



ACCP 2023

Curriculum Code: OV-7094

Nigeria Product Note



TECH INDUSTRY OUTLOOK

- Africa is one of the emerging tech landscape in the digital transforming era.
- The region highlights the existence of roughly 200 African innovation hubs, **3,500 new tech-related ventures**, and **US \$1 billion in venture capital (VC)** to a pan-African movement of start-up entrepreneurs.
- Revenue in Africa's eCommerce market is expected to show an annual growth rate (2021-2025) of 13.27% resulting in market volume of **US \$40,758 million by 2025**.
- Africa has the fastest-growing rate of mobile penetration, with 44% of the population owning a device in 2018, and unique mobile subscribers **expected to reach 634 million by 2025**.
- Almost every booming industry in technology and data driven. Hence, there is an immense demand for technology skilled professional across the region.

A hand holding a futuristic, metallic, segmented prosthetic arm against a background of blue digital data and a clock face.

Join the Nigeria's Booming I.T. Industry



EVERY SECTOR & SERVICES REQUIRE IT PROFESSIONALS

As stated by the TopDev survey, in 2022, below are the 12 key focused IT sector and services.



E-Commerce



Fintech



**Car/ food
order**



**Software
outsourcing**



**Digital content,
online media**



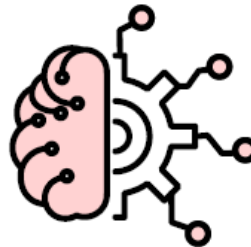
**Online
travelling**



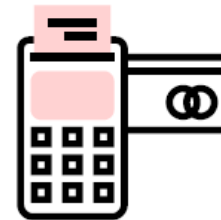
Transportation



**Business
Process Outsourcing
(BPO)**



**High-tech
(AI/ML, IoT,
Blockchain...)**



**Business service
(SAAS,...)**



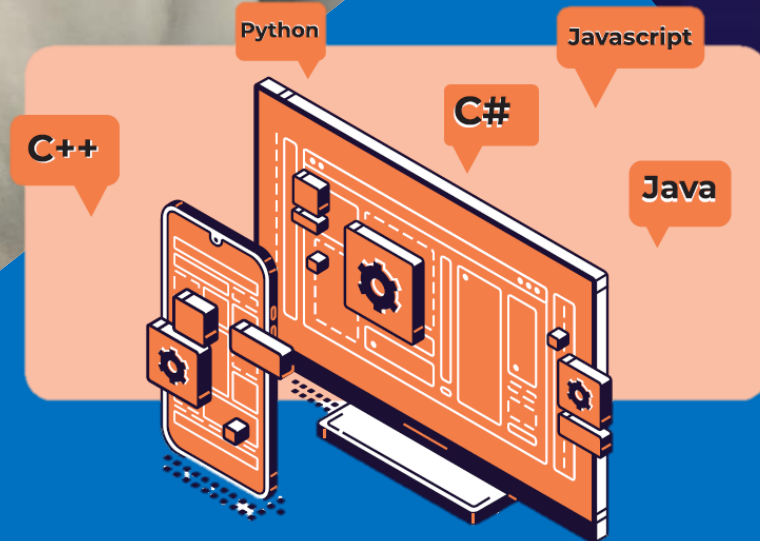
Edtech



Healthcare

INTRODUCING NEW ACCP 2023

- Aptech Certified Computer Professional (ACCP) is a career program that has been designed taking into consideration the professional skills demanded by the industry and the future trends that are set to influence the I.T. world.
- ACCP 2023 gives the students skills and proficiency in multiple Technology areas through its holistic view of industry requirements and a comprehensive curriculum.
- The course helps you train in Python Programming, responsive Website design skills, Web Application development with .NET, Oracle Database Administration, Microsoft Azure Administration, Data Analysis, AIML application development, IoT Application development, and more.



