



Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en
Inligtingtegnologie / Lefapha la Boetšenere,
Tikologo ya Kago le Theknolotši ya Tshedimošo

Study Guide

Department of Industrial and Systems Engineering

Practical Training

BPY 310 and BPY 410

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1. Introduction

Welcome to the world of work! The BPY 310 and BPY 410 modules (Practical Training) aim to expose you to the working environment, workplace dynamics and interactions, as well as exposure to what real-life problems, often ill-defined and multi-faceted, look like and how industry goes about addressing them.

1.1 Educational Approach

The BPY modules follow a work-report-reflect approach.

Work. During the course of your studies you are required to gain 12 weeks of working experience as an Industrial Engineering (IE) student. These 12 weeks are divided into 6 weeks for BPY310 and 6 weeks for BPY 410. In keeping with the aims of the module, the work undertaken should be of such a nature that the student receives exposure to:

- A real working environment
- Real-life workplace dynamics and interactions
- Real-life problems and problem-solving processes.

Report. During the course of the module, students need to submit progress reports to describe the work done. These reports are assessed to ascertain whether the work done has been sufficient, appropriate and professionally presented in the report.

Reflect. Self and other awareness is the key to personal growth and thus reflection on formal and informal learning is formally required.

No tests or exams are written in this module and no marks are assigned. Students will be assessed as 'complete' or 'not yet complete' based on the requirements communicated in this study guide.

1.2 Student Responsibilities

Sourcing training opportunities. It is the responsibility of the student to use their industry network to secure practical training opportunities. As IEs function over a wide scope of industries and processes, most environments can function as fertile training grounds for IE students. These might include the traditional working environments such as factories, warehouses and mines, but could also include farms, office environments, retail stores, workshops, schools etc. If you have found an organisation willing to accommodate you, but you do not know how to make the work IE-related, you may speak to your module coordinator for assistance in scoping projects.

Careful and pro-active planning. Seeing that you need to have 12 weeks of practical training completed by the time you finish your studies at the end of your final year, you will do well to start in the December holiday at the end of your second year already even though you have not yet registered for BPY 310. Table 1 shows available weeks as well as some warnings to consider when planning your

vacation work. It shows that, from the end of your second year to your final year, you might only have 25 potential weeks to complete your 12 weeks. The warnings highlight that only 15 of these potential weeks will most likely be available.

Table 1: Available weeks for practical training

2nd Year	
December / January	8 weeks available, but many companies close for the holiday, and you might want to take a break too.
3rd Year	
April	1 week, but 1-week projects are not often available.
June / July	2.5 weeks
September	1 week, but 1-week projects are not often available.
December / January	8 weeks available, but many companies close for the holiday, and you might want to take a break too.
Final Year	
April	1 week, but 1-week projects are not often available.
June / July	2.5 weeks
September	1 week, but 1-week projects are not often available.
December / January	No weeks available as you want BPY410 signed off as complete along with your other modules in order to graduate.

When considering the combination of the availability of weeks and the availability of work opportunity, it is clear the BPY will need pro-active planning on your part.

Adhering to deadlines. Students are required to submit progress reports before communicated deadlines. These deadlines will be communicated via announcements on clickUP.

1.3 Statement of Anti-discrimination

Herewith the official statement from the university, which the BPY team also supports:

The University of Pretoria is committed to building an inclusive, affirming and transformed institutional culture, curriculum, and campus life. It rejects and condemns racism, sexism, homophobia, transphobia, xenophobia, ethnic chauvinism, religious intolerance, unfair discrimination, hate speech, sexual harassment, gender-based violence and retaliation, and all other forms of discrimination. The University has committed itself to the eradication of these practices, and in 2019 adopted an Anti-Discrimination Policy, in order to realise procedural and substantive equality in all respects.

As lecturers and presenters of this course, we acknowledge the extreme harm that racism, sexism, xenophobia, and other forms of discrimination have inflicted and continue to inflict on our society and communities. We commit to ensuring that there is an open dialogue between ourselves and all the students in the module on curriculum content and teaching method which may be interpreted as discriminatory or exclusive. We undertake to ensure that any such concerns are raised without fear of

intimidation or recrimination. Moreover, we resolve to continuously improve the teaching of this course in a way that allows the inclusion of all the students enrolled for this course, building their self-confidence and self-efficacy, and supporting the ultimate goal of substantive equality for all persons.

The choices that we make about curriculum content and pedagogy (what and how we teach) are also choices about what kind of society we wish to build. In this declaration of intent, we resolve to be part of and give substance to the University's anti-discrimination and transformation endeavours.

