FACULTY OF ENGINEERING AND BUILT ENVIRONMENT

Department of Industrial Engineering

PRINCIPLES OF MANAGEMENT

(PMGM 102) Assignment

Instructional Programme:	**BN: Industrial Engineering**
Instructional Offering:	**Principles of Management**
Subject Code:	**PMGM 102**
Date:	**26 October 2020**
Total Marks:	**100 marks**
Due Date:	**03 December 2020**
Number of Pages:	**1 excluding cover page**
Examiner/s:	**M Dewa**
Moderator:	**H Jackson**

Instructions / Requirements: -

1. Carefully read the content of the assignment and attempt the question accordingly

2. The rubric must be printed and attached as the last page of the assignment

3. All research materials must be dully referenced in the text as well as bibliography.

Assignment - Graduate Attribute 10: Engineering Professionalism

This is a group assignment, maximum 5 students per group and students who fail to get a group can submit the assignment individually.

Ethical standards and Safety management is an important theory and concept as engineering activities grow increasingly. Engineers play a vital role in ensuring that safety rules and laws are followed, ethical practices are strictly adhered to, safety audits and risk assessment on systems are conducted and appraised to ensure a safe working environment for people and ultimately prevent accident.

- Identify an ethical issue at a workplace, in a community or industrial accident caused by a compromised safety management system (lack of engineering professionalism). You can develop a questionnaire to ask relevant questions to the sample of your target population, interview people in the community, an experienced or retired engineer in the industry, anyone working industry or technicians in the industrial, mechanical or chemical engineering labs at DUT to know the safety rules, ethics and laws in their company, the system safety and potential for risk.
- Use the provided information to conduct an ideal safety audit and risk assessment of the system that could have identified and averted the accident if done before accident and possibly avert future occurrence.
- Develop a detailed report using resources (journals, books, articles) from the library and the correspondence from the interview conducted.
- Choose a suitable topic for your research and ensure that all materials are dully referenced using Harvard DUT referencing style.

Marks will be allocated to detail and thorough work. The following guidelines should be followed for the assignment;

- • Cover page (Topic, Subject, Department, student name, Student number)
- • Font size 12pt, Times New Romans, 1.5 line spacing
- • Maximum pages 7 pages and the minimum number of pages is 4 pages.

Note that you are to attach the mark rubric to your report for mark allocation which are to be printed otherwise you lose 5% of your overall assignment mark.

GUIDELINES FOR GROUP ASSIGNMENT

The assignment must basically be focused on comprehending and applying ethical principles and committing to professional ethics, responsibilities and norms of engineering technology practice**.**

1. Title page

This should include the project title and the name of the authors of the report. The assignment should be based on application of Rapid Prototyping technology at a typical company in South Africa or a real life problem. The title must **reflect** the goals or aims of the project.

2. Acknowledgements

It is usual to thank those individuals who have provided particularly useful assistance, technical or otherwise, during your project.

3. Abstract

The abstract is a very brief summary of the report's contents. It should be about half a page long. Somebody unfamiliar with your project should have a good idea of what it's about having read the abstract alone and will know whether it will be of interest to them. Trends in work ethics can also be cited.

The abstract is a very brief summary of the report's contents. It should be about half a page long. Somebody unfamiliar with your project should have a good idea of what it's about having read the abstract alone and will know whether it will be of interest to them. The abstract should include the following key process elements:

- Reason for writing: What is the importance of the research? Why would a reader be interested in the larger work?
- Problem: What problem does this work attempt to solve? What is the scope of the project? What is the main argument/project/claim?
- Methodology: Detail the approach used in the study
- Results: Include specific data that indicates the results of the project.

- Implications: What changes should be implemented as a result of the findings of the work? How does this work add to the body of knowledge on the topic?

4. Table of Contents

This should list the main chapters and (sub)sections of your report. Choose self-explanatory chapter and section titles and use 1.5 line spacing for clarity. Try to avoid too many levels of subheading - three should be sufficient.

5. Introduction

This is one of the most important components of the report. It should begin with a clear statement of what the project is about so that the **nature and scope of the project** can be understood by a lay reader. It should summarise everything you set out to achieve, provide a clear summary of the project's background, relevance and main contributions. The introduction should set the scene for the project and should provide the reader with a summary of the key things to look out for in the remainder of the report. The introduction itself should be largely non-technical. The background of the problem should be explained clearly. **Aim and objectives** of the project should be clearly stated.

6. Literature review

The literature review is a critical analysis, evaluation of existing knowledge relevant to your own research problem. You are required to extract different kinds of information from what you read and also show the relationship between different studies and how these relate to your own research (Hart, 2005:153). You are required to take the following points into consideration:

- Consider the key aspects of your topic, aim and objectives when searching for literature.
- Consult historical and recent books that are relevant to your problem, as well as any other published materials, for example, in newspapers, journals and the Internet.

Avoid plagiarism. Do not copy material from other authors/sources without acknowledging where you have got the information, and this applies especially when you make a

statement of fact. A minimum of **20 references** is expected and should include at least **10 journal articles**.

7. Methodology

Outline the procedure that is undertaken to collect, store, analyze and present information as part of a research process to identify the problem and achieve the desired objectives. This section should **briefly** exhibit steps undertaken to identify the problem, how the assignment was conducted.

8. Results and discussion

This is the central part of the report and can have more than one heading detailing the technical work undertaken during the project. This section must include the engineering professionalism, ethics, safety audit and risk assessment or accident investigation.

9. Recommendations

Recommendations or suggestions for improvement should be presented in this section .

10. Conclusions and Future Work

The project's conclusions should list the things which have been learnt as a result of the work you have done.