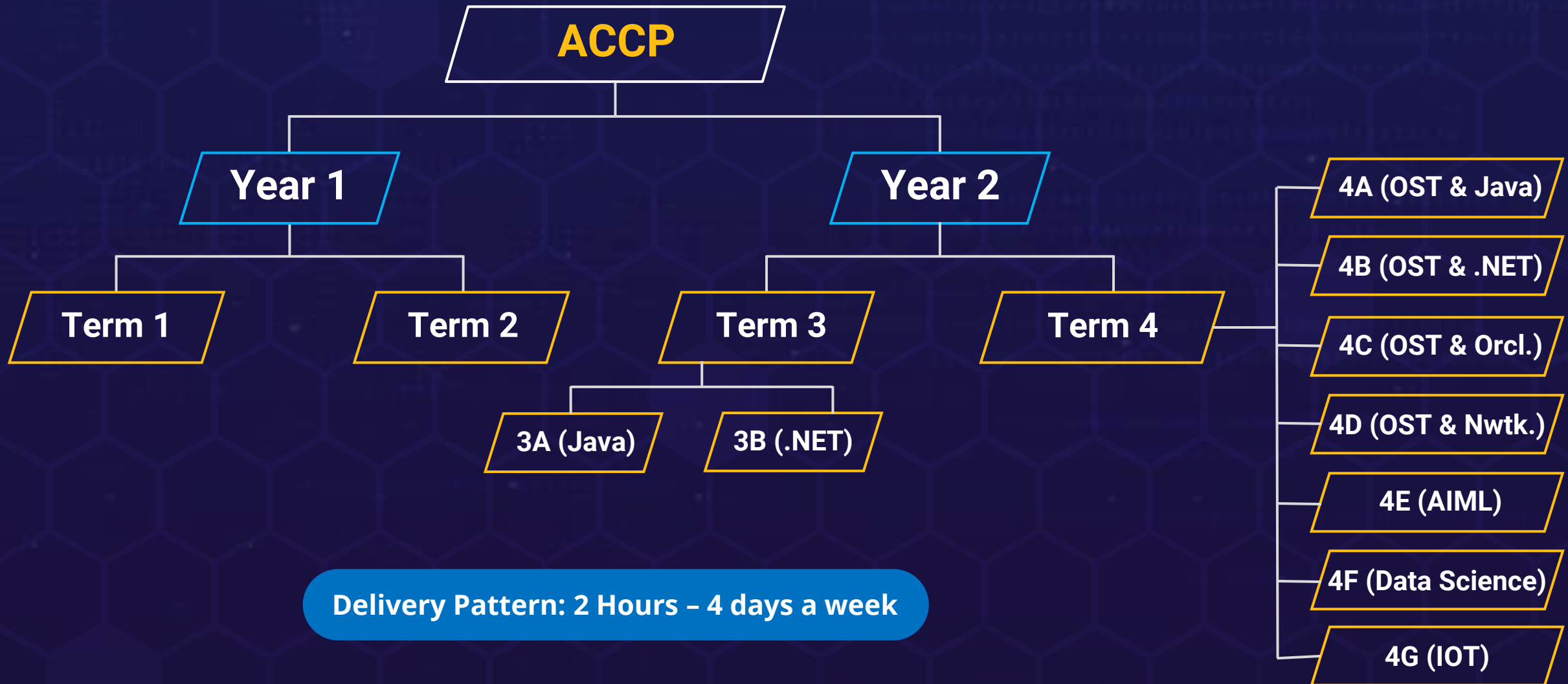
Curriculum Code: OV-7094

Course Category: Career

OLD vs NEW ACCP COMPARISON

Technology/Topics	OV-7061	OV-7094
Front-end Web development	AngularJs and Angular 9	React 17.x or higher
Java	Java 15	Java 19.x, JavaFX
.NET	Microsoft Visual Studio 2019 Professional	Microsoft Visual Studio 2022 Professional
Java EE	Jakarta EE 9	Jakarta EE 10
Tableau	Tableau Desktop 10.2	Tableau Desktop 2022.x or higher
NoSQL Database	MongoDB 3.0.3	MongoDB 6.x
Windows Azure	Microsoft Azure	Microsoft Azure
Oracle	Oracle 20C	Oracle 22C or higher
AIML	AIML Tools	AIML Tools with latest version
Data Science	Hadoop and Big Data tools	Hadoop and Big Data tools with latest version

