II   INFORMATION TECHNOLOGY COURSES

1. Audit in IT Environment

Working days:03

Day	Session	Topic
12.07.2021 Monday		Inauguration of the course and Ice breaking
	I	Understanding IT environment- Challenges and opportunities
	II	Importance of controls with specific reference to Application Controls
	III	Introduction to CAATs – IDEA and Excel
	IV	Physical and logical access controls
13.07.2021 Tuesday	I	Analysis of audit trail/Security logs
	II & III	Excel as data analytic tool- Features of Excel (aspects relating to following underlining the purpose for which these are used as Audit Tool) Conditional formatting Filter including Advanced Filters Pivot Table
	IV	Hands on session
14.07.2021 Wednesday	I	Change Management Controls
	II	Excel functions – User defined functions Numeric Text Conditional Date and time Financial Aggregation
	III	Hands on session
	IV	Creating Projects, Import of data from diverse formats – Excel, Access, csv, text; understanding data using the field statistics, Checking validity of data through Control totals, creating current documentation of tasks performed using the history property, Project Overview.
15.07.2021 Thursday	I	Field Manipulation in IDEA- Append, Remove, Modify columns. Data types- Virtual, non-virtual, editable, enabling/disabling deletion of non-virtual fields. Basic data analysis in IDEA- Duplicate Key

Day	Session	Topic
		Detection/Exclusion, Gap detection, Summarisation.
	II	Commonly used @ Functions in IDEA, Introduction to # functions
	III	Exit test
	IV	Summing up and Valediction

2. IT Security

Day	Session No.	Topic
Day1	I	Inauguration of the course and Ice breaking :
	II	Introduction to IT Security and Information Security (InfoSec) :
	III	Security Awareness – Email and Internet Safety.Best practices to mitigate cyber-attacks. :
	IV	System Interconnection and Information Sharing :
	V	IT Security Policy of IA&AD :
Day 2	I	Basics of Network –Network types, Components and Topologies of a Network :
	II	Network Security – Network attacks and web attacks :
	III	End point Security – Types of threats and technical controls. :
	IV	Hands-on session – Securing your devices :
Day 3	I	Risk Management – Asset threat vulnerability :
	II	A recap of Important Concepts of IT Security :
	III	Management and Operational Controls :
	IV	Exit Test :
	V	Summing up and valediction :

3. Analytics- Knime and Tableau

Working days: 05

Day	Session	Topics
Day 1		Inauguration of the course
	I	Ice Breaking Session Entry Behaviour Test (EBT)
	II	Introduction to Data Analytics: Basic Concepts: Data, types of data: String, numeric, date; types of analytics; KNIME: A Broad overview; Build a basic workflow;
	III	Data downloading sorting errors
	IV	Hands on session
Day 2	I	Manipulating, Data type conversion (Data preparation), Application of Statistical concepts in Knime Statistical Analysis and deriving insights about the dataset
	II	Text Processing and Other features in KNIME
	III	Treating Missing values Duplicate, Top/bottom record, Box Plot, Scatter Plot, Correlation,
	IV	Hands on session
Day 3	I & II	Database connectivity: Setting preferences- getting data from oracle 11g- Using Write Node to export data- Export Knime workflow
	III & IV	Case Study
Day 4	I & II	Tableau: Data downloading; Database Connectivity; Manipulation; Visualisation, Calculated fields; Filters; Hierarchy, Dashboards
	III & IV	Other features in Tableau: Story, Distribution of workbooks
Day 5	I & II	Tableau Exercise/ Case Study: Analysing data, Deriving Insights; Identifying risk areas, building dashboards.
	III	Principles of Visualisation- Consolidation of Concepts; Data Analytic Principles and Approaches
	IV	Exit Test Summing and valediction

4. Workshop on Responsible AI and Data Analytics

Working days: 03

Day	Session No.	Topic
Day 1	I	Inauguration and opening remarks by Director General, RTI Jammu AI and Machine Learning in Data Driven Decision Making :
	II	Data Characteristics and their Measures :
	III	Data Visualization Techniques :
Day 2	I	Data Visualization Techniques :
	II	Regression Techniques in Decision Making :
	III	Man-machine Reconciliation in Decision Making :
Day 3	I	Supervised Learning :
	II	Unsupervised Learning Concluding remarks by DG, RTI :