2. Administrative Information

Students are welcome to contact the module coordinator via e-mail or WhatsApp. Being a industry-facing module, BPY students are encouraged to practice professional communication skills when engaging with lecturers, e.g., introducing oneself before asking a question, providing adequate, but concise information, refraining from communicating after office hours, etc.

ClickUP announcements are the primary and official sources of communication for the module.

2.1 Contact Details

Table 2 contains all the relevant contact information for key persons for this module. These details will also be available on clickUP.

Table 2: Contact Details

	Name	Building and room number	Telephone number	Email address	Consulting Appointment via
Module Coordinator	Ilse Doyer	Eng II Room 3-16	083 402 8224	Ilse.doyer@up.ac.za	Open door policy
Departmental administrator	Hanli Helm	Eng II Room 3-10		hanli.helm@up.ac.za	E-mail
Teaching assistants	Anthe Venter	Eng II Room 3-19		Anthea.venter@up.ac.za	E-mail
Faculty Student Advisor	Rumaine Naidoo	Eng II Level 2	+27 (0)12 420-4565	rumaine.naidoo@up.ac.za	https://goo.gl/FWVM29



Our Faculty Student Advisor can advise you on goal setting, adjustment to university life, time management, study methods, stress management and career exploration. Book an individual consultation or attend a workshop. For other support services see Section 5.

2.2 Timetable

No classes are scheduled for BPY 310 or BPY 410, but information sessions might be held as required. ClickUP announcements will schedule these well in advance.

2.3 Study Material, Resources and Policies

There is no prescribed textbook for the BPY modules. “Consulting” resources will be made available on clickUP under the Resources tab on the menu ribbon.

Resources such as templates and rubrics will be provided for the deliverables as necessary. A menu item for these resources will be made available on the menu ribbon on clickUP.

2.3.1 Programme/Departmental/Module Rules, Requirements, and Guidelines

Students must familiarise themselves with the rules and guidelines of both the University as well as that of the EBIT faculty, as this module also is subject to those rules. Some guidelines have already been outlined in Section 1.2 which specifically pertain to this module. Further to these guidelines, please also take note of section 2.3.2.

2.3.2 Grievance Procedures

Any grievance should be reported in writing, providing details of the complaint or issue. First consult the lecturer concerned about the complaint or issue in an adult and civilized manner. If the matter is, however, not resolved, you should consult the class representative (the primary function of the class representative is to serve as a two-way communication channel between the class and the lecturer). If the matter remains unresolved you should consult the module co-ordinator in the case of large module classes with multiple lecturers. Where the co-ordinator is unable to or fails to resolve the matter, you should consult the Head of Department. Should the matter remain unresolved, you may approach the Deputy-Dean (of Teaching) of the faculty.

3. Module Information

This section contains important information regarding the module content, structure and its alignment to the policies and requirements of the governing quality assurance bodies.

3.1 Purpose of the Module

As mentioned in the introductory section, the aim of the Practical Training modules is to expose students to the world of work. This includes functioning in working environment, experiencing workplace dynamics and interactions, and observing and/experiencing real-life workplace problems

and how industry goes about addressing these.

3.2 Module Outcomes

The main outcome of the module is personal growth for the student. This growth can take the form of growing in professionalism, work experience, emotional intelligence, self-discipline, skills and techniques, etc. Due to the independent and practical nature of the work that is done in the module, the module supports the development of many of the Graduate Attributes (GAs) of the Engineering Council of South Africa (ECSA). However, as this is a non-credit bearing course, specific attributes are not assessed.

Students are encouraged to get as much exposure to the independent development of as many of these GAs as possible. The ECSA GAs are listed in Table 3.

Table 3: Graduate Attributes.

ECSA Graduate Attribute Description
GA1: Problem-solving. Identify, formulate, analyse and solve complex engineering problems.
GA 2: Application of scientific and engineering knowledge. Apply knowledge of mathematics, natural sciences, engineering fundamentals and an engineering speciality to solve complex engineering problems
GA 3: Engineering design. Perform creative, procedural and non-procedural design and synthesis of components, systems, engineering works, products or processes.
GA 4: Investigations, experiments and data analysis. Demonstrate competence to design and conduct investigations and experiments.
GA 5: Engineering methods, skills and tools, including information technology. Demonstrate competence to use appropriate engineering methods, skills and tools, including those based on information technology.
GA 6: Professional and technical communication. Demonstrate competence to communicate effectively, both orally and in writing, with engineering audiences and the community at large.
GA 7: Sustainability and impact of engineering activity. Demonstrate critical awareness of the sustainability and impact of engineering activity on the social, industrial and physical environment.
GA 8: Individual, Team and Multidisciplinary Working. Demonstrate competence to work effectively as an individual, in teams and in multidisciplinary environments.
GA 9: Independent Learning Ability. Engage in independent and life-long learning through well-developed learning skills.
GA 10: Engineering professionalism. Demonstrate critical awareness of the need to act professionally and ethically and to exercise judgment and take responsibility within own limits of competence.
GA 11: Engineering management. Demonstrate knowledge and understanding of engineering management principles and economic decision-making.

