DIGITAL EGYPT PIONEERS INITIATIVE (DEPI)

PROFESSIONALS CATALOG

2024

Contents

Contents

Introduction

DEPI includes 6 technology tracks (specialties) that cover highly demanded jobs. Those tracks are:

1. SOFTWARE DEVELOPMENT
2. DIGITAL ART
3. AI & DATA SCIENCE
4. DATA ANALYTICS
5. INFRASTRUCTURE & SECURITY
6. Management & ERP

Each technology track offers training courses for technologies used by many companies in that specific track and each course covers a potential job opportunity (job profile). The objectives of the studying each job profile are

- Provide trainees with the necessary technical background and experience needed to excel in specific technologies that match trainee's capabilities and aspirations. This includes all necessary prerequisites.
- Guide trainees on how to develop a professional and product quality module.
- Explain different aspects of product development life cycle (planning, design, development, integration, testing) that help trainees succeed in job market
- Involve trainees in Hands on experience / training that deepen their understanding of the introduced technologies.

SOFTWARE DEVELOPMENT TRACK

The software track offers training courses for several web development technologies (frontend/backend) across different platforms, mobile development, cloud application development, and DevOps, software testing.

Software Development

1. DevOps Engineer
2. AWS Cloud Specialist
3. React web developer
4. Frontend developer
5. Mobile App Developer
6. Net Web Developer
7. PHP Web Developer
8. Software Tester

SOFTWARE DEVELOPMENT TRACK

1. DevOps Engineer

A DevOps Engineer is responsible for smoothing operation of a company's IT infrastructure. A DevOps Engineer's roles and responsibilities are a combination of technical and management roles. DevOps Engineers build and set up new development tools and infrastructure, implement integrations requested by customers, deploy updates and fixes, develop scripts to automate visualization, design procedures for system troubleshooting and maintenance, and optimize software development processes.

The technical study plan proposed for a DevOps Engineer is provided below:

Course Contents	Hours
Prompt Engineer	9
DevOps Essentials & Perquisites	15
Configuration Management using Ansible	15
Containerization basics using Docker	15
Docker Advanced	9
Continuous Integration using Jenkins	9
Introduction to Kubernetes	15
Continuous Monitoring using Prometheus	15
DevOps Project "Build Real World application"	9
Define the AWS Cloud	15
Explain the different cloud architecture design principles	9
Terraform	12
Setting Resource Dependencies	12
Total	159

SOFTWARE DEVELOPMENT TRACK

2. AWS Cloud Specialist

An AWS Cloud Developer is responsible for setting up, maintaining, and evolving the cloud infrastructure of web applications. They are expected to understand all the core AWS services and have experience with creating, debugging, and managing AWS infrastructure. They are also expected to understand the current infrastructure stack, scalability, and reliability goals.

The technical study plan proposed for an AWS Developer Associate is provided below:

Course Contents	Hours
AWS Cloud Foundations	35
AWS Cloud Services	70
AWS Cloud Security Foundations	35
AWS Academy Cloud Web Application Builder - PROJECT	20
Total	160

SOFTWARE DEVELOPMENT TRACK

3. React Web Developer

This profile is equipped with comprehensive knowledge in web development essentials such as HTML, CSS, and JavaScript, and specialized in building React applications. With proficiency in Git and GitHub for version control, NodeJS for server-side scripting, and an understanding of containerization with Docker and Kubernetes, they are well-prepared to construct and manage full stack projects. The culmination of these skills is demonstrated in a capstone project, bringing React and NodeJS together to produce a sophisticated, real-world web application.

Course Contents	Hours
Prompt Engineer	9
Introduction to Web Development with HTML, CSS, JavaScript	21
Getting Started with Git and GitHub	15
Developing Front-End Apps with React	60
NodeJS	21
Introduction to Containers w/ Docker, Kubernetes	21
Full Stack Web Development Project using React & NodeJS	12
Total	159

SOFTWARE DEVELOPMENT TRACK

4. Frontend Developer

This frontend profile is adept in HTML5 Essentials, CSS with a focus on the principles of UX/UI design, JavaScript for dynamic interactions, Bootstrap for responsive design, and Angular for robust single-page applications. With these skills, participants will be capable of crafting user-centric websites and applications that are both functional and visually appealing.

Course Contents	Hours
Prompt Engineer	9
HTML5 Essentials	21
CSS Essentials Principles of UX/UI Design	24
JavaScript	30
Bootstrap	36
Angular	39
Total	159

SOFTWARE DEVELOPMENT TRACK

5. Mobile App Developer

A Mobile Application Developer is responsible for designing, developing, and maintaining mobile application. The courses in this profile cover a range of technologies that a Mobile Application Developer should have a strong understanding of and be able to use these technologies to design and develop responsive and user-friendly mobile applications.