NEW ACCP COURSE STRUCTURE



ACCP ELECTIVE COMBINATIONS

Course	Term Combinations	Total Duration
CPISM	Term 1	178
DISM	Term 1 + 2	348
ADSE	Term 1 + 2 + 3a (Java) + 4a (Java)	740
	Term 1 + 2 + 3a (Java) + 4c (Oracle)	776
	Term 1 + 2 + 3a (Java) + 4d (Networking)	776
	Term 1 + 2 + 3a (Java) + 4e (AIML)	782
	Term 1 + 2 + 3a (Java) + 4f (Data Science)	778
	Term 1 + 2 + 3a (Java) + 4g (IoT)	682
	Term 1 + 2 + 3b (.NET) + 4b (.NET)	700
	Term 1 + 2 + 3b (.NET) + 4c (Oracle)	752
	Term 1 + 2 + 3b (.NET) + 4d (Networking)	752
	Term 1 + 2 + 3b (.NET) + 4e (AIML)	758
	Term 1 + 2 + 3b (.NET) + 4f (Data Science)	754
	Term 1 + 2 + 3b (.NET) + 4g (IoT)	658

NEW ACCP CERTIFICATION

Term 1

Certificate of Proficiency in Information Systems Management (CPISM)

Term 1 - 2

Diploma in Information Systems Management (DISM)

Term 1 - 4

Advanced Diploma in Software Engineering (ADSE)

Course Family Name	Course Code	Course Name
OV-7094-ACCP	OV-7094-CPISM	Certificate of Proficiency in Information Systems Management
	OV-7094-DISM	Diploma in Information Systems Management
	OV-7094-ADSE	Advanced Diploma in Software Engineering

TERM 1

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Programming Principles and Techniques	16	16	0	6
Logic Building and Elementary Programming	32	16	16	12
Building Modern Websites	40	20	20	10
UI/UX for Responsive Web Design	16	12	4	6
Frontend Web Development with React	24	12	12	8
eProject-Responsive Website Development	2	2	0	0
Object-oriented Programming Concepts	16	16	0	6
Data Management with SQL Server	32	16	16	12
Total-Term 1	178	110	68	60

Tool / Software

- NetBeans 8.1 or higher
- CoffeeCup Free HTML5 Editor or Notepad++
- Figma Toolkit
- React 18.x or higher
- MS SQL Server 2019 Standard Edition

Career Opportunity

- Responsive Website Developer
- C Programmer

TERM 1

LEARNING OUTCOMES

Term 1 focuses on developing the programming logic and Web development skills of the student. After the completion of Term 1, students will be able to:

- Solve programming problems using flowcharts and pseudocodes
- Use programming constructs to write programs in C
- Use HTML5/CSS3/JavaScript to develop interactive Websites and apps
- Learn front-end Web development with React
- Learn the basic principles of effective and responsive Web UI/UX design
- Develop object-oriented programming skills using OOP principles and concepts
- Normalize raw data into well-organized database tables in SQL Server
- Develop a responsive Website using latest Web technologies

The eProject in this Term will involve designing a responsive Website.