4. Assessment

In keeping with the Work-Report-Reflect approach of the BPY modules, the deliverables of BPY are as follows:

4.1 The Five BPY Deliverables

The five deliverables for BPY 310 and BPY 410 are described in the sequence in which they are to be completed and handed in.

4.1.1 Step 1. WORK – STUDENT COMPLETES 6 WEEKS PER MODULE.

Students must complete six weeks of practical training with a company or organisation, doing or observing Industrial Engineering-related work, where:

- 1 week = 5 days
- 1 day = 8 hours of work (not breaks). Breaks take place in the 9th hour. If you do not work full days, 1 day can be compiled out of e.g. 4 hours + 4 hours.
- 6 weeks = 30 days = 240 hours of work experience.

The six weeks do not have to be uninterrupted and may be done at different companies and different times during the year. Regardless of whether work has been done at the time of a deadline, students are expected to submit a Practical Training Report as a progress report (Step 3).

4.1.2 Step 2. REPORT – EMPLOYER VERIFIES WORK DONE.

The industry mentor, ideally an Industrial Engineer, otherwise a manager, signs off on the Employer Report Form. Students must pre-fill this document and then have the information verified by their industry mentor. Find the Employer Report Form template on clickUP / The 4 BPY Deliverables / Engineering Report Form template.

An Employer Reporting Form needs to be filled in for each company a student worked for, as well as for each uninterrupted period of work. For example, if a student works for the same company in June and December, two forms should be submitted.

The Employer Reporting Form/s is/are not handed in separately, but are rather attached to the Practical Training Report (Step 3) as Appendix A.

4.1.3 Step 3. REPORT – STUDENTS DESCRIBES WORK DONE.

Students report on their practical training experience by handing in progress reports. Find the Practical Training Report template clickUP / The 5 BPY Deliverables / Practical Training Report template. **Students only hand in these reports once they have completed all the required practical training weeks for the module they are registered for (BPY 310 or BPY410).** The BPY

grade centre will list the requirements to be completed and a C for Complete or NYCI for Not Yet Complete – Issues (please correct, resubmit, and notify marker to regrade).

There are four deadlines for progress reports for 2023:

- Semester 1 pro-active deadline: Monday 24 April 2023 @ 10h00.
- Semester 2 pro-active deadline: Friday 1 September 2023 @ 10h00.
 - These links will open at the end of the summer and winter holidays for students who would like to sign off the module before the semester pressures start. Feedback will be provided quicker than with the normal deadlines below.
- Semester 1 deadline: Friday 5 May 2023 @ 10h00
- Semester 2 deadline: Friday 29 September 2023 @ 10h00
 - These links are the last opportunity for students to submit during the particular semester to ensure that the module is signed off in that semester. Due to the high number of submissions expected for these links, marking is expected to take longer, but feedback will be given before the close of the semester.

The Practical Training Report (with the Employer Reporting Form(s) in Appendix A) is **submitted on a TurnItIn link** to screen for similarity to online sources as well as previously submitted student reports. Find the submission link on clickUP / The 5 BPY Deliverables.

4.1.4 Step 4. REFLECT – STUDENTS SUMMARISE THE TRAINING DONE TO DATE

To enable data analysis of student progress, as well as where and how practical training is typically done, students are required to complete a Summary of Practical Training via a structured questionnaire on Google Forms. The information will also be processed to assist with the development of the Practical Training modules. Find the submission link on clickUP / The 5 BPY Deliverables.

This form is to be completed by ALL registered BPY students before every semester deadline regardless of their progress. The only exception is those students who have received “C” for all their deliverables and have thus signed off the module.

Please save the URL link to your Google form so that you can return to edit your submission at a later stage instead of re-doing the whole submission. You should receive an e-mail with this link as well as your responses.

4.1.5 Step 5. REFLECT – STUDENTS REFLECT FOR PERSONAL GROWTH

As the main aim of the module is for students to grow in their ability to cope with and contribute to the workplace as Industrial Engineers, students will be required to facilitate this growth process by submitting a Reflection on Learning via a structure questionnaire on Google Forms.