Course Contents	Hours
Prompt Engineer	9
Java Programming Fundamental & OOP	45
Android Application Development	30
Android Security Essentials	12
Dart programming language	24
Flutter Applications Development for IOS & Android	39
Total	159

SOFTWARE DEVELOPMENT TRACK

6. .Net Web Developer

Rooted in .NET technologies, this profile reflects a solid foundation for data-driven applications. With a strong grasp of C#, the candidate is equipped with robust back-end development. Front-end proficiency is ensured through HTML5, JavaScript, and CSS3, creating a full-stack capability. Experience with .NET Core Web API and MVC frameworks enables the creation of scalable, modern web services and applications, completing a versatile skill set for comprehensive .NET development.

Course Contents	Hours
Prompt Engineer	9
Introduction to SQL Server Programming	18
Programming in C#	39
Programming in HTML5, JavaScript & CSS3	24
.Net Core Web API	33
Developing .NET Core MVC Web Applications	36
Total	159

SOFTWARE DEVELOPMENT TRACK

7. PHP Web Developer

A PHP Web Developer is responsible for designing, developing, and maintaining web applications using PHP and related technologies. A successful Full Stack PHP Web Developer should have a strong understanding of Web technologies and be able to use them to design and develop responsive and user-friendly web applications. Job responsibilities could include analyzing user needs, recommending upgrades to existing applications, testing and updating web applications, and collaborating with other developers and designers to get projects done.

Course Contents	Hours
Prompt Engineer	9
HTML5 & CSS Fundamentals	21
JavaScript Fundamentals	21
MySQL Database Development	18
PHP Programming	39
Laravel PHP Framework	36
WordPress	15
Total	159

SOFTWARE DEVELOPMENT TRACK

8. Software Tester

Software testing is a crucial part of the software development lifecycle, and a Software Tester is responsible for ensuring that software products meet quality standards. A successful Software Tester should have a strong understanding of the topics covered in the courses in this profile and be able to use them to design and execute effective testing strategies.

Course Contents	Hours
Prompt Engineer	9
Java programming fundamentals	33
Fundamentals Of Testing	15
Testing Throughout The Software Development Life Cycle	15
Static Testing Techniques	15
Test Analysis & Design	15
Managing Test Activities	15
Test Tools	21
Test implementation project	21
Total	159

DIGITAL ARTS TRACK

Digital Arts enables artists to express themselves in new and innovative ways using technology and digital tools and employing them innovatively in their artistic creations, which opens new doors for expression and innovation in the art world.

The educational field revolves around enabling students to grow as specialized digital artists, who can apply their skills in producing innovative and high-quality works of art using modern technologies in this field, such as dealing with software and applications that contribute to the creation of works of art, such as photo and video editing programs, and 3D design programs. and digital drawing tools.

The track is concerned with exploring and integrating cutting-edge technology with a focus on its impact on the development of artistic works. It means thinking about how technology can be used to enhance artistic expression and provide new experiences to the public. For example, virtual and augmented reality technologies can be used to create distinctive and immersive interactions in artworks.

The educational objectives of the program are:

- Providing an educational environment that includes comprehensive and effective knowledge in the field of digital arts. This includes providing students with detailed knowledge about the concepts and foundations of digital arts and its development.
- Equipping students with the practical skills necessary to work in the digital arts industry. These skills include using various software and digital tools, developing 2D and 3D artwork, and the ability to interact with advanced technology.

Digital Arts

1. Digital Marketing Specialist
2. Autodesk Maya Professional/Character Designer
3. UI & UX Web Designer
4. Adobe Motion Graphics Designer
5. Adobe Video Production Specialist
6. Adobe Graphics Designer
7. Autodesk 3D Designer

DIGITAL ARTS TRACK

1. Digital Marketing Specialist

Digital Marketing Specialist is responsible for Creating and Executing Digital Marketing Campaigns, Developing Visual Assets for Digital Campaigns, Administering Websites & Publish Content, Monitoring & Optimizing Marketing Campaigns and Ad Copywriting & Content Creation.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Google Digital Marketing & E-commerce Professional	125
Foundations of Digital Marketing and E-commerce	20
Attract and Engage Customers with Digital Marketing	20
From Likes to Leads: Interact with Customers Online	16
Think Outside the Inbox: Email Marketing	14
Assess for Success: Marketing Analytics and Measurement	20
Make the Sale: Build, Launch, and Manage E-commerce Stores	25
Satisfaction Guaranteed: Develop Customer Loyalty Online	10
Aleph Digital Ads Creator	24
Final Project	15
Total	164

Prerequisite:
Graphic Design Fundamentals, Photoshop & Illustrator Fundamentals.

DIGITAL ARTS TRACK

2. Autodesk Maya Professional / Character Designer

Maya is for creating 3D models and characters. Through practical exercises and projects, you gain proficiency in 3D modeling techniques, character animation, and the application of textures and materials. The course aims to equip students with the foundational knowledge and skills required to embark on a career in 3D and character design, enabling them to produce high-quality 3D models and animations suitable for various industries, including animation, gaming, Television, Advertising, and film.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Exploring Maya Interface	9
Polygon Modeling	12
NURBS Curves and Surfaces	12
UV Mapping	11
Shading and Texturing	12
Animation	15
Rigging, Constraints, and Deformers	15
Paint Effects	9
Rendering	9
Particle System	9
Fluids	9
nHair and Xgen	9
Bifrost	9
Bullet Physics and Motion Graphics	9
Final Project	15
	164

Pre-requisite:
Graphic Design Fundamentals, Photoshop & Illustrator Fundamentals.

DIGITAL ARTS TRACK

3. UI & UX Web Designer

UI & UX designers create the user interface for an app, website, or other interactive media. Their work includes collaborating with product managers and engineers to gather requirements from users before designing ideas that can be communicated using storyboards. They also process flows or sitemaps. Large job opportunities in technology companies, E-Commerce and Retails.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Introduction to UI and UX Design	6
Evaluating Interactive Design	10
Applied Design Fundamental	15
Designing your UI	24
Create a Figma account and learn about some of the main features of Figma.	27
Add pages to the frame in Figma.	13
Develop a plan for how to collaborate with your team, share the design and learn about the levels of access to grant in Figma.	12
Adobe Illustrator (for Web)	21
Adobe Photoshop (for Web)	21
Final Project	15
Total	164

Prerequisite:
- None.

DIGITAL ARTS TRACK

4. Adobe Motion Graphics Designer

A motion graphics designer works with animation, audio, and visual effects to create moving content and graphics for various media, such as television, the internet, and film. Motion graphic designers work with creative teams to incorporate design elements into a project.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Adobe After effect	77
Adobe Premiere Pro Fundamentals	15
Maxon Cinema 4D Fundamentals	21
Adobe Audition	9
Adobe Character Animation	15
Adobe Illustrator (for Motion)	12
Final Project	15
Total	164

Prerequisite:
Graphic Design Fundamentals, Photoshop & Illustrator Fundamentals.

DIGITAL ARTS TRACK

5. Adobe Video Production Specialist

Adobe video production specialist works on video and sound projects, including selecting program format for final output, capturing/importing media, organizing raw media, editing footage and sound files, creating and inserting static and motion graphics, titling, adding music/voice-over/sound effects, media management and archiving project media.

Pre-requisite: Graphic Design Fundamentals, Photoshop & Illustrator Fundamentals.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Adobe Premiere Pro	60
DaVinci Resolve	50
Adobe Audition	9
Adobe After Effect (for video production)	30
Final Project	15
Total	164

DIGITAL ARTS TRACK

6. Adobe Graphics Designer

Graphic designers create visual text and imagery concepts, by hand or using computer software, to communicate ideas that inspire, inform, or captivate consumers. They develop the overall layout and production design for advertisements, brochures, magazines, and corporate reports, etc.

Pre-requisite: None.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Adobe Photoshop cc	60
Adobe Illustrator	45
Adobe InDesign	32
Adobe Dimension	12
Final Project	15
Total	164

DIGITAL ARTS TRACK

7. Autodesk 3D Designer

A 3D Artist builds 3D models of products, environments, and more. They use their ability to create photo realistic materials, lighting, and rendered images for various uses including marketing and advertisements.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Autodesk 3D Max interface and workflow.	3
Assembling files by importing, linking, or merging	6
3D modeling with primitives and 2D objects	12
Using modifiers to create and modify 3D objects	9
Materials and maps	9
Autodesk 3ds Max lighting	9
Working with cameras and exposure control	6
Rendering using various renderers, such as Scanline, ART, and Arnold	5
Animation for visualization	9
Make 3d models of any complexity	15
Use 3ds Max Physical Camera settings to improve composition	3
Use VRay lights, including HDRI dome lights, to create natural looking lighting	12
Create custom advanced textures / materials in Photoshop and VRay	9
Atmospherics, lens flare and light bloom, all within 3ds Max / VRay	9
Tools, tips and tricks to make professional & photorealistic images.	9
Achieve perfect light exposure for your renderings	6
UVW mapping for complex models	9
Understand VRay settings that contribute to photorealism, speed and quality	6
Image pop with professional post-processing techniques in Photoshop	3
Final Project	15
Total	164

Pre-requisite:
Graphic Design Fundamentals, Photoshop & Illustrator Fundamentals.

AI & DATA SCIENCE TRACK

This track primarily focuses on applying data science and machine learning techniques to solve real-world challenges and problems.

The objectives of the program are:

Gain the practical experience needed to use artificial intelligence to solve problems

- Familiarity with a wide range of topics related to this field, for example: machine learning, deep learning, language processing, and others
- The ability to deal with data in its various forms, collect it, and extract data in easier images for processing by various programs
- The ability to understand and analyze data and extract important information from it, and thus provide recommendations to companies in various fields
- Effectively implement and manage large-scale and complex AI projects
- Participate in the design and implementation of high-quality and reliable intelligent systems
- The ability to evaluate and analyze problems as well as propose solutions related to the development of artificial intelligence systems
- The ability to develop programs that run on different computers in terms of architecture and technology used
- The ability to define the infrastructure needed to store big data and develop competitive AI solutions
- Applying artificial intelligence techniques to contribute to overcoming emerging humanitarian challenges

ARTIFICIAL INTELLIGENCE

1. IBM Data Scientist
2. Microsoft Data Engineer
3. Microsoft Machine Learning Engineer
4. AWS Machine Learning Engineer
5. Generative AI Professional

AI & DATA SCIENCE TRACK

1. IBM Data Scientist

An IBM data scientist can leverage a unique set of skills and tools to help businesses derive value from their data. A data scientist is capable of mining the data for drivers of past and future performance, opportunities for new revenue, methods to increase efficiency, ways to improve customer experience and a host of other critical business insights. All this is done mostly using IBM technologies.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
What is Data Science?	12
Tools for Data Science	6
Data Science Methodology	6
Python for Data Science, AI & Development	24
Python Project for Data Science	6
Databases and SQL for Data Science with Python	30
Data Analysis with Python	18
Data Visualization with Python	18
Machine Learning with Python	21
MLOps Tools, MLflow and Hugging Face	12
Applied Data Science Capstone	6
Total	159

AI & DATA SCIENCE TRACK

2. Microsoft Data Engineer

Microsoft Data Engineer learns how to use Microsoft tools for data management and processing. He/she should be experienced in SQL, Microsoft Azure platform, and DevOps roles.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Microsoft SQL Essentials	24
Implementing a SQL Data Warehouse	39
Python Programming Fundamentals	27
Introduction to Agile Development and Scrum	12
Azure Data Fundamentals	12
MLOps Tools, MLflow and Hugging Face	12
Azure Data Engineer Associate	33
Total	159

AI & DATA SCIENCE TRACK

3. Microsoft Machine Learning Engineer

Microsoft machine learning engineers leverage Microsoft technology to translate the raw data gathered from various data pipelines into data science models that can be applied and scaled as needed. A machine learning engineer connects that structured data to the models defined by the data scientists they work with. In addition, machine learning engineers also develop algorithms and build programs that enable machines, computers, and robots to process incoming data and identify patterns.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Statistics and Linear Algebra Basics	15
Data Science with Python	15
Machine Learning	21
Azure AI Fundamentals	15
Azure AI Engineer Associate	36
MLOps Tools, MLflow and Hugging Face	12
Build Basic Generative Adversarial Networks GANs	24
Natural Language Processing with Attention Models	21
Total	159

AI & DATA SCIENCE TRACK

4. AWS Machine Learning Engineer

AWS Machine learning engineers use AWS technology to work with algorithms, data, and artificial intelligence. Their tasks involve researching, building, and designing the artificial intelligence responsible for machine learning and maintaining and improving existing artificial intelligence systems. Often, a machine learning engineer will also serve as a critical communicator between other data science team members, working directly with the data scientists who develop the models for building AI systems and the people who construct and run them.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
AWS Academy Cloud Foundations	30
AWS Academy Cloud Architecting	60
AWS Academy Machine Learning Foundations	36
MLOps Tools, MLflow and Hugging Face	12
AWS Academy Machine Learning for Natural Language Processing	21
Total	159

AI & DATA SCIENCE TRACK

5. Generative AI Professional

Learn the skills required to use generative AI in your professional life. Discover the fundamental ideas behind generative AI and artificial intelligence. Gain knowledge about generative AI models. Discover the moral implications of employing generative AI. Examine the effects of tools for generative AI.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
AI and Generative AI models	18
Machine Learning & Deep Learning	33
MLOps Tools, MLflow and Hugging Face	12
Generative AI models	30
Build Basic Generative Adversarial Networks GANs	21
Natural Language Processing with Attention Models	21
Generative AI pipeline – projects	24
Total	159

DATA ANALYTICS TRACK

The field of data analysis is the science of identifying business needs through data analysis to make informed business decisions and identify solutions to business problems in various industries.

