

SCHOOL OF BUSINESS INTELLIGENCE

Applied Business Intelligence & Analytics for Professionals

Course Syllabus

Applied Master Program



A P I B A
Asia Pacific Institute
of Business Analytics

Overview

The Certificate in Business Intelligence Analytics is designed to provide students with a comprehensive understanding of business intelligence concepts, analytics techniques, and tools used for data-driven decision-making in organizations. This certificate program aims to equip individuals with the knowledge and skills necessary to extract valuable insights from data and generate actionable business intelligence.

Program information



Estimated Time:
3 Months



Skill Level:
Applied Master Program

Prerequisite

No need any prior Knowledge or Experience to complete this course

Required Hardware/Software

Learners will need access to the internet and a 64-bit computer. They'll also need to be able to download and run Microsoft SQL Server, MySQL, Microsoft Power BI, and Python 3.

Module 1

Introduction to Data

Lesson 1 Descriptive Statistics I

- Learn data types, measures of center, and the basics of mathematical notation.
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Lesson 2 Descriptive Statistics II

- Learn a common visual method for quantitative data, measures of spread, and the difference between descriptive and inferential statistics.
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Lesson 3 Spreadsheets: Getting Started

- Learn about the keys steps of the data analysis process.
 - Use cell referencing and menu shortcuts.
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Lesson 4 Spreadsheets: Manipulate Data

- Sort and filter data.
 - Use text and math functions.
 - Split columns and remove duplicates.
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Lesson 5 Spreadsheets: Analyze Data

- Summarize data with aggregation and conditional functions.
 - Use pivot tables and lookup functions.
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Lesson 6 Spreadsheets: Visualize Data

- Build data visualizations for quantitative and categorical data.
 - Create pie, bar, line, scatter, histogram, and boxplot charts.
 - Build professional presentations.
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Lesson 7 Metrics

- Become familiar with business metrics used by business analysts in the area of marketing, sales, growth, engagement, and financial analysis.
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- Calculate and interpret key performance metrics.
- Calculate metrics and create plots to visualize metrics in Excel.

Lesson 8
Excel Modelling

- Understand the fundamentals of sales and financial forecasting models.
- Create forecasting models using advanced lookup and data validation tools (INDEX, MATCH, OFFSET) in Excel.

Module 2

SQL for Data Analysis

Lesson 1
Basic SQL

- Become fluent in basic SQL commands including SELECT, FROM, WHERE, and corresponding logical operators. Gain an overview of what you'll be learning and doing in the course.

Lesson 2
SQL Joins

- Combine data tables using SQL joins to answer more complex business questions.

Lesson 3
SQL Aggregations

- Aggregate data in SQL including COUNT, SUM, MIN, and MAX.
- Write CASE and DATE functions, as well as work with NULL values.

Lesson 4
**Advanced SQL Lessons
(Optional)**

- Use subqueries, also called CTEs, in a number of different situations.
- Use window functions including RANK, NTILE, LAG, LEAD new functions along with partitions to complete complex tasks.
- Clean data, optimize queries, and write advanced JOINS.

Module 3

Data Visualization with PowerBI

Lesson 1
Data Visualization
Fundamentals

- Evaluate the quality of data visualizations and build high quality visualizations.
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Lesson 2
Design Principles

- Implement the best design practices, and to use the most appropriate chart for a particular situation.
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Lesson 3
Creating Visualizations

- Build data visualizations in Tableau.
 - Use data hierarchies, filters, groups, sets, and calculated fields.
 - Create map-based data visualizations in Tableau.
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Lesson 4
Telling Stories

- Build interactive Tableau dashboards.
 - Tell impactful stories using data.
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Module 4

Final Project

Applying the acquired knowledge and skills to solve a real-world problem.

Meet your lecturers.



Nilantha Prasad

B.Sc. (Hons) IT (Moratuwa), Master in Computer Science (Colombo)

Nilantha is a Senior Lecturer at the University of Sri Jayewardenepura. He holds a master's degree in computer science and a BSc degree specialized in Business Information Technology. Prior to his academic career, Nilantha worked as a Software Engineer at IFS from 2008 to 2011, gaining practical industry experience.

In terms of research, Nilantha focuses on the areas of Artificial Intelligence, Data Sciences, and Cyber Security. He explores advancements and developments in these fields, contributing to the academic community's understanding and knowledge. Nilantha's expertise in these areas allows him to provide valuable insights and guidance to his students and colleagues at the University of Sri Jayewardenepura.