TERM 2

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Data Processing with XML and JSON	12	6	6	8
Java Programming - I	36	18	18	12
Java Programming - II	40	20	20	10
Project-Java Application Development	2	2	0	0
Programming in C#	40	16	24	12
Emerging Job Areas (SMAC)	8	4	4	4
Managing Large DataSets with MongoDB	32	16	16	10
Total-Term 2	170	82	88	56

Tool / Software

- Apache NetBeans 16.x
- Java SE 19.x or higher and JavaFX
- Microsoft Visual Studio 2022 Professional
- Cloud Tools
- MongoDB 6.x

Career Opportunity

- Java Application Programmer
- .NET Application Programmer

TERM 2

LEARNING OUTCOMES

Term 2 focuses on imparting application development skills using Java and C#. After the completion of Term 2, students will be able to:

- Use XML and JSON to store and exchange data
- Design and develop desktop applications using Java
- Use the core language features and Application Programming Interfaces (APIs) of Java to design object-oriented applications
- Develop basic and advanced object-oriented applications using C#
- Identify emerging technologies of the cloud and learn about SMAC
- Understand MongoDB concepts, features, architecture and data model, and learn to install, configure, and monitor open-source NoSQL databases.

The Project in this Term will involve building a real-world application with Java technologies including JavaFX.



TERM 3A

- JAVA

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Web Component Development using Jakarta EE	40	20	20	16
Building Java Web Applications with Spring Framework	24	12	12	6
Introduction to Dart Programming	16	8	8	8
Application Development Using Flutter and Dart	40	20	20	16
Agile and DevOps	24	24	0	8
eProject-Cross Platform App Development	2	2	0	0
Total-Term 3A	146	86	60	54

Tool / Software

- Jakarta EE Platform 10
- Spring 6.x, Spring Boot 3.0.x
- Flutter SDK 1.22 with Dart 2.10.x

Career Opportunity

- Exit Not Applicable

TERM 3A

LEARNING OUTCOMES

Term 3A focuses on building Web application and mobile App development skills in students. After the completion of Term 3A, students will be able to:

- Develop Web applications suited to any Jakarta EE application server using JSP and Servlet APIs
- Understand and work with the Spring Framework and Spring Boot
- Build cross platform apps using Flutter Framework and Dart language
- Develop Web applications suited to any Jakarta EE application server using JSP and Servlet APIs
- Implement software development process using Agile methodology
- Develop a Cross Platform App using Dart and Flutter.

The Project in this Term will involve developing a real-world App using Cross Platform technologies.



TERM 3B

- .NET

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Developing ASP.NET Core MVC Applications	40	20	20	16
Introduction to Dart Programming	16	8	8	8
Application Development Using Flutter and Dart	40	20	20	16
Agile and DevOps	24	24	0	8
eProject-Cross Platform App Development	2	2	0	0
Total-Term 3B	122	74	48	48

Tool / Software

- Microsoft Visual Studio 2022 Professional
- Flutter SDK 1.22 with Dart 2.10.x

Career Opportunity

- Exit Not Applicable

TERM 3B

LEARNING OUTCOMES

Term 3B focuses on building Web application and mobile App development skills in students. After the completion of Term 3B, students will be able to:

- Develop advanced ASP.NET MVC applications using .NET Framework tools and technologies
- Build cross platform apps using Flutter Framework and Dart language
- Implement software development process using Agile methodology
- Develop a Cross Platform App using Dart and Flutter.

The Project in this Term will involve developing a real-world App using Cross Platform technologies.



TERM 4A - OST & JAVA

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Working with MySQL	32	16	16	10
Developing Applications with Python	40	20	20	12
Web Application Development using Python	40	20	20	12
Web Framework for Python (Django)	24	12	12	4
eProject (Python-Web Application Development)	2	2	0	0
Enterprise Application Development in Jakarta EE	40	20	20	16
Creating Services for the Web	16	8	8	6
Software Engineering Principles	16	16	0	0
Software Project Management	36	18	18	12
Total-Term 4A	246	132	114	72

Tool / Software

- MySQL 8.x
- Python SDK 3.x, Django 3.x
- Jakarta EE Platform 10
- Project Professional 2022 or higher

