrutinized by the employer so that confidential company information is not divulged. Students that could not be allocated projects can present part of their principal duties during the training during the WIL open day.
- It is the responsibility of the student to compile all the reports and submit timeously.
- To ensure eligibility for graduation, the final report must be submitted two months before the
 graduation ceremony. If submitted by post or courier service, it must be addressed to COOPERATIVE EDUCATION N203. It is the responsibility of the student to trace the status of the
 submission.
- The mentor will assess all the work done by the trainee before submitting any reports.

NB: Assessments must be submitted by post or in person to Cooperative Education located in N203.

1.8 MODULE OUTCOMES

The purpose of the module is to equip the learner with the necessary skills that are required for a career in Biotechnology. Although the learning outcomes are given below, they only serve as a guideline. It is expected that the learner will be involved in some aspect of Biotechnology that will involve the exploitation of biological systems and organisms in the production of manufactured goods or services. The learner is also expected to assume daily responsibilities and activities within the workplace. If possible, the student must be offered a project as it forms part of assessment. The student must inform the Department of Biotechnology (WIL Coordinator) within the first six months of assumption of duties if they don't have a research project.

CONDITIONS OF TRAINING

- > The learner works under the supervision of a training official who will mentor the student during training.
- > A learner must comply with all the safety rules and regulations as prescribed by the company/institution.

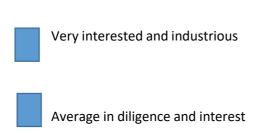
- > The learner must adhere to the working hours and conditions as required by the training institution.
- > 100% percent attendance is expected from the learner. Urgent leave has to be arranged or discussed with the relevant immediate supervisor.
- A learner is expected to be in training for consecutive 12 months and final evaluation can only be done once the period is completed. Any interruption in the training must be communicated to the WIL coordinator.
- A learner will be visited by a representative of the Biotechnology department at least once during training for evaluation and discussions with the training official (s) and student for monitoring purposes.
- > In the event of change of training institution during this period, the WIL coordinator must be informed and relevant documents submitted.

ASSESSMENT EVENT 1: ASSESSMENT IN THE WORKPLACE – ADAPTATION AND COMMUNICATION SKILLS

NAME OF THE STUDENT:
STUDENT NUMBER:
DATE:
INSTRUCTION: Evaluation to be conducted by the immediate supervisor.
1. Relations with fellow colleagues
Exceptionally well accepted
Works well with others
Gets along satisfactorily
Has some difficulty working with others
Works very poorly with others

2. ATTITUDE- WORK RELATED

Outstanding in enthusiasm



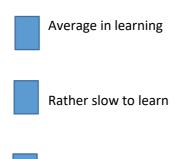
- Somewhat indifferent
- Definitely not interested

3. DEPENDABILITY

- Completely dependable
- Above average
- Usually dependable
- Sometimes neglectful or careless
- Unreliable

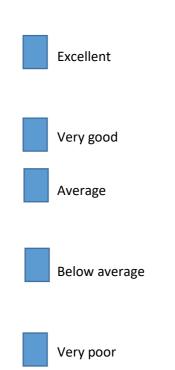
4. ABILITY TO LEARN

- Learns very quickly
- Learns readily

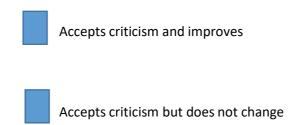


Very slow to learn

5. QUALITY OF WORK



6. Criticism



	Ignores criticism	
	Retaliates	
7.	ATTENDANCE:	
	Regular	
	Irregular	
8.	PUNCTUALITY:	
	Yes	
	No	
9.	OVERALL PERFORMANCE	
		_
10.	Has this report been discussed with the student? YES	
	NO	
RATED	BY:DEPT:	
	(SUPERVISOR)	

PLEASE AUTHENTICATE THE DOCUMENT WITH A COMPANY STAMP.

VAAL UNIVERSITY OF TECHNOLOGY FACULTY OF APPLIED AND COMPUTER SCIENCES WORK INTEGRATED LEARNING (WIL)



PROGRESS REPORT

COVER PAGE

These reports must be submitted in person or by post to the WIL office (N203)

DEPARTMENT	BIOTECHNOLOGY	Y	ABBPA1A
STUDENT DETAILS		STUDENT'S	
Number:		POSTAL ADDRESS:	
Initials & surname:			
ID number:			
E-MAIL:		CELL OR TELEPHONE:	
COMPANY NAME:		Division:	
Street address:			
MENTOR INITIALS & SURNAME:			
CELL OR TELEPHONE:	·		
PROGRESS REPORT SUBMISSION:			
Start date:		END DATE :	
VUT OFFICE USE :	REMAR	KS	
Departi	MENT WIL OFFICIAL SIGNATU	JRE	DATE

_											
		_	_	_		_	_	•	-		 -
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- 1 COMPANY PROFILE
- 2 TRAINING COMPLETED
- 3 TRAINING SCHEDULED FOR THE NEXT PERIOD
- 4 PERSONAL GROWTH

1. Company profile

Company name:	
Number of employees:	
Number of students in training:	
Company's specialization field or products:	

