

RESPONSE FROM CAPE PENINSULA UNIVERSITY OF TECHNOLOGY IN TERMS OF DEFERRALS REGARDING CATEGORY B QUALIFICATIONS

NDINDS: DIPLOMA IN INDUSTRIAL ENGINEERING DATE OF RE-SUBMISSION: 24 APRIL 2015

COMMENTS RECEIVED FROM HEQC (dated 18 March 2015)

The programme appears to be significantly changed in order to align with the HEQSF. The institution should clarify what changes have been made and how these changes align with the HEQSF but do not equate to more that 50% of the programme design.

RESPONSE FROM INSTITUTION REGARDING QUERIES

The current ND: Industrial Engineering has a total of 27 subjects to graduate (Total SAQA credits of 360).

The revised Diploma consists of 15 subjects (Total SAQA credits of 360). The breakdown for the new Diploma in Industrial Engineering consist of the following subject breakdown:

Unchanged: 9 subjects = 204 credits (57%) Modified: 5 subjects = 144 credits (40%) Added: 1 subject = 12 credits (3%)

The number of subjects has reduced from 27 to 15 due to combining existing subjects and changing the offering from semester to a year offering but without changing the content. Also, the two in-service training modules (P1 and P2) were reduced to one 60 credit module.

See Appendix A for an explanation and more detail.

Definitions for unchanged, modified and added

For the **unchanged** subjects some subject names were changed but the content remained the same. Or some subjects might have been combined with no content change.

For the **modified** subjects these were only partially modified. In other words most of the subject content remained the same as what is currently offered but some subject content moved from one subject to another with a subsequent name change; or some obsolete content was replaced with more relevant up to date content. Although 40% was "modified", the subject content fundamentally and mostly remained the same.

Only the "added" subjects are completely new subjects not offered in the current programme.

Rationale for minor changes (modifications) and additions is a combination of the following;

- 1) Integrate subjects to overcome the criticism of the current programmes, viz. "subjects are offered in isolation".
- 2) To benefit from the additional time accrued due to offering year subjects as opposed to semester subjects to allow more intervention time to assist unprepared and academically needy students.
- 3) To remove obsolete content and replace it with more relevant/pertinent information.
- 4) To allow more time for some project-based subjects where students historically battle to meet due dates.
- 5) To allow more time for practice-based learning to occur.
- 6) To increase the throughput rates, pass and decrease dropout rate without compromising on quality standards.

Careful thought and consideration was given to achieve the above.

Fundamentally, the curriculum based on programme/subject content was changed minimally.

Kindly direct any queries pertaining to this re-submission to:

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Date of re-submission: 24 April 2015

APPENDIX A: NDINDS: DIPLOMA IN INDUSTRIAL ENGINEERING

MODULE			YR	Compulsory	Elective	Removed/Added/ Modifed/Unchanged	YEA	R1	YEA	R2	1	YEAR :	3	TOTAL				50 Section 200
	Credits	Level					Unchanged	Modified	Unchanged	Modified	Unchanged	Modified	Added	Unchanged	Modified	Added		EXPLANATION
Engineering Mathematics 1 (MTH1535)	24	5	1	Yes	No	Unchanged	24									T		Current Mathematics 1 with extra help for students to allow students to get a good grounding in mathematics offered over 1 year. No content changes
Industrial Engineering Design (IED1505)	24	5	1	Yes	No	Modified		24										Current Drawings 1, Autocad 2 and Computer Skills 1 content modified & integrated.
Engineering Management (ENM1505)	24	5	1	Yes	No	Mafified		24										Current Communications 1, Manufacturing Relations 2 and Industrial Leadership 3 integrated: Integrated x 12 credit courses into one 24 credit course. Manufacturing Relations 2 and Industrial Leadership 3 become the topics for effective communications.
Engineering Manufacturing Technology (EMT150S)	24	5	1	Yes	No	Unchanged	24											Current Mechanical Engineering Manufacturing 1 and 2 combined and offered over one year. No content changes
Engineering Physics (PHY1525)	24	5	1	Yes	No	Unchanged	24											Current Electrotechnology 1 and Mechanics 1 commbined and offered over 1 year. No content changes
							72	48						72	48	0	12	0
Engineering Mathematics 2 (MTH262S)	24	6	2	Yes	No	Unchanged			24									Current Mathematics 2 and 3 combined and offered over 1 year. No content changes
Engineering Workstudy (EWY2605)	24	6	.2	Yes	No	Unchanged			24									Current Engineering Workstudy 1 and 2 combined and offered over a year. No content changes
Industrial Production Engineering (PIB260S)	24	6	2	Yes	No	Unchanged			24									Current Production Engineering: Industrial 1 and 2 combined and offered over 1 year. No content changes
Engineering Economics (EEC260S)	24	6	.2	Yes	No	Unchanged			24									Current Costing 2 and Industrial Accounting 3 combined and offered over 1 year. No content changes
Qualitative Techniques (QUA260S)	24	6	2	Yes	No	Unchanged			24									Current Quantitative Techniques 1 and Quality Assurance 2 combined and offered over 1 year. No content changes
			9 (1)		9 1			- 59	120	0	8			120	0	0	12	0.
Industrial Engineering Project 3 (IEP3605)	60	6	3	Yes	No	Modified						60						Current Industrial Engineering Practice 1 and 2 reduced to 6 months. Modifications required due to reduced time.
Computer Integrated Manufacturing (CIM3605)	12	6	3	Yes	No	Modified						12						Current Automation 3 content that was modified to delete obsolete content and to add more relevant content.
Facility Layout and Materials Planning (FAM3605)	24	6	3	Yes	No	Modified						24						Current Facility Layout and Materials Handing 2 content, minor additions, and additional time allowed for students to complete project. Students historically were challeged for time to complete this very fundamental project-based subject.
Operations Research (ORE360S)	12	6	3	Yes	No	Unchanged					12							Current Operations Research 3
Systems Engineering (SYE360S)	12	6	3	Yes	No	Added							12					Some of the current Engineering Workstudy 3 content that was modified to delete obsolete content and to add more relevant content, e.g. more Systems Engineering content which is one of the basics for Industria Engineering problem solving.
							\Box				12	96	12	12	96	12	12	0
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											3	Lev 6	only	132	96	12	24	0