Career Opportunity

- Full-Stack Developer
- Python Web Application Developer
- Java Enterprise Application Developer

TERM 4A

LEARNING OUTCOMES

Term 4A focuses on building enterprise and web application development skills in students. After the completion of Term 4A, students will be able to:

- Use MySQL, the world's most popular open-source database
- Build Web applications using Python
- Learn how to make and publish websites with Django and Python
- Design and develop a Web application using Python
- Develop enterprise applications using Jakarta Enterprise Beans
- Design and develop enterprise applications using Jakarta Web Services APIs
- Use software engineering principles to design software on time, within scope, and budget
- Manage software projects efficiently using Microsoft Project

The Project in this Term will involve developing a real-world application using Python.



TERM 4B - OST & .NET

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Working with MySQL	32	16	16	10
Developing Applications with Python	40	20	20	12
Web Application Development using Python	40	20	20	12
Web Framework for Python (Django)	24	12	12	4
eProject (Python-Web Application Development)	2	2	0	0
Developing Microsoft Azure Solutions	40	20	20	16
Software Engineering Principles	16	16	0	0
Software Project Management	36	18	18	12
Total-Term 4B	230	124	106	66

Tool / Software

- MySQL 8.x
- Python SDK 3.x, Django 3.x
- Microsoft Visual Studio 2022 Professional
- Project Professional 2022 or higher

Career Opportunity

- Full-Stack Developer
- Python Web Application Developer
- .NET Enterprise Application Developer

TERM 4B

LEARNING OUTCOMES

Term 4B focuses on building enterprise and web application development skills in students. After the completion of Term 4B, students will be able to:

- Use MySQL, the world's most popular open-source database
- Build Web applications using Python
- Learn how to make and publish websites with Django and Python
- Design and develop a Web application using Python
- Develop enterprise applications and Web services using the Microsoft Azure cloud platform
- Use software engineering principles to design software on time, within scope, and budget
- Manage software projects efficiently using Microsoft Project

The Project in this Term will involve developing a real-world application using Python.



TERM 4C - OST & ORACLE

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Working with MySQL	32	16	16	10
Developing Applications with Python	40	20	20	12
Web Application Development using Python	40	20	20	12
Web Framework for Python (Django)	24	12	12	4
eProject (Python-Web Application Development)	2	2	0	0
Oracle Database SQL	32	16	16	10
Program with PL/SQL	32	16	16	10
Oracle Database Administration I	40	20	20	12
Oracle Database Administration II	40	20	20	12
Total-Term 4C	282	142	140	82

Tool / Software

- MySQL 8.x
- Python SDK 3.x, Django 3.x
- Oracle Database 22c or higher

Career Opportunity

- Full-Stack Developer
- Python Web Application Developer
- Oracle Database Administrator

TERM 4C

LEARNING OUTCOMES

Term 4C focuses on building Web application development and database administration skills in students. After the completion of Term 4C, students will be able to:

- Use MySQL, the world's most popular open-source database
- Build Web applications using Python
- Learn how to make and publish websites with Django and Python
- Design and develop a Web application using Python
- Gain expertise in relational database, data management, and learn how to use SQL commands effectively against your data
- Learn PL/SQL with examples on cursors, triggers, functions, procedures, strings, exceptions, arrays, collections, packages, transactions etc.
- Develop stored procedures, functions, packages, and database triggers and manage an Oracle database instance, configure the Oracle network environment, and perform database maintenance
- Develop appropriate strategies for backup, restore, and recovery procedures from provided scenarios

The Project in this Term will involve developing a real-world application using Python.



TERM 4D - OST & NETWORKING

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Working with MySQL	32	16	16	10
Developing Applications with Python	40	20	20	12
Web Application Development using Python	40	20	20	12
Web Framework for Python (Django)	24	12	12	4
eProject (Python-Web Application Development)	2	2	0	0
Azure Fundamentals	32	16	16	10
Implementing, Managing and Monitoring Azure Environment	40	20	20	12
Azure Architect Technologies	36	18	18	12
Azure Architect Design	36	18	18	12
Total-Term 4D	282	142	140	84

Tool / Software

- MySQL 8.x
- Python SDK 3.x, Django 3.x
- Microsoft Azure

Career Opportunity

- Full-Stack Developer
- Python Web Application Developer
- Windows Azure Administrator

TERM 4D

LEARNING OUTCOMES

Term 4D focuses on building Web application development and Azure administration skills in students. After the completion of Term 4D, students will be able to:

- Use MySQL, the world's most popular open-source database
- Build Web applications using Python
- Learn how to make and publish websites with Django and Python
- Design and develop a Web application using Python
- Learn foundational level knowledge of cloud services and how those services are provided with Microsoft Azure
- Implement, manage, and monitor identity, governance, storage, compute, and virtual networks in a cloud environment
- Implement and manage on-premises and hybrid solutions, such as identity, management, compute, networking, and storage
- Implement and manage on-premises and hybrid solutions, including performing tasks related to security, migration, monitoring, high availability, troubleshooting, and disaster recovery
- Implement and manage an on-premise and hybrid solution

The Project in this Term will involve developing a real-world application using Python.



TERM 4E – AI & ML

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Application Based Programming in Python	36	18	18	10
Inferential Statistical Analysis	16	16	0	0
AI Primer	16	16	0	16
AI Applications of NLP	40	20	20	8
AI and ML with Python	40	20	20	12
Applied Machine Learning using Python	40	20	20	12
Deep Learning using Neural Networks	60	30	30	12
Capstone Project-Recommendation Engine and Customer Churn Prediction	40	2	38	0
Total-Term 4E	288	142	146	70

Tool / Software

- Python
- NLP Tools and Libraries
- Jupyter Notebook, Google Collab
- TensorFlow

Career Opportunity

- AI Developer

TERM 4E

LEARNING OUTCOMES

Term 4E enables students to master concepts of AI & ML and then, apply them to develop applications. After the completion of Term 4E, students will be able to:

- Understand the basics of statistical analysis, descriptive statistics, predictive analytics, probability, and Bayes theorem.
- Gain an understanding of AI.
- Gain knowledge in NLP and learn the use of AI in NLP.
- Use important building blocks of AI & ML with Python, make data modelling decisions, interpret output of the algorithms, and validate results.
- Master ML concepts and techniques including supervised and unsupervised learning, mathematical and heuristic aspects, and hands-on modeling to develop AI algorithms.
- Master deep learning concepts and TensorFlow open-source framework, implement deep learning algorithms, and build ANN.
- Develop a real-world Capstone project on recommendation engine and perform customer churn prediction.

The Project in this term will involve developing a recommendation engine and perform customer churn prediction.



TERM 4F – DATA SCIENCE

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Application Based Programming in Python	36	18	18	10
Data Mining with WEKA	36	18	18	10
Data Science using R Programming	36	18	18	12
Data Science with Python	36	18	18	12
Foundation of Big Data Systems with Hadoop	40	20	20	12
Advanced Data Science with Python	36	18	18	10
Visual Analytics with Tableau	32	16	16	12
Capstone Project for Data Science	32	2	30	0
Total-Term 4F	284	128	156	78

Tool / Software

- Python
- WEKA (Open source AI and data mining tool)
- R Studio
- Jupyter Notebook, Google Collab
- Tableau Desktop
- Hadoop, Spark

Career Opportunity

- Data Analyst
- Hadoop Developer

TERM 4F

LEARNING OUTCOMES

Term 4F is designed to impart Data Science skills through tools and software such as Python, Tableau, R, and Hadoop. After completion of Term 4F, students will be able to:

- Use WEKA to perform data mining tasks.
- Develop applications using Python language.
- Master data exploration, predictive & descriptive analytics techniques using R.
- Understand the components of the Hadoop ecosystem-YARN, MapReduce, HDFS, and Apache Spark with the Big Data processing lifecycle.
- Implement advanced data science techniques with Python libraries.
- Build visualizations, organize data, and design dashboards to empower more meaningful business decisions using Tableau Desktop data visualization and reporting tool.
- Develop a real-world advanced data science Capstone project.

