### ST JOHN'S COLLEGE ANCHAL

## DEPARTMENT OF COMMERCE ADD ON COURSE

# HANDS- ON TRAINING ON SQL FOR DATA SCIENCE



COURSE COORDINATOR: Ms. MUNNOO MARIA CHARLES

COURSE DURATION: 25 HOURS
COURSE COMMENCING FROM:

ELIGIBILITY: B.COM-ACCOUNTS AND DATA SCIENCE STUDENTS

For further queries please contact the Course Coordinator





#### COURSE SUMMARY REPORT

2021-2022

Name of Course	ADD-ON COURSE Hands-on Training on SQL FOR DATA SCIENCE (COM.ADS.22.1)
Course Duration	30 Hours
Department offering the Course	Department of Commerce
Faculty In Charge	Munnoo Maria Charles
Number of Students Enrolled	25
Start Date & End Date	04/01/2022 to 21/02/2022

The add on course on **Hands-on Training on SQL** (COM.ADS.22.1) has been coordinated by the Department of Commerce, St John's College, Anchal. The course was specially designed to provide the hands-on training course on SQL which is an excellent choice for data querying and data analysis. Big names like Netflix, Facebook, Google, Amazon, Uber, and Airbnb use SQL in their tech stack. The demand for SQL experts is at an all-time high at companies across multiple sectors, ranging from start-ups to established companies.

The course had a well-defined syllabus and was approved by the 1QