Graduate Development Programme

Project Services

PROJECT CONTROLS EXPO 2022

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Introduction:

The company has developed a unique program for new junior employees who just graduated from university. Upon enrolment of entry-level employees, the novice employee joins different departments as part of development. The scheme has been developed primarily to help the young Graduate to obtain the maximum benefit of gaining expected knowledge and skills as a career in project controls Engineering. The scheme will also assist the staff by providing a coach/mentor to provide the support needed.
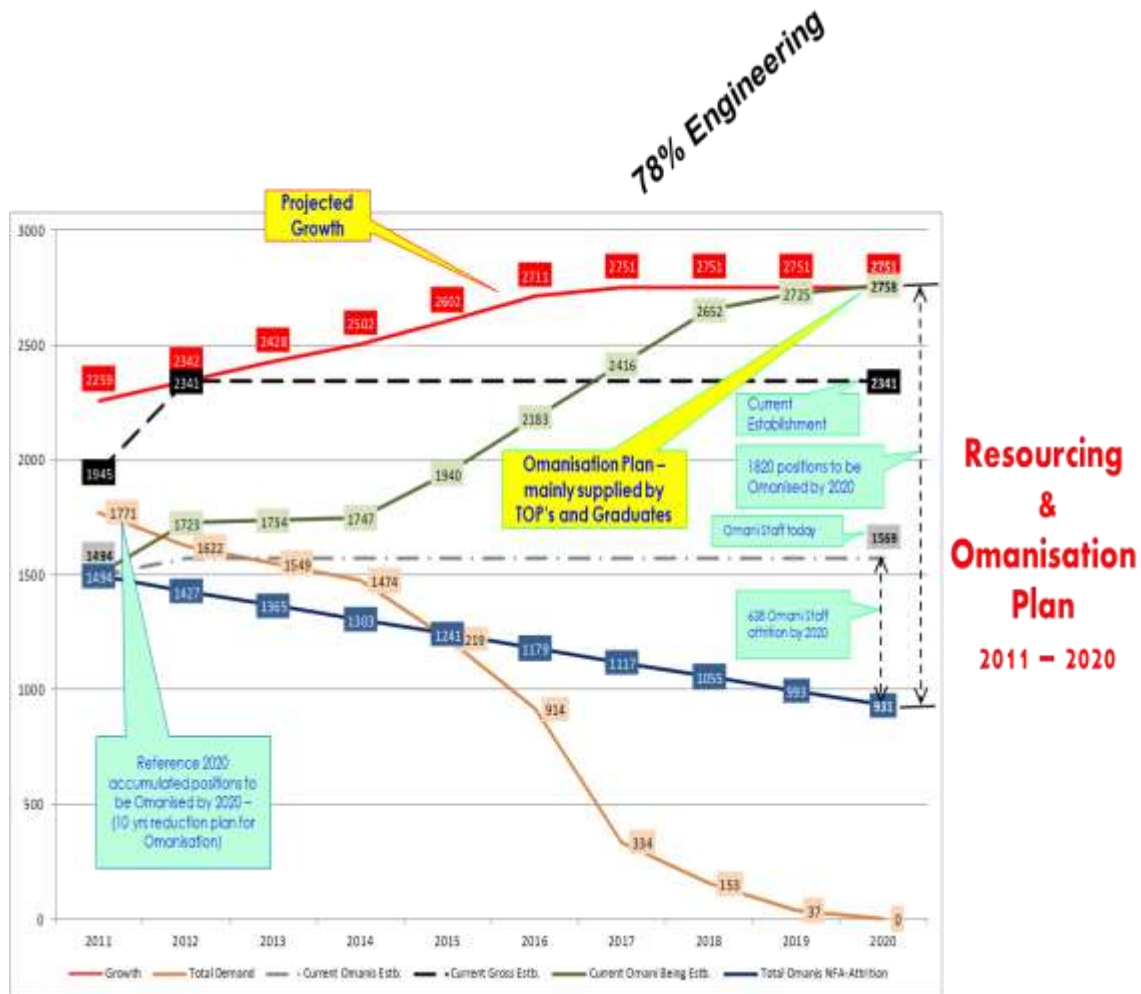
Graduates' development program (GDP) provides fresh graduates with a detailed framework to develop their professional careers in PDO. The program enables the graduate to develop the required competence profile for the discipline so that he/she can perform their own duties within the shortest possible learning and development time. The GDP normally runs for a period of approximately between 3 to 4 years. During this time, the Graduate will receive the full support to complete the program, including formal mentoring/coaching and together with regular reviews and assessments.
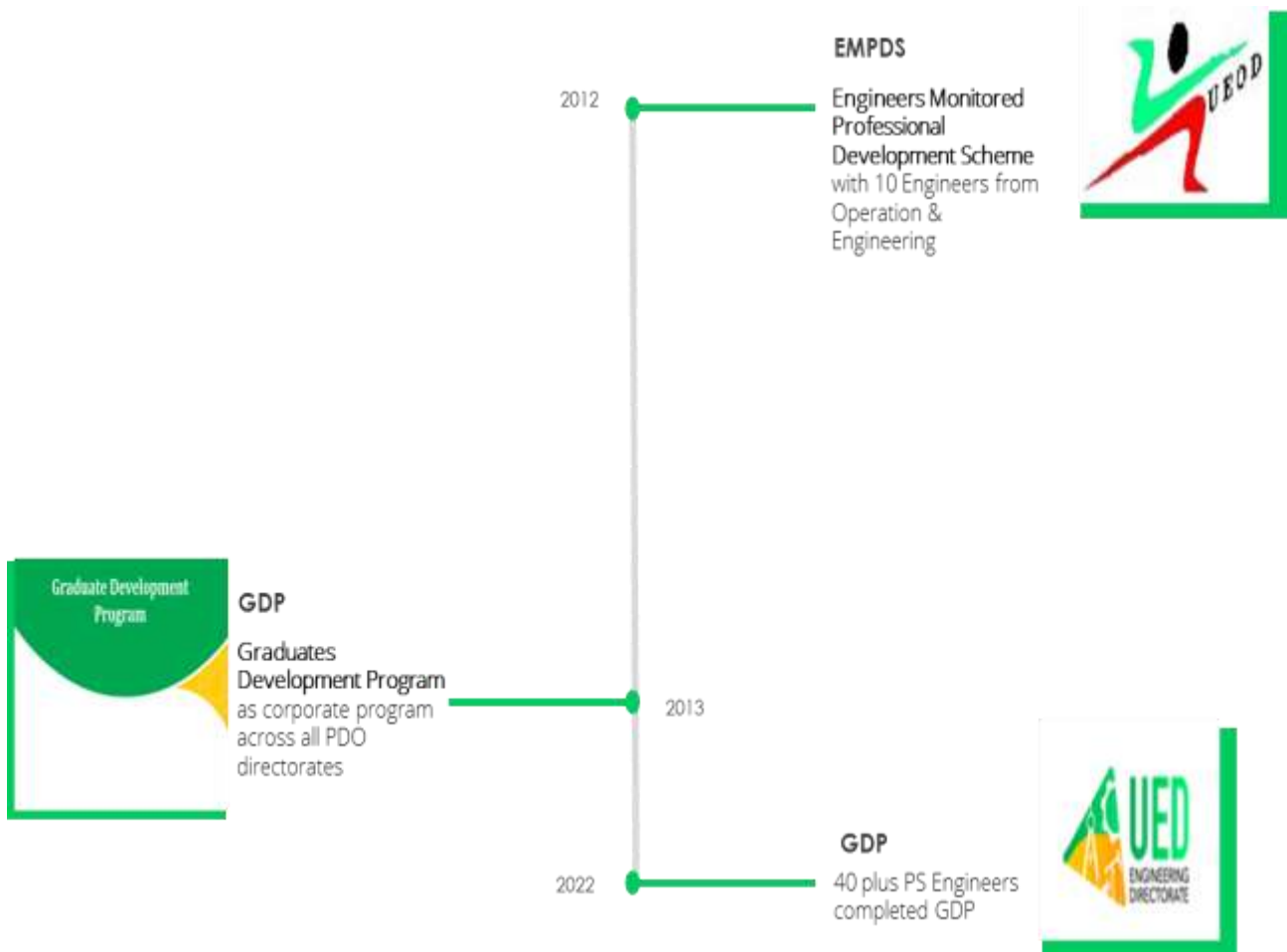
This paper will provide the roadmap of a project control engineer from hiring to graduation as a specialist employee in project controls. The paper will start demonstrating the graduate engineer development in PDO, set of skills needed, formal training courses, self-study and ongoing research, and Regular assessment of skills and will end by concluding the importance of projects services young professional development.

So far PDO was successful in this journey and all graduates who join PDO goes through it as they finish their degree. Until today hundreds of them have completed the program as reached senior management positions.

In projects services, around 41 graduates have completed the program in 11 batches starting from 2012.

Background:

PDO has chosen the development of young talent in project controls due to the challenges faced in projects from 2012 when a new department called project services was developed to support the project. The vision was to develop young locals who are specialised in cost control, planning, and estimation and risk management to run the business in the long term.

Roles and Responsibilities

The Main Players

New PS Engineer

- Develops personal EMPDS plan
- Works against assigned tasks & targets
- Exploits all development and learning opportunities
- Attends training courses
- Maintains Manual and supporting evidence files
- Claims newly acquired competence/skills elements
- Delivers quarterly EMPDS reviews

Mentor

Coach

- Provides technical advice and guidance
- Attends quarterly reviews
- Feeds back on Engineer's performance
- Identifies additional work exposure opportunities

Corporate Functional Discipline Head

GDP Coordinator

Team Leader

- Sets and reviews development standards
- Nominates new Engineers to the scheme
- Sign and endorse technical competencies

- Manage/update processes
- Custodian of standards
- Liaises with training agencies

- Arranges coaching facilities at workplace
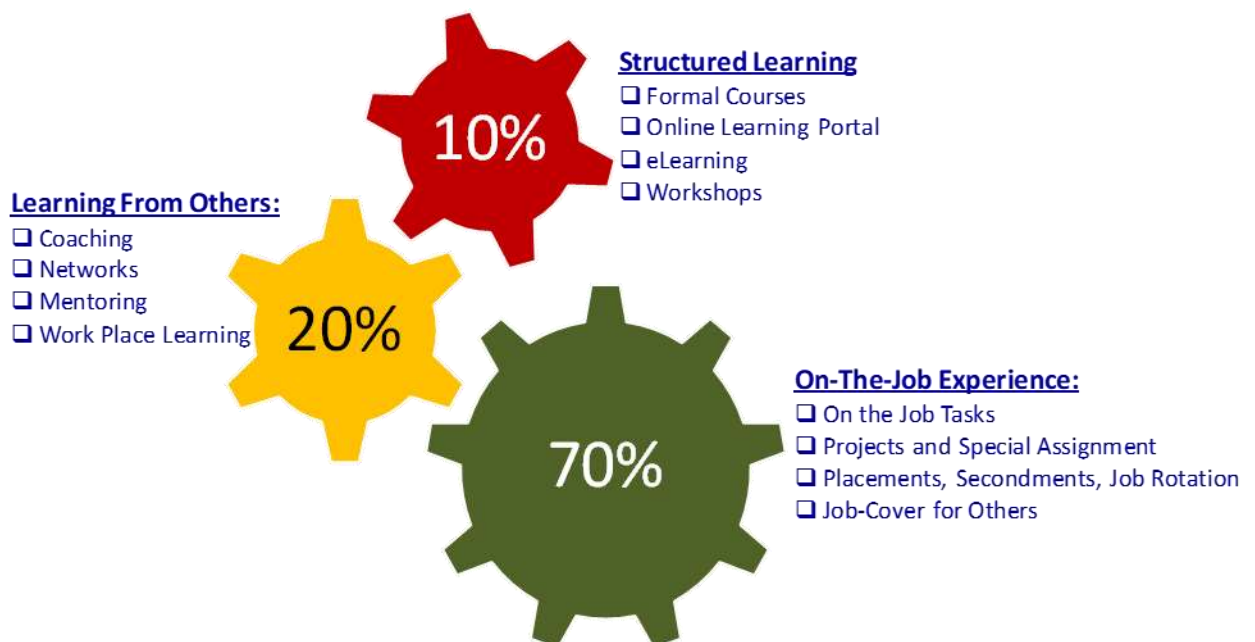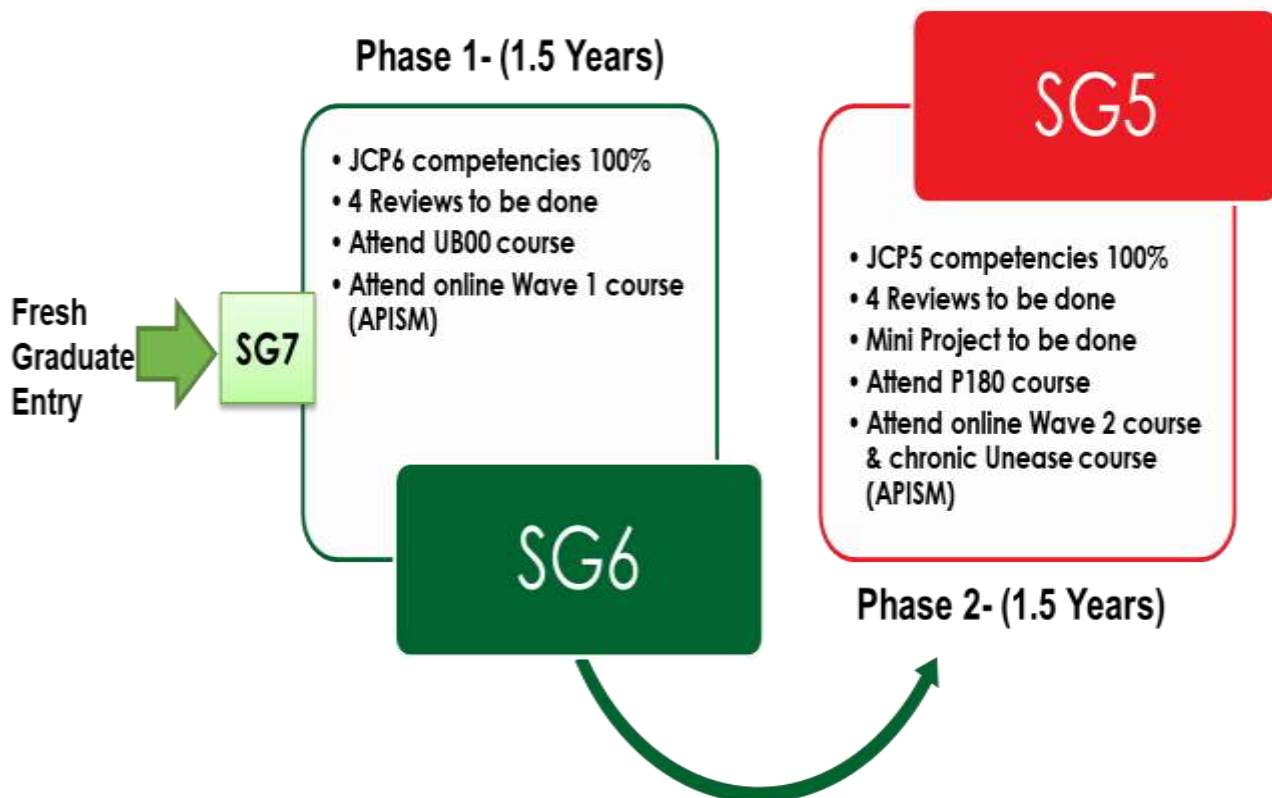
Learning and development Approach:

GDP follow the 70-20-10-time model, which is learning and development method that enables graduates to achieve their competence potentials independent of the progression process. 70% of the graduate time will be learning on the job tasks, 20% will be assigned to coaching and mentoring, and 10% for goes training.

This means that majority of learning and development takes place on the job. The focus of the GDP development framework is, therefore, to shift to more on-the-job learning, with enhanced hands-on experience and practicing. The diagram below helps as a guide to structure the appropriate GDP contents.

Structured Learning
- ❑ Formal Courses
- ❑ Online Learning Portal
- ❑ eLearning
- ❑ Workshops

Learning From Others:
- ❑ Coaching
- ❑ Networks
- ❑ Mentoring
- ❑ Work Place Learning

On-The-Job Experience:
- ❑ On the Job Tasks
- ❑ Projects and Special Assignment
- ❑ Placements, Secondments, Job Rotation
- ❑ Job-Cover for Others

10%

20%

70%

Timeline and requirements of the program:

Phase 1- (1.5 Years)

Fresh Graduate Entry → SG7

- JCP6 competencies 100%
- 4 Reviews to be done
- Attend UB00 course
- Attend online Wave 1 course (APISM)

SG6

SG5

- JCP5 competencies 100%
- 4 Reviews to be done
- Mini Project to be done
- Attend P180 course
- Attend online Wave 2 course & chronic Unease course (APISM)

Phase 2- (1.5 Years)

Competence Profile

Two (2) separate job competence profiles (JCPs) i.e. Job Group 6 and the other at Job Group 5 are developed by PDO with the objective of developing the basic foundation and knowledge to function and familiarise a graduate with the respective tasks of a discipline/sub-discipline that he/she have been assigned to.

There are eighteen (18) competence elements in each job competence profile. The methodologies to develop and progress a graduate in Graduate Development Program (GDP) will be via a structured blended approach of on-the-job coaching (and job tasks), formal courses (F2F events) and online courses (e-learning).

As enabler of a graduate development program, Supervisor, Line Coach and Discipline Mentor will discuss how the competences will be developed, the phasing of which is largely dependent on he/she role and exposures in the organization.
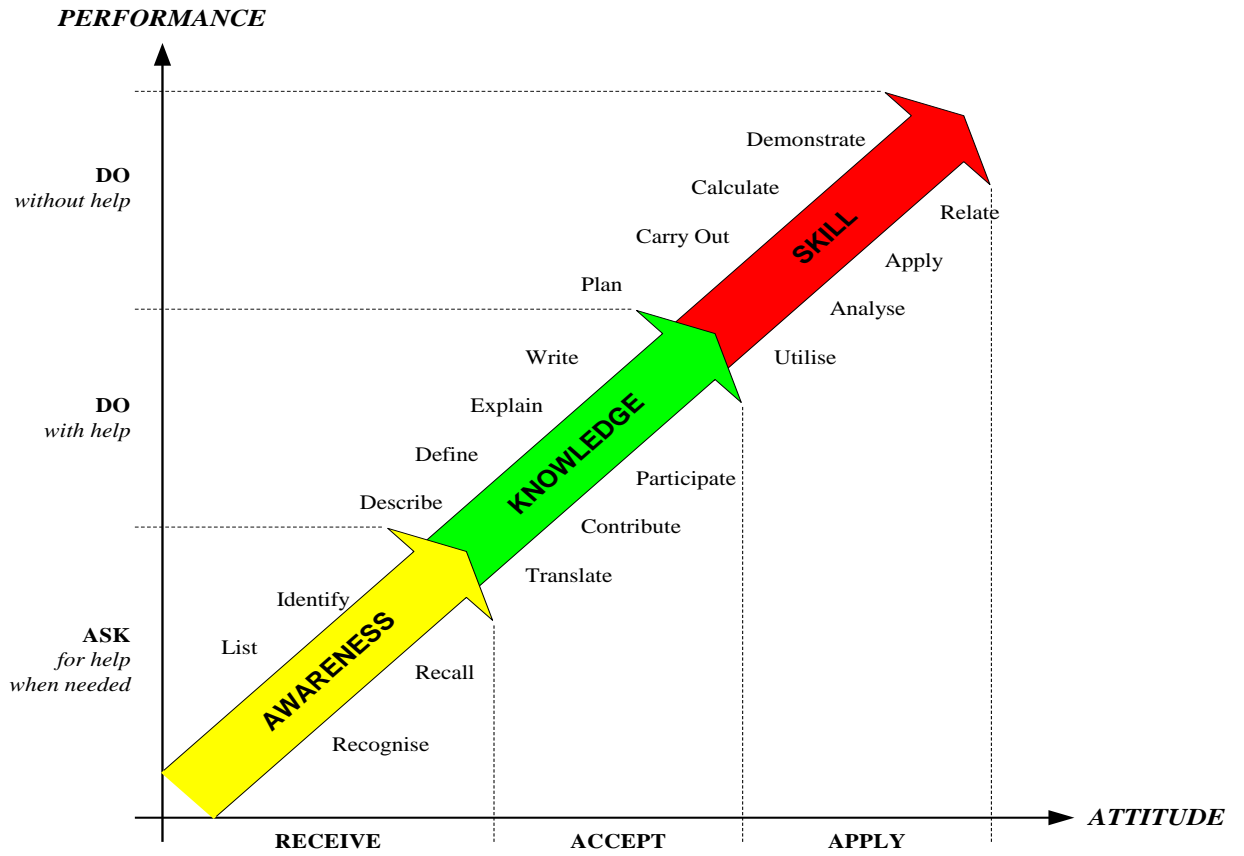
Level	Level Name	Knowledge
1	**Aware**	**Has an awareness of knowledge needed for the competence**
2	**Practised**	**Has a working knowledge of, and can describe, the competence.**
3	**Competent**	**Has a comprehensive knowledge of the competence in situations of limited complexity.**

The job competence profile list in Project Services:

Sr. #	Competencies	Proficiency Level	
		JCP6	JCP5
1.	HSSE	Aware	Aware
2.	Continuous Improvement	Aware	Practised
3.	Planning Part 1	Aware	Practised
4.	Planning Part 2	Aware	Practised
5.	Planning Part 3	Practised	Practised
6.	Planning Part 4	Practised	Competent
7.	Cost Estimating Part 1	Aware	Practised
8.	Cost Estimating Part 2	Aware	Practised
9.	Cost Estimating Part 3	Practised	Practised
10.	Cost Estimating Part 4	Practised	Competent
11.	Cost Control Part 1	Aware	Practised
12.	Cost Control Part 2	Aware	Practised
13.	Cost Control Part 3	Practised	Practised
14.	Cost Control Part 4	Practised	Competent
15.	Risk Management Part 1	Aware	Practised
16.	Risk Management Part 2	Aware	Practised
17.	Risk Management Part 3	Practised	Practised
18.	Risk Management Part 4	Practised	Competent

Development Framework

Years	On Job Coaching and Mentoring	GDP On Boarding		Discipline Specific training & e-Learning Cross-Internal Discipline Learning Cross-Business Learning
		Intake Discussion (Tasks + Teams + Site Exposure)		
		Global & Business Specific On-Boarding		
		Introduction to PDO	Introduction to Project Services	
Progress Checks & Assessments (up to 5 Years) GDP Period To be specified in **Development Agreement** based on Initial CFDH Assessment		**Competences**	**Job Tasks**	
		HSSE (A)	**JT1** Manage & Apply HSSE Risk Management	
		Continuous Improvement (A/P)	**JT2.A** Develop Lean Awareness **JT2.B** A3 Thinking Awareness **JT2.C** Apply CI Fundamental **JT2.D** Practical Problem Solving (PPS)	
		Planning Part 1 (P)	**JT3** Define and Describe Procedures, Guidelines, Schedule and Tools for Project Planning	
		Planning Part 2 (P)	**JT4** Develop Deterministic Integrated Project Schedule	
		Planning Part 3 (P)	**JT5** Develop Mature, Review, Check and Manage Contractor's Schedule and Schedule Change	
		Planning Part 4 (C)	**JT6** Set-Up and Maintain Project Controls System and Schedule Status Report	
		Cost Estimating Part 1 (P)	**JT7** Study & Develop Procedures, Guidelines and Tool for Cost Estimate	
		Cost Estimating Part 2 (P)	**JT8** Perform Deterministic Cost Contingency Development	

Cost Estimating Part 3 **(P)**	**JT9** Develop Type 1,2,3 & 4 Cost Estimate	
Cost Estimating Part 4 **(C)**	**JT10** Develop and Communicate Estimate Basis, Estimate Plan and Manage Estimate Data	
Cost Control Part 1 **(P)**	**JT11** Develop Procedures, Guidelines and Tool for Cost Control	
Cost Control Part 2 **(P)**	**JT12** Set-Up and Maintain Project Controls System, Cost Plan, Project Structures and Manage CTRs	
Cost Control Part 3 **(P)**	**JT13** Implement Cost Control Processes and Earned Value Management	
Cost Control Part 4 **(C)**	**JT14** Set-up (Support) and Maintain Change Control, Contingency Management Systems, Develop and Prepare Project Management/Cost reports Including 'One-Pager', Detailed Project Monthly	
Risk Management Part 1 **(P)**	**JT15** Develop Procedures, Analysis, Risks, Workshops for Risk Management	
Risk Management Part 2 **(P)**	**JT16** Establish Risk and Opportunity Management System	
Risk Management Part 3 **(P)**	**JT17** Perform Probabilistic Schedule and Risk Analysis	
Risk Management Part 4 **(C)**	**JT18** Perform Probabilistic Cost Risk Analysis	
Competency Assessment		
Development Approaches: e-Learning, Face-to-Face, Coaching, Mentoring, Professional Experience, Assessment Methods		

Brief Author Profile

o *Education Qualifications:*

Doctorate in Leadership & Innovation-2021- In Progress
Doctorate Degree from New York University – U.S.A.

o *Professional Qualifications:*

CIPD Level 5 - 2022

PDO: Technical Authority (level 2) in Project services
2019- Now Certified as Authority in Cost Control, Cost Estimating,
Planning, Resource loading, Risk Management.

Certified Professional Trainer
2016- Now SAUDIA ARABIA- and KUWAIT

o *Work Experience (Jobs)*

Total years of experience are 15 years.

❖ *Role: Project services Team Leader*

➢ *Framework that details the work items new graduates need to understand in their initial period (3 years) with PDO.*
➢ *Mentor the graduates during their training to ensure they are receiving appropriate development opportunities.*
➢ *Lead and assist in peer reviews, Estimate and Schedule Assurance Review (ESARs) and Value Assurance Review (VARs).*

❖ *Role: Senior Cost & Planning Engineer*

➢ *Experienced in: Cost Control, Cost Estimating, Planning, Resource loading, Risk Management, commissioning plan, Contract and Procurement Management, progress measurement system, VOWD, OPEX and CAPEX monitoring.*

Summary & Conclusion

To conclude, the main goal of the program is to plan and equip graduates to achieve that goal by giving every opportunity and infrastructure for them to acquire the following competencies. Each GDP Engineering graduate from PDO is trained in their discipline to meet the requirements of a Technical GDP Engineer in the mainstream business.
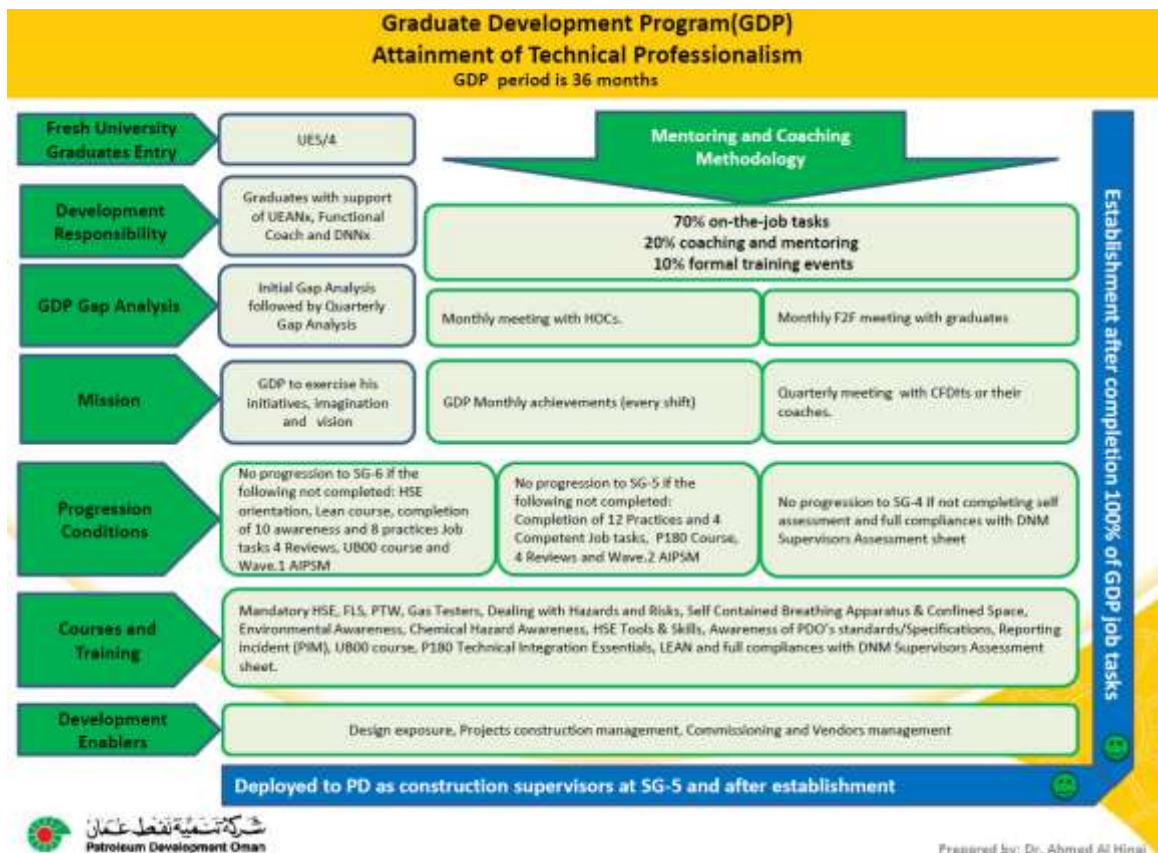
Sample of construction discipline