This form is to be completed only upon completing the six weeks of practical training for a specific module, using the same deadlines as communicated in section 4.1.3. The information will also be processed to assist with the development of the Practical Training modules. Find the submission link on clickUP / The 5 BPY Deliverables.

Please save the URL link to your Google form so that you can return to edit your submission at a later stage instead of re-doing the whole submission. You should receive an e-mail with this link as well as your responses.

4.2 SUCCESSFUL COMPLETION OF THE COURSE

The module team will endeavour to provide prompt feedback to the pro-active submissions and feedback before the start of the exam period for deadline submissions.

Students will be given progress feedback on clickUP after each submission. As this not a credit bearing course, students will not be assigned any marks, but requirements will be marked as:

- C for Complete – no further action or submissions required
- NYCOK – for Not Yet Complete, but OK – submission had no issues, but further submissions are expected as student completes more weeks.
- NYCI – for Not Yet Complete, and Submission Issues detected – inconsistencies were detected in the submission – refer to the detailed e-mail sent, correct issues and notify the marker when corrections have been done.
- NOS – no submission received.

As soon as students have received a “C” for Complete on all the BPY requirements, students may stop handing in progress reports. Any “NYC” for Not Yet Completed issues must be corrected by the student and resubmitted at the next deadline.

4.3 SPECIFIC ALLOWANCES

A few specific allowances are made for BPY 310 and BPY 410 and are described here.

4.3.1 Simultaneous Registration for BPY 310 and BPY 410

Students are allowed to register for both BPY 310 and BPY 410 in the same year and submit reports for both. Such student must, however, register for each module independently and submit the report of each module independently. The University no longer allows the report of BPY 310 to be submitted under BPY 410. Moreover, if a student does a project for BPY 310 and continues working on the same project for BPY 410, such student must write an independent report for each and not just copy from one report to another. The requirements for both BPY 310 and BPY410 are six weeks of practical training each, thus twelve weeks altogether.

4.3.2 Use of projects for both Vacation work and some other modules

There are times when the student uses the same project for both the vacation work report as well as the report for some other modules, e.g. the final year project, BPJ 410 and BPJ 420. Please note that only time “on site” will count towards BPY. In such instance, the student must write independent

reports for both. As the BPY report has a specific template, as well as focus, students are not allowed to copy from such reports into the vacation work report.

4.3.3 Module Transition Year

The responsibilities for the module have been handed over between module coordinators. Although the basic requirements have stayed the same, this study guide communicates some changes to the management of the module and its deliverables. Students may engage with the new module coordinator should they have started working according to a 2022 guideline that has changed, such as the report template, to request being able to submit the 2022 format or deliverable.

4.3.4 Incomplete BPY by December of Final Year

Warning: In previous years a January deadline existed for final year students who struggled to find sufficient practical training opportunities due to the Covid-19 pandemic. This concession will only be considered after an interview with the student and is only open for students affected by the Covid-19 pandemic economic closure. Students affected in such a way, may present their plan to make up for the missed practical training time during the December holiday of their final year. Their final deliverables must be handed in before the deadline agreed during the interview.

This concession is thus not open to students who were enrolled for BPZ 220 from 2022 onwards as ample notification was given regarding BPY timing during this module. Any students who were enrolled in BPZ 220 since 2022 are expected to hand in their final BPY410 deliverables using the semester 2 deadline at the latest.

4.4 Plagiarism

Plagiarism is a serious form of academic misconduct. It involves both appropriating someone else's work and passing it off as one's own work afterwards. Thus, you commit plagiarism when you present someone else's written or creative work (words, images, ideas, opinions, discoveries, artwork, music, recordings, computer-generated work, etc.) as your own. Only hand in your own original work. Indicate precisely and accurately when you have used information provided by someone else. Referencing must be done in accordance with a recognised system. Indicate whether you have downloaded information from the Internet. For more details, visit the library's website: <http://www.library.up.ac.za/plagiarism/index.htm>.

Plagiarism Policy Document of the University of Pretoria: This document is available online and was retrieved from <http://web.up.ac.za/default.asp?ipkCategoryID=11297&subid=11297>

Time and again students have been found to commit PLAGIARISM. This document serves as information on what constitutes plagiarism, why it is considered a **grave offence** and what the possible consequences could be if a student is found guilty of plagiarism.

The word 'plagiarism' comes from a Latin word meaning 'to kidnap' and refers to 'kidnapping' someone else's work or idea. In the context of the University, plagiarism constitutes the following:

- handing in an assignment that was written (even in part) by someone other than yourself, or copied from someone else's assignment
- copying from another student during an exam or test
- copying parts of an article/textbook (whether in your own words or not) without proper acknowledgement of the source

It is especially this last issue that is a reoccurring concern. We understand that in some cultures, quoting what someone else said without acknowledging the original source is not a problem. However, in terms of international copyright law it constitutes a criminal offence and is equal to stealing – as the person who does this is regarded as stealing another's ideas and pretending that they are his/her own.