11. Bibliography

This consists of a list of all the books, articles, manuals etc. used in the project and referred to in the report. You should provide enough information to allow the reader to find the source. Please refer to the Study Guide for further information on referencing.

SUBMISSIONS

1. Soft copy submission for plagiarism check (must be <20% similarity) on https://www.turnitin.com/t_home.asp?r=76.7012163182706&svr=25&lang=en_us&
   Class ID 27033873, Enrollment key: pmgm102
   (Single page of Turnitin report to be submitted as third from last page)
2. Email final soft copy to mendond@dut.ac.za
3. The following 2 pages must appear in the final sot copy submission

GROUP ASSIGNMENT MARKING GUIDE

SOFT COPY	MARK	OUT OF	COMMENTS
Title page		**2**	
Abstract		**4**	
Table of Contents		**4**	
1. Introduction and problem statement		**10**	
2. Literature Review		**20**	
3. Methodology		**10**	
4. Results and discussion		**25**	
5. Conclusions and Future Work		**10**	
Bibliography		**5**	

Assessment of development of Graduate Attribute 10: Engineering Professionalism

Durban University of Technology

Department of Industrial Engineering

Student Numbers: | **Final Mark**

PMGM 102: Principles of Management for Engineers - Engineering Professionalism

INDICATOR		A	B	C	D	E	RESULT
1	**Introduction and document layout (20%)**	Excellent clear statement of the project's background, relevance, problem statement, aims and objectives. Report is exceptionally documented	Good statement of the project's background, relevance, problem statement, aims and objectives. Report is well documented	Average statement of the project's background, relevance, problem statement, aims and objectives. Report documentation is average	Poor statement of the project's background, relevance, problem statement, aims and objectives. Report is poorly documented	Very vague statement of the project's background, relevance, problem statement, aims and objectives. Report is very poorly documented	
2	**Literature survey and Bibliography summary of readings (25%)**	Student has an **excellent understanding** of the topic on hand and has prepared an excellent summary. Readings are relevant to the topic, summary is well planned and executed. Referencing guidelines are adhered to.	Student has a **good understanding** of the topic on hand and has prepared a good summary. Readings are relevant to the topic, summary is planned and executed. Referencing guidelines are adhered to.	Student has a **satisfactory understanding** of the topic on hand and has prepared an adequate summary. Referencing guidelines are adhered to in part.	Student has a **poor understanding** of the topic on hand and has prepared an in adequate summary. Readings are somewhat relevant to the topic, summary has no evidence of planning and execution. Referencing guidelines are not adhered to.	Student has **no understanding** of the topic on hand and has prepared an ill-conceived and poorly executed summary. Readings are irrelevant to the topic, summary has no evidence of planning and execution. Referencing guidelines are not adhered to.	
		10 - 8	**8 - 7**	**6 - 5**	**4 - 2**	**0 - 1**	
3	**Methodology (10%)**	Student has provided **an excellent** description of the methodology that was adopted	Student has provided a good description of the methodology that was adopted	Student has provided an average description of the methodology that was adopted	Student has provided a poor description of the methodology that was adopted	Student has **no understanding** of the topic on hand and has prepared an ill-conceived and poorly presented methodology	

3	**Engineering Professionalism (10%)**	Student has provided **an excellent** description of the engineering activity. Student has supported this through visual evidence such as photographs, diagrams, pictures etc.	Student has provided **a good** description of the engineering activity. Limited visual evidence submitted.	Student has provided **a satisfactory** description of the engineering activity. Limited to no visual evidence submitted.	Student has provided **a poor** description of the engineering activity. No visual evidence submitted.	Student has provided **no** description of the engineering activity.	
		10 - 8	**8 - 7**	**6 - 5**	**4 - 2**	**0 - 1**	
4	**Ethics, Safety audit and risk assessment (15%)**	Student has provided **an excellent** description of the system safety and risk assessment. Student has demonstrated excellent understanding the role of ethics in engineering professionalism.	Student has provided **a good** description of the system safety and risk assessment. Student has a good understanding of the role of ethics in engineering professionalism.	Student has provided **a satisfactory** description of the system safety and risk assessment. Student has a satisfactory understanding of the role of ethics in engineering professionalism.	Student has provided **a poor** description of the system safety and risk assessment. Student has a poor understanding of the role of ethics in engineering professionalism.	Student has provided **no** description of the Impact of unethical engineering practices at work environment. Student has no understanding of the role of ethics in engineering professionalism.	
		10 - 9	**8**	**7 - 5**	**4 - 3**	**2 - 0**	
6	**Conclusion and Suggestions for improvement (10%)**	Student has provided **excellent** discussions of the topics on hand, has shown in-depth understanding of subject matter and has made a meaningful suggestions	Student has provided **a good** discussion of the topics on hand, has shown in-depth understanding of subject matter and has made a good suggestions	Student has provided **a satisfactory** discussion of the topics on hand, has shown satisfactory understanding of subject matter and has made satisfactory suggestions	Student has provided **a poor** discussion of the topics on hand, has shown poor understanding of subject matter and has not made any suggestions	Student has provided **no** discussion of the topics on hand, has shown no understanding of subject matter and has made no suggestions	
		10 - 9	**8 - 7**	**6 - 5**	**4 - 3**	**2 - 0**	
Note: If a mark of less than 50 % is obtained on the first attempt for this assignment, then the project can be re-submitted on or before the date indicated below for reassessment. In this case if a pass mark is obtained a student will be awarded a final mark of 50 % (i.e. deemed competent) irrespective of what mark they actually achieve.						**Mark Allocated**	**100**
						Achievement of outcome being developed	
GA 10	**Engineering Professionalism**	**Learning Objective:** Comprehend and apply ethical principles and commit to professional ethics, responsibilities and norms of engineering technology practise.				**YES**	**NO**