

Data Science

Learning Zones / Pathway	Global Pathway	Pathway 1	Pathway 2
International Travel & Study	1 USA / Europe / Aus/ Sing	1 GCC / Southeast Asia	NA
National Travel & Study	NA	NA	1
Regional Travel & Study	NA	1	1
Industry Micro-Credential Course	4	3	2
Outbound Leadership training	1	1	1
International online courses (COURSERA)	10	8	7
Sponsorship for Registration in National Events	✓	✓	NA
Foreign Language	✓	✓	✓
Career Prep – CAT/ TOEFL/ IELTS	✓	✓	✓

* For immersion programs, only the course fee will be covered by the college through the Pathway. Students will be responsible for all other expenses, including travel, food, accommodation, and personal costs.

Choosing Between the Two Learning Cohorts:

- Business Analytics and Business Intelligence:** Ideal for students interested in understanding and interpreting business data to make informed decisions. It's perfect for those who enjoy working with numbers, trends, and data-driven insights, as well as those who wish to pursue careers in business consulting, data analysis, and market research.
- Full Stack Development:** Ideal for students interested in building and deploying web applications. It's perfect for those who enjoy coding, problem-solving, and the development lifecycle, and wish to pursue careers in software development, web development, or DevOps.

Learning Cohort- 1: Business Analytics and Business Intelligence

Focus: This Learning Cohort focuses on using data to drive business decisions, leveraging analytics, statistical techniques, and tools to interpret complex data and provide actionable insights. Students will focus on the process of analyzing and interpreting business data, with a particular focus on decision-making, trend analysis, and strategic planning.

Possible Courses (Advanced/Specialized)

- | | |
|---------------------------------------|--|
| 1. Introduction to Business Analytics | 6. Business Intelligence Tools (e.g., Power BI, Tableau) |
| 2. Data Visualization for Business | 7. Statistical Methods for Business |
| 3. Predictive Analytics | 8. Data security |
| 4. Advanced Excel for Data Analysis | 9. Data-Driven Decision Making |
| 5. Data Mining and Big Data | 10. Data Ethics and Governance |

* Selected courses from the above list will be offered based on industry trends, chosen pathway & requirements, as recommended by the committee

Tools/Software:

- | | |
|--|--|
| <ul style="list-style-type: none"> • Microsoft Excel (Advanced) • Power BI (Business Intelligence Tool) • Tableau (Data Visualization Tool) • R (Statistical Analysis) • Python (Data Analytics, Pandas, NumPy) | <ul style="list-style-type: none"> • SQL (Database Management) • Google Analytics (Web Data Analytics) • QlikView (Business Intelligence) |
|--|--|

Career Opportunities:

- | | |
|---|---|
| <ul style="list-style-type: none"> • Business Analyst • Data Analyst • Business Intelligence Consultant • Market Research Analyst | <ul style="list-style-type: none"> • Data Scientist in Business Development • Operations Analyst • Product Analyst |
|---|---|

Learning Cohort 2: Full Stack Development

Focus: This prepares students for a career in web development, emphasizing both front-end and back-end skills. Students will learn to build complete web applications from scratch, handling the user interface, server management, and database integration.

Possible Courses (Advanced/Specialized)

- | | |
|--|--|
| 1. Introduction to Web Development | 6. Server Management and API Development |
| 2. HTML, CSS, and JavaScript | 7. DevOps Fundamentals |
| 3. Front-End Frameworks (e.g., React, Angular, Vue.js) | 8. Cloud Computing (e.g., AWS, Azure) |
| 4. Back-End Development (e.g., Node.js, Python) | 9. Cybersecurity for Developers |
| 5. Database Management (SQL/NoSQL) | 10. Agile Development Methodologies |

** Selected courses from the above list will be offered based on industry trends, chosen pathway & requirements, as recommended by the committee*

Tools/Software:

- | | |
|--|---|
| • Visual Studio Code (Code Editor) | • MongoDB (NoSQL Database) |
| • Git/GitHub (Version Control) | • MySQL/PostgreSQL (SQL Databases) |
| • Node.js (JavaScript Runtime for Backend) | • Azure (Cloud Platforms) |
| • React.js (Front-End Framework) | • Jenkins (Automation/DevOps) |
| • Angular (Front-End Framework) | • Postman (API Development and Testing) |

Career Opportunities:

- | | |
|------------------------|---------------------|
| • Full Stack Developer | • Software Engineer |
| • Front-End Developer | • Cloud Engineer |
| • Back-End Developer | • DevOps Engineer |
| • Web Developer | |

Partners:

IBM | Salesforce | Microsoft | Amazon | Google | Cambridge | Spartutor | Forge | NUS Singapore | Babson USA | Coursera | Break through | IMS | IIM-Kozhikode | Logistics skill sector council | KPMG | Keystone Foundation |