2. Training completed (after three months)

DEPARTMENTS OR SECTION OF PLACEMENT	DATES			
DELYMENTS GROSESTIGHT GLI I ENGEMENT	STARTED	COMPLETED		

3. Training scheduled for the next six months

The following table shows the training that is scheduled for the remaining period of WIL training

SECTION	ESTIMATED DATES				
SECTION	Start	COMPLETION			

ASSESSMENT EVENT 3: GENERAL EVALUATION OF STUDENT PROFICIENCY

EVALUATION REPORT

(Guidelines available on page 15)

	1	2	3	4	5
1.Theoretical Knowledge					
2. Application of Theory					
3. Use of Advanced					
Instruments and					
Equipment					
4. Skills integration/					
Competences gained					
5. Working speed					
6. Accuracy					
7. Interpersonal					
Relations					
8. Diligence and					
Motivation					
9. Neatness					
(No parameters)					
			1		
Signature		Date			
Rank/Qualification		Compa	any Stamp		

Evaluation guidelines Use of: Skills integration Rating Theoretical Application of advanced tools / Interpersonal Diligence / Competencies Working speed Accuracy knowledge theory measuring relations motivation gained equipment Very slow and Cannot use Has not does not Does not get Does nothing Has little Cannot apply 1 advanced integrated any successfully Never accurate along with any unless knowledge any theory skills complete any equipment staff instructed tasks Can use Has integrated Never Can apply some Has to redo and Can interact Does just Can recall some advanced completes tasks some 2 theory with then sometimes positively with enough to keep basic knowledge equipment with documented successfully on most of the staff out of trouble assistance accurate assistance skills time

Has integrated

the basic

minimum

Effectively

integrate skills

as needed in

applications

Innovatively

integrate all

theoretical and

practical skills to

solve problems

practical

skills

documented

Just complete

successfully on

tasks

time

Normally

tasks

Always

tasks

complete all

successfully

before time

complete all

successfully

before/on time

Can use

advanced

the basic

minimum

Can select and

use advanced

independently

Optimally select

and use

advanced

equipment

equipment

equipment to do

Can apply the

basic minimum

Can apply high

Can analyze and

synthesize

level theory

theory

Knows the basic

Good knowledge

Excellent

knowledge

minimum

3

4

5

These guidelines can be used by the assessor to do student evaluation.

Just meets the

specifications

Work is always

Work is always

excellent.

better than

minimum

expected

minimum

Interact

positively with

Is accepted by

somebody with

good personal

Uses personality

influence other

to positively

the staff as

skills

staff

all the staff

Does the

minimum

expected

Normally looks

above work to

Ambitious and

eager to prove

talents beyond

requirements

for over and

do

ASSESSMENT 4 AND 5: FINAL REPORT FOR P1 AND P2

VAAL UNIVERSITY OF TECHNOLOGY FACULTY OF APPLIED AND COMPUTER SCIENCES WORK INTEGRATED LEARNING (WIL)



FINAL REPORT

This report must be submitted on completion of P1 and P2 to the WIL office (N203)

COVER PAGE

DEPARTMENT	BIOTECHN	IOLOGY	ABBPA 1A & 2A
STUDE Numb		STUDENT'S POSTAL ADDRESS:	
Initials & surna	ME:		
ID nume	ER:		
E-M	AIL:	CELL OR TELEPHONE:	
COMPA Na	ME:	DIVISION:	
Street addre	ess:		
MENTOR Initial surna		CELL OR TELEPHONE:	
	ART ATE:	END DATE:	
VUT OFFICE USE:	'	REMARKS	

MENTOR'S DECLARA	TION			
MENTOR	INITIALS AND SURNAME:			
STUDENT	INITIALS AND SURNAME:			
	STUDENT NUMBER:			
	ID NUMBER :			
	FINAL MARK:		%	
DECLARATION				
	tioned mentor, declare that the along component of the qualification		ned student has completed the work pervision.	
The student was	found competent in the outcomes	s as specified i	in the final report.	
The achieved credits as specified above may be awarded to the student.				
The student cannot be declared incompetent at the end of work integrated learning without the relevant communication to the WIL coordinator and supporting documents from the mentor.				
	Signature	D	ate	

DECLARATION BY THE STUDENT

I,	
Full names)	
hereby declare that the practical work is my ow from another person in the execution thereof.	vn original work and that I received no help
Signed on this Day of	
Signature	 Date

1.7 STRUCTURE of the final report:

Final Report

(The report must be neatly bound, well presented and it must include the following)

Title page (PROVIDED)

Mentor's Declaration (PROVIDED)

Declaration by STUDENT (PROVIDED)

Table of contents:

Introduction:

This must give detailed information about the company to demonstrate the student's role in the company with references (Where did the trainee fit into the organizational structure)

Roles and responsibilities:

Discuss the specific functions (in detail) that the trainee was required to perform during WIL, include color pictures with references, if possible.