The field of business analysis has witnessed great importance in recent years due to the boom in technology and the creation of advanced tools and techniques that help provide the best results and solutions to various organizations.

The educational objectives of the program are:
- Learning different ways of data analysis.
- Applying statistical models and modern data science tools to understand and analyze data and solve business problems.
- Studying machine learning algorithms to make the right decisions and meet the challenges of modern business.
- Acquiring different skills, tools and methodologies to explore past businesses performance and drive future planning.

Data Analytics
1. Data Analyst Specialist
2. Microsoft Power BI Engineer

DATA ANALYTICS TRACK

1. Data Analyst Specialist

Data Analyst Specialist is responsible for analyzing data and extracting useful insights from large amounts of data using a variety of tools and techniques. A Data Analyst's roles and responsibilities are a combination of technical and management roles. Google Data Analysts visualize data and prepare reports on data findings, review data quality to identify possible sources of error, consult with management on potential changes to business processes, recommend further changes to data models or data structures, identify patterns and trends in data using data mining and statistical analysis software, and recommend improvements in the products and services to achieve customer satisfaction and preferences.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Foundations of Data and Data Analytics	9
Make Data-Driven Decisions	18
Data Preparation for Exploration	18
Data cleaning process and organization of data	9
Data Analysis to Answer Questions	18
Data Visualization	27
Data Analysis with R Programming	27
Prompt Engineering	9
Data Analytics Capstone: Complete a Case Study	18
Data Governance	9
Total	162

DATA ANALYTICS TRACK

2. Microsoft Power BI Engineer

Power BI Engineer is responsible for collecting, analyzing, and visualizing data from various sources using Azure services. They analyze massive amounts of data to find trends, patterns, and insights that can make informed business decisions. A Microsoft Enterprise Data Analyst's roles and responsibilities are a combination of technical and management roles. Microsoft Enterprise Data Analysts collect and analyze data to identify trends and patterns, build predictive models using machine learning algorithms, create dashboards and reports to visualize data, identify and correct data quality issues, collaborate with business stakeholders to understand their data needs, and update data analytics tools and technologies.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Microsoft Azure Fundamentals	18
Microsoft Azure Data Fundamentals	18
Microsoft Power BI Data Analyst	36
Designing and Implementing Enterprise-Scale Analytics	27
Data Visualization using Tableau	27
Data Refresh	18
Data Governance	9
Prompt Engineering	9
Total	162

INFRASTRUCTURE & SECURITY TRACK

With the increase in the use of the Internet in the tasks of our daily lives (such as electronic banking services, online shopping, social media, etc.), personal data has become increasingly vulnerable to electronic attacks, as attackers use modern methods and technologies to overcome traditional security controls. This is why cyber security has become an important field and is in high demand.

The cyber security track includes the techniques and mechanisms for ensuring the security of computer systems, data and networks and protecting them from various electronic attacks.

The educational objectives of the program are:

1. Developing the manpower required to protect Egypt from electronic threats, while ensuring that security priorities are aligned with the country's work needs and strategies
2. Empowering graduates with the technical knowledge and skills necessary to protect and defend computer systems and networks
3. Develop graduates who are able to identify, analyze and remedy computer security breaches
4. Develop graduates who can plan, implement and monitor cyber security mechanisms to help ensure that IT assets are protected

INFRASTRUCTURE AND SECURITY

1. Cisco Network Administrator
2. Cisco Cybersecurity Engineer
3. Fortinet Cybersecurity Engineer
4. Google Technical Support Specialist
5. Azure Cloud Solution Admin & Architect
6. AWS Cloud Solution Admin & Architect
7. Cyber Security Incident Response Analyst
8. Vulnerability Analyst / Penetration Tester

INFRASTRUCTURE & SECURITY TRACK

1. Cisco Network Administrator

A Cisco Network Administrator is capable of the following using Cisco technologies; Designing, installing, configuring, and maintaining Cisco network devices, such as routers, switches, firewalls, access points, etc., Troubleshooting and resolving network issues, such as connectivity, performance, security, etc., Monitoring and optimizing network performance and availability using various tools and methods., Implementing and enforcing network security policies and standards, such as encryption, authentication, authorization, etc., Updating and upgrading network software and hardware in accordance with best practices and company procedures, Documenting and reporting network configuration, status, and changes, Providing technical support and guidance to network users and other IT staff, Collaborating with other network engineers, administrators, vendors, and stakeholders on network projects and initiatives.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Cisco CCNA Routing and Switching (200-301 CCNA)	120
Cisco CCNP Enterprise (350-401 ENCOR)	60
Total	180

INFRASTRUCTURE & SECURITY TRACK

2. Cisco Cybersecurity Engineer

A Cisco Cybersecurity Engineer should be capable of the following using Cisco technologies; Planning, implementing, managing, monitoring, and upgrading security measures, in accordance with best practices and company procedures, for the protection of the organization's data, systems, and networks, such as encryption, authentication, authorization, etc., Troubleshooting security and network problems and responding to all system and/or network security breaches, Configuring and implementing intrusion detection systems and firewalls, documenting and reporting security configuration, status, and incidents, Maintaining firewalls, virtual private networks, web protocols, and email security and Creating virus and threat detection systems, performing vulnerability and risk assessments, and testing and checking the system for weaknesses in software and hardware.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Cisco CCNA Routing and Switching (200-301 CCNA)	120
Cisco CyberOps Associate (200-201 CBROPS)	60
Total	180

INFRASTRUCTURE & SECURITY TRACK

3. Fortinet Cybersecurity Engineer

Fortinet Cybersecurity Engineer is capable of the following using Fortinet technologies; Planning, implementing, managing, monitoring, and upgrading security measures for the protection of the organization's data, systems, and networks, Troubleshooting security and network problems and responding to all system and/or network security breaches, Configuring and implementing intrusion detection systems and firewalls, Maintaining firewalls, virtual private networks, web protocols, and email security, Creating virus and threat detection systems and performing vulnerability and risk assessments, Testing and checking the system for weaknesses in software and hardware, Developing and implementing security policies and standards, such as encryption, authentication, authorization, etc., Updating and upgrading security software and hardware in accordance with best practices and company procedures, Documenting and reporting security configuration, status, and incidents, Providing technical support and guidance to security users and other IT staff, Collaborating with other security engineers, administrators, vendors, and stakeholders on security projects and initiatives.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Cisco CCNA Routing and Switching (200-301 CCNA)	120
Fortinet NSE 4 - FortiOS 7.2 (NSE4_FGT-7.2)	48
Total	168

INFRASTRUCTURE & SECURITY TRACK

4. Google Technical Support Specialist

A Google Technical Support Specialist is capable of; Providing technical assistance and guidance to customers who use Google products and services, such as Gmail, Google Drive, Google Cloud Platform, Google Ads, etc., Troubleshooting and resolving customer issues related to product functionality, performance, compatibility, security, etc., Communicating with customers via phone, email, chat, or other channels to understand their needs and expectations, Documenting customer interactions and feedback in the appropriate systems and tools., Escalating complex or unresolved issues to the relevant teams or experts within Google., Collaborating with other technical support engineers, product specialists, developers, and account managers to provide the best possible customer experience., and Keeping up to date with the latest features, updates, and changes in Google products and services., Participating in training and certification programs to enhance technical skills and knowledge.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Google IT Support Professional	137
Total	137

INFRASTRUCTURE & SECURITY TRACK

5. Azure Cloud Solution Admin & Architect

Azure Cloud Solution Admin & Architect is capable of the following; Creating a well-informed cloud strategy and managing the adaptation process, Evaluating cloud applications, hardware, and software regularly, Developing and organizing cloud systems and working closely with IT security to monitor the company's cloud privacy, Troubleshooting and resolving cloud issues, such as connectivity, performance, security, etc., Implementing and enforcing cloud security policies and standards, such as encryption, authentication, authorization, etc., Updating and upgrading cloud software and hardware in accordance with best practices and company procedures, Documenting and reporting cloud configuration, status, and changes, Providing technical support and guidance to cloud users and other IT staff, Collaborating with other cloud engineers, administrators, vendors, and stakeholders on cloud projects and initiatives.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Azure Fundamentals	6
Azure Data Fundamentals	6
Azure Administrator Associate	32
Azure Solution Architect Expert	32
Customer Data Platform Specialty	32
Azure Data Scientist Associate	36
Manage Resources in Azure	10
Deploy a website to Azure with Azur Virtual Machine	8
Total	162