The Project in this term will involve developing an application to process Big Data and analyze data using the Visualization tool.



TERM 4G – INTERNET OF THINGS

Module	Duration Instructional Hours	Theory	Lab	Self-Study
Application Based Programming in Python	36	18	18	10
IoT Hardware	36	18	18	10
IoT Networking	36	18	18	10
Programming the IoT with Python	40	20	20	10
Capstone Project for IoT	40	2	38	0
Total-Term 4G	188	76	112	40

Tool / Software

- Python Studio

Career Opportunity

- IoT Developer

TERM 4G

LEARNING OUTCOMES

Term 4G is designed to impart learners to learn everything about IoT from scratch to an advance level starting with an introduction to IoT, IoT Architecture, why IoT is used, sensor devices, and Raspberry Pi. After completion of Term 4G, students will be able to:

- Develop applications using Python language.
- Learn the Fundamentals of IoT, Sensors, Wireless Sensor Networks, and Raspberry Pi platform
- Learn IoT Networking and understand the different IoT Protocols
- Build IoT applications using Python
- Develop a real-world IoT application using various IoT technologies

The Project in this term will involve design, create, and deploy an application using Raspberry Pi platform.



GET AN EDGE WITH APTECH



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curriculum**



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**Learning
on the 'Go'**



Certification



Guidance

STUDY ABROAD & DEGREE PATHWAY

- Aptech has collaborated with the best education institutes and universities in the world for the benefit of our students
- Aptech enables students to gain an International degree via Credit Transfer Facility (CTF).

Our Education Alliances:



ACCP TO DEGREE PATHWAY



Walk in to an **Aptech** center

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Get Certified with **Aptech Advanced Diploma**

Final year at **uCLAN, LUC or MDX University or UOB**

Get **Certificate Endorsed & Collect Provisional Admission Letter** from University

Get a Degree **B.Sc. (Hons) in IT**

PATHWAY GLIMPSE

Pathway into	NCC Education Partners	Middlesex University	UCLan	Lincoln University College	University of Bolton
Requirement	ADSE from Aptech L5DC from NCC Education	ADSE from Aptech	ADSE from Aptech L5DC from NCC Education	ADSE from Aptech	ADSE from Aptech
Location of study	18 different Universities in UK or Ireland or Australia	UK, Dubai, Malta or Mauritius	UK or Online	Malaysia or Nigeria	UAE
Program of study	Bachelor degree (Direct entry to final year)	BSc (Hons) Information Technology Business Information BSc (Hons) Computer Networks / Computer Science (Direct entry to final year)	BSc (Hons) Business Computing and Information Systems (Direct entry to final year)	Bachelor of Information Technology (Hons) / Bachelor of Computer Science (Hons) (Direct entry to final year)	BSc (Hons) Computing or BEng (Hons) Software Engineering (Direct entry to final year)
Other requirement	IELTS 6.0 (with minimum 5.5 in all four components) & Student Visa requirements as per respective Country	IELTS 6.0 (with minimum 5.5 in all four components) & Student Visa requirements as per respective Country	IELTS 6.0 (with minimum 5.5 in all four components) & UK Student Visa requirements	IELTS 6.0 or confirmation letter from College/Center on pursuing studies in English & Malaysia Student Visa requirement	IELTS 6.0 (with minimum 5.5 in all four components) & UAE Student Visa requirements

Note: To avail L5DC, students to study & successfully complete additional modules of NCC Education.



THANKS.

For more details contact Academics team at Aptech HO.