What can happen if a student is found guilty of plagiarism?

If it is a first-time transgression in an assignment, the matter is usually resolved between the lecturer and the student but will result in a reduced mark in the assignment, as well as an indication on the student's departmental record. If the student denies the transgression, or commits plagiarism again, the matter is taken up with the faculty disciplinary committee. Based on the Registrar's decision, this may lead to a disciplinary hearing on charge of misconduct. The student must appear at the hearing. Depending on the findings of the hearing, disciplinary action might be taken against the student. In the worst case, the student may be suspended from all further studies at the University and in extreme cases from all South African universities.

So, what should students do in an assignment to avoid this?

Firstly, it is always best for the student to write in his/her own words. Very rarely will he/she receive marks for quoting directly from the textbook – it does not really show the lecturer that the student has understood the issues at hand.

Even when the student answers in his/her own words, but the ideas mentioned come from a prescribed reading, the student needs to reference that reading, by giving the surname(s) of the author(s), as well as the publication date. For example:

Children with severe disabilities often struggle to become literate (Pierce & McWilliam, 1993).

If the student feels he/she really needs to quote (copy directly) from a prescribed text, because there is no other way to say something, the quoted part needs to be put in inverted commas, and the surname(s) of the author(s), date of publication and page number from where the piece was copied needs to be given. For example:

Pierce and Mc William (1993) point out the difference between print and graphic symbol systems. They specifically state that "...there is a critical difference between English print and any current GRS used for augmentative communication" (Pierce & McWilliam, 1993, p. 221).

However, students need to be aware that **direct quotes should be used very sparingly**, and students will rarely receive marks for such quotes.

At the end of an assignment the student is expected to give the full reference list of all the prescribed work referenced in the body of his/her assignment.

In an exam, students are not expected to provide references, seeing that they do not have access to reading work. However, in assignments, students most definitely need to provide references.

5. Support Services

Please download a QR code reader on your cell phone. To download a QR code reader open your mobile app store (App Store, Google Play, or Windows Marketplace) and search for QR code readers.

5.1 Safety in the Evening and Emergencies

There are a variety of student support services available – find these on the next page.

Student Support THE UP WAY

Student Counselling Unit

Provides counselling, therapeutic support and career counselling to students.

012 420 2333

Email: studentcounselling@up.ac.za

UP Careline

Offers 24-hour telephonic counselling and referrals to traumatised staff and students.

0800 747 747

Faculty Student Advisors

Offer workshops and academic support on goal setting, time management, study methods, test and examination preparation etc. and general faculty specific academic advice.

<https://www.up.ac.za/advising>

Student Health Services

Promote and assist students with health and wellness.

012 420 5233/3423

Department of Library Services

www.library.up.ac.za

Whatsapp: 066 509 1285

E-mail: library.enquiries@up.ac.za

Fees and Funding

www.up.ac.za/fees-and-funding

Disability Unit

Provides specialised services to students with physical or learning disabilities.

012 420 2064

Room-14 Old Chemistry Building,
Hatfield campus

Department of Student Affairs

Organises projects, programmes, student structures and events for your holistic development throughout your study career at UP.

012 420 6555

Student Affairs Building,
Hatfield campus

Green Route

Security Officers are available 18:00-06:00 to escort you (on foot) anywhere east of the Hatfield campus through to the Hillcrest campus. Departure point: Capitec ATM next to the Merensky Library.

012 420-2310

012 420-2760

083 654 0476

Department of Security Services

Contact details available on the back of your student card.

<https://www.up.ac.za/departments-of-security-services>

0800 0064 28 (UP Crisis Service)

Centre for Sexualities, AIDS and Gender

We engage in critique, advocacy, research, and programmatic work to challenge the status quo around sexualities, gender, and HIV in the interests of social justice and a more equal society.

012 420 4391

The Transformation Office

All incidents of discrimination, sexual harassment, sexual assault and gender-based violence can be reported directly to the office.

<https://www.up.ac.za/transformation>

Student Computing Services

IT and device support for students

Visit your nearest computer facility

Tukssport

Whether you are a complete beginner looking to try something new or an elite athlete with a record of high achievement, membership is OPEN to all students.

<https://www.up.ac.za/tukssport>

The Careers Office

Provides support for UP students and graduates as they prepare for their careers.

careerservices@up.ac.za

012 420 2315