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INFRASTRUCTURE & SECURITY TRACK

6. AWS Cloud Solution Admin & Architect

An AWS Cloud Solution Admin & Architect is capable of the following using AWS technologies; Creating a well-informed cloud strategy and managing the adaptation process, Evaluating cloud applications, hardware, and software regularly, Developing and organizing cloud systems and working closely with IT security to monitor the company's cloud privacy, Troubleshooting and resolving cloud issues, such as connectivity, performance, security, etc., Implementing and enforcing cloud security policies and standards, such as encryption, authentication, authorization, etc., Updating and upgrading cloud software and hardware in accordance with best practices and company procedures, Documenting and reporting cloud configuration, status, and incidents, Providing technical support and guidance to cloud users and other IT staff, Collaborating with other cloud engineers, administrators, vendors, and stakeholders on cloud projects and initiatives.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
AWS Cloud practitioner	34
SysOps Administrator Associate	40
Solution Architect Associate	40
Solution Architect Professional	40
Data Analytics	28
Architecting Solutions on AWS	18
Total	200

37

INFRASTRUCTURE & SECURITY TRACK

7. Cyber Security Incident Response Analyst

A Cyber Security Incident Response Analyst is capable of the following; Responding to incidents and threats tracked by the Incident Response Management System. Incidents may include phish, network, email, IDS, or antivirus alerts, Performing log, vulnerability, or compliance analysis/remediation, Collection, collating, and secure handling of evidence for storage and/or processing, Drafting reports and security briefs as needed, and Participation in intra-departmental meetings and projects in support of Network, Infrastructure, and Support groups as assigned.

Course Contents	Hours
Intro to Threats, Vulnerabilities, and Incident	20
Assessing Threats	20
Finding Security Vulnerabilities	20
Fixing Security Vulnerabilities	20
Preparing for Inevitable Attacks	20
Project: Navigating a Cybersecurity Incident	20
Total	120

INFRASTRUCTURE & SECURITY TRACK

8. Vulnerability Analyst / Penetration Tester

A Vulnerability Analyst / Penetration Tester is capable of the following; Ensuring that all Network security tests are conducted within the framework set at Mastercard, Ensure that all test cases and tools are used appropriately for testing of various network segment types, Ensuring that all help and guidance is provided to development teams on the vulnerabilities identified in their applications while performing security testing, Identify improvement areas in the security testing domain and implement learnings for the Globally located team, Coordinate with application development teams on their demands for security testing and provide a seamless experience with testing and reporting of penetration tests, and Working with a global team spread across time-zones and geographies.

Course Contents	Hours
Intro to Penetration Testing & Red Team Operations	20
Reconnaissance	20
Scanning & Research	20
Gaining Access	20
Maintaining Access	20
Covering Tracks & Reporting	20
Total	120

Management & ERP TRACK

The field of Enterprise Resource planning is concerned with the study of various techniques for organizing and managing the personnel and resources of companies with high efficiency, improving operations, achieving automation, and making decisions based on data and various scientific and technological methods that have boomed in recent years.

The importance of studying this specialization lies in increasing the income of individuals and companies through various job possibilities open up in the business and technology sectors, as institutions increasingly apply ERP systems locally and globally. Also, the experiences gained from the study contribute to the success of the institutions, and this success is represented in increasing the competitiveness with international companies.

The educational objectives of the program are:

- The study provides a comprehensive understanding of administrative processes and scientific methods for improving them and enhances problem-solving skills using various algorithms.
- The study equips individuals with the necessary skills to adapt to digital transformation and collaborate and communicate effectively within multidisciplinary teams.
- Enabling organizations to manage their daily tasks and internal and external resources with high efficiency.
- Learn about and use the different technologies used globally such as MS Dynamics 365, and Odoo.

Management & ERP

1. Odoo Application Consultant
2. Google Project Management
3. 6. Oracle Digital Accounting Specialist
4. Oracle Digital Supply Chain Specialist
5. Oracle Digital Human Resources specialist
6. MSD Digital Accounting Specialist
7. MSD Digital Supply Chain Specialist
8. MSD Digital Human Resources specialist