Chandika Witharana

B.Sc. in Business Information Systems (Special)(SJP)

Chandika is the Chief Executive Officer (CEO) and Founder of the Asia Pacific Institute of Business Analytics (APIBA Institute). Additionally, he holds the position of a Lecturer in Information Technology and Business Analytics at various government and private universities in Sri Lanka.

Chandika has also worked as an Information Technology Instructor at the Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, from 2014 to 2022. Furthermore, he is the CEO and Founder of Xenosys Software Solutions, which indicates his involvement in the leadership and establishment of a software solutions company.

Udara Alagalla

B.Sc. in Business Information Systems (Special)



Udara is a visiting lecturer at the Open University of Sri Lanka and is associated with a reputed institute for CA Sri Lanka. He previously worked at the Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, from 2014 to 2017. With six years of experience in the Business Intelligence field, Udara has developed expertise in this domain.

Currently, Udara holds the position of Business Development Specialist and Data Evangelist at Xenosys Software Solution in Sri Lanka. In this role, he is involved in business development activities and serves as an advocate for data-driven solutions. This position allows Udara to leverage his knowledge and experience in Business Intelligence to contribute to the growth and success of Xenosys Software Solution.

APIBA's Learning Experience



Hands-on Projects

Open-ended, experiential projects are designed to reflect actual workplace challenges. They aren't just instead require critical thinking.



Quizzes

Auto-graded quizzes strengthen comprehension. Learners can return to lessons at any time during the course to refresh



Knowledge

Find answers to your questions with Knowledge, our proprietary wiki. Search questions asked by other students, connect with technical mentors, and discover how to solve the challenges that you encounter.



Custom Study Plans

Create a personalized study plan that fits your individual needs. Utilize this plan to keep track of movement toward your overall goal.



Workspaces

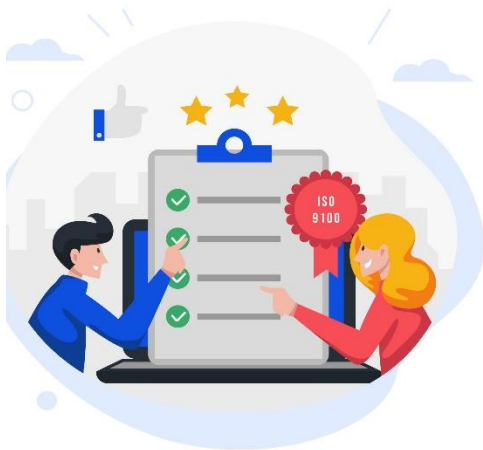
See your code in action. Check the output and quality of your code by running it on interactive workspaces that are integrated into the platform.



Progress Tracker

Take advantage of milestone reminders to stay on schedule and complete your program.

Our proven approach for building job-ready digital skills.



Experienced Project Reviewers Verify skills mastery.

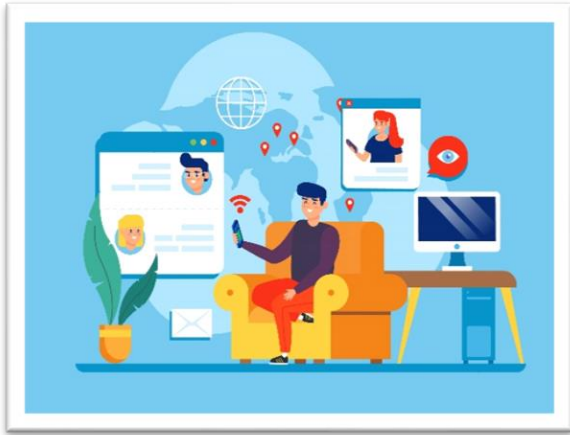
- Personalized project feedback and critique includes line-by-line code review from skilled practitioners with an average turnaround time of 1.1 hours.
- Project review cycle creates a feedback loop with multiple opportunities for improvement—until the concept is mastered.
- Project reviewers leverage industry best practices and provide pro tips



Technical Mentor Support

24/7 support unblocks learning.

- Learning accelerates as skilled mentors identify areas of achievement and potential for growth.
- Unlimited access to mentors means help arrives when it's needed most.
- 2 hrs or less average question response time assures that skills development stays on track.



Mentor Network

Highly vetted for effectiveness.

- Mentors must complete a 5-step hiring process to join APIBA's selective network.
- After passing an objective and situational assessment, mentors must demonstrate communication and behavioral fit for a mentorship role.
- Mentors work across more than 30 different industries and often complete a Nanodegree program themselves.

Learn more at

www.apiba.org



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