Routine Work:

In the case where routine work is performed, it is required that the following be included in the report:

- Background information/purpose of the apparatus, instruments or equipment used with color pictures
- The principles of the methods and media used. (References to laboratory manuals employed are expected)
- Results if allowed by the company (Clarify this with the company institution)

Research projects

The final report for **P1** must only contain **routine work** conducted for the first six months of training.

The students are encouraged to engage in research projects that form the basis of P2 assessment. Should the company be unable to provide the student with a research project, written communication is required from the company.

The students that are unable to conduct research are required to perform oral presentations to the department. Industry representatives and mentors are encouraged to attend the presentations if available.

FACULTY OF APPLIED AND COMPUTER SCIENCES - DIPLOMA INFORMATION

WBL REGISTRATION FEE **DIPLOMA:**

The cost for WBL registration is R2 472.00 for the year 2022.

ADDITIONAL FEES:

The following University fees will be automatically added to the student's account when registering for WBL. These fees remain the responsibility of the student:

- Registration levy R252.00
- Student levy per semester R154.00
- Access card R127.00

For queries regarding these fees place contact the VUT Finance Department.

WBL REGISTRATION PREREQUISITES:

- Students need to have completed all the credits required for the specific discipline of study
- WBL students can register all WBL subjects simultaneously
- Validation/accreditation of WBL employers will be done by the Faculties
- Placement will be administered by the Co-operative Education Department

WBL registration takes place at CW-25 (Student Admission & Registration). For more information regarding WBL registration, please contact Ms Malejone Moqhoba on +27(0)16-950-6730 or email wilregistration@vut.ac.za

All WBL registration forms should be completed electronically on screen and printed afterwards. Registration forms should NOT be completed by hand.

The following documents are COMPULSORY for WBL registration:

- WBL registration form
- Appointment/Confirmation letter from company
- Proof of payment
- Certified copy of ID
- Proof of residence
- Certified copy of Senior certificate
- International students must also submit the checklist
- Tourism & NDT students must submit the letter from the lecturer
- ALL students must also submit their CV's at Co-operative Education (N108)

Students MUST register within ONE MONTH from starting with training!

It is the student's responsibility to follow up on his/her registration.

PAYMENT FOR WBL **BANKING DETAILS**

Students paying for themselves: ABSA

Branch Code: 334237

Reference: WIL + student

number

WBL COURSES, CONTACT DETAILS & DOCUMENTATION

WIL New Qualification

All final semester students need to submit their CV's to the Co-operative Education Department: the CV, academic record and certified copy of ID.

WIL registration documents:

- WIL registration form
- ID Copy (certified)
- Proof of payment OR NSFAS stamp OR bursary letter
- Proof of residence
- Snr certificate
- Company letter with correct date (date of WIL registration no outdated letters will be accepted Students should not be financially blocked when applying for WBL registration.

It is the student's responsibility to follow up on his/her registration.

Students MUST register within ONE MONTH from starting with training!

REGISTRATION CYCLES

VUT has an annual (Jan – Dec) academic calendar set in line with the census dates; end of March and end of September. Please see below analysis, which should be adhered to by both administrators, WIL Coordinators and Academic HoD's:

Cycle 1

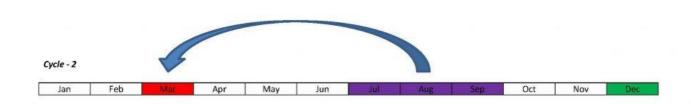
Students that register before the end of March will have their results released in June, justifying the minimum period required for WIL, six (o6) months, these students can only graduate in September.

Cycle 2

Students that register before the end of September will have their results released in December to make the March graduation ceremony the next academic year.

WIL - Registration Cycles







FACULTY OF APPLIED & COMPUTER SCIENCES WORKPLACE BASED LEARNING (WBL) REGISTRATION

Biotechnology -Course code: DI1510

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STUDENT INFORMAT	ION:	Sponsored b	y: SETA / NSFAS / Bu	ırsary / Other
Student Number		•	•	
Name				
Surname				
Gender (Please Tick)	М		F	
Home address				
Postal address				
Contact number				
Email address				
SITE ADDRESS (IF AF	PLICA	BLE):		
PLACEMENT DETAILS	s·			
Company Name				
Company Address				
Company Contact Number				
Company Contact Number				
MENTOR DETAILS:				
Mentor Name				
Mentor Address			- 	
Mentor Contact Number				
Mentor Email Address				
Mentor Qualification				
Mentor Qualification				
SUPERVISOR DETAIL	S:			
Mentor Name				
Mentor Address				
Mentor Contact Number				
Mentor Email Address				
Mentor Qualification				
ricitor Qualification				
WBL DURATION:				
From (start)			To (finish)	
Trom (start)			TO (IIIISH)	
WBL SUBJECT: (PLE	ASF TI	CK WBL SUBJE	CT THAT YOU ARE RE	GISTERING FOR)
Biotechnology	AACIP1		AACPR2A	- CIGIZIANIO I GIA,
Student Signature	AACIFI		AACFIZA	
Stadent Signature				
UNIVERSITY APPROV	/AL:			
Signature of WIL Coordina	tor		Approved	STAMP
			Dodinad	
			Declined	
Date				