Management & ERP TRACK

1. Odoo Application Consultant

The target job for an Odoo Application Consultant involves designing, implementing, and deploying software for applications in the Odoo ERP suite. They specialize in developing strategies to optimize a company's management processes using Odoo tools and modules to ensure efficiency and smooth workflow. The primary qualifications to become an Odoo consultant include a bachelor's degree in computer science or a relevant field and experience working with Odoo ERP suite. An Odoo consultant may collect and analyze business requirements, write business requirement documents, and other functional and technical documents.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
ERP Business Introduction and ERP Accounting Concepts	6
Practicing General Ledger	9
Practicing Accounts Payable	9
Practicing Receivables and Collections	9
Practicing Cash Management	9
Practicing Fixed Assets	6
ERP Introduction and Consulting Role	3
Outlining Odoo ERP Components	3
Odoo Implementation Life Cycle Concepts	3
Accounting Implementation Management	15
Inventory Implementation Management	15
Purchasing Cycle Implementation Management	15
Human Resources Cycle Implementation Management	15
Life Cycle Review Project (Tips & Tricks)	6
Workshop & Project: complete Financials Implementation Cycle	18
Total	141

Management & ERP TRACK

2. Google Project Management

Google project management profile prepares the applicant to be a successful project manager whose roles and responsibilities include but not limited to :

- Being actively involved in the preparation, conceptualization, realization, and deploying of customer implementation projects.
- Enhancing the project management tools for end-users based on requirements.
- Attending meetings with the client and gathering information on their current business processes.
- Conducting business process analyses, needs assessments, and leading industry/corporate process implementation across all related applications5.
- Assisting developers in project planning and delivery.
- Assisting customers in performing integration and acceptance testing.

The technical study plan proposed for this job profile is provided below:

Course Contents	Hours
Foundations of Project Management	18
Project Initiation: Starting a Successful Project	21
Project Planning: Putting It All Together	29
Project Execution: Running the Project	26
Agile Project Management	25
Capstone: Applying Project Management in the Real World	33
Total	152

Management & ERP TRACK

3. Oracle Digital Accounting Specialist

Oracle digital accounting Specialist is responsible for day to day work covering all accounting modules GL, accounts receivable, accounts payable, banking and fixed assets, and this will provide clients with digital accounting specialists covering all accounting areas.

Course Contents	Hours
ERP Business Introduction and ERP Accounting Concepts	15
Practicing General Ledger	12
Practicing Accounts Payable	12
Practicing Receivables and Collections	12
Practicing Cash Management	9
Practicing Fixed Assets	6
Workshop	15
Total	81

Management & ERP TRACK

4. Oracle Digital Supply Chain Specialist

Oracle digital SCM Specialist is responsible for day to day work covering all purchasing and warehouse activities, and this will provide clients with digital SCM specialist covering all material management areas.

Course Contents	Hours
ERP Business Introduction and SCM Concepts	15
Practicing Inventory Management	15
Practicing Procurement Management	15
Practicing Order Management	15
Workshop	15
Total	75

Management & ERP TRACK

5. Oracle Digital Human Resources Specialist

Oracle digital HCM Specialist is responsible for day to day work covering all personal, timesheet and payroll contents, and this will provide clients with digital HCM specialist covering all Human resources areas.

Course Contents	Hours
ERP Business Introduction and HR Concepts	15
Practicing Global Human Capital Management	15
Practicing Payroll	15
Practicing Vacations and Absence Management	15
Workshop	15
Total	75

Management & ERP TRACK

6. MSD Digital Accounting Specialist

MSD digital accounting Specialist is responsible for day to day work covering all accounting modules GL, accounts receivable, accounts payable, banking and fixed assets, and this will provide clients with digital accounting specialists covering all accounting areas.

Course Contents	Hours
ERP Business Introduction and ERP Accounting Concepts	15
Practicing General Ledger	12
Practicing Accounts Payable	12
Practicing Receivables and Collections	12
Practicing Cash Management	9
Practicing Fixed Assets	6
Workshop	15
Total	81

Management & ERP TRACK

7. MSD Digital Supply Chain Specialist

MSD digital SCM Specialist is responsible for day to day work covering all purchasing and warehouse, and this will provide clients with digital SCM specialist covering all material management areas.

Course Contents	Hours
ERP Business Introduction and SCM Concepts	15
Practicing Inventory Management	15
Practicing Procurement Management	15
Practicing Order Management	15
Workshop	15
Total	75

Management & ERP TRACK

8. MSD Digital Human Resources Specialist

MSD digital HCM Specialist is responsible for day to day work covering all personnel, timesheet and payroll, and this will provide clients with digital HCM specialists covering all Human resources areas.

Course Contents	Hours
ERP Business Introduction and HR Concepts	15
Practicing Global Human Capital Management	15
Practicing Payroll	15
Practicing Vacations and Absence Management	15
Workshop	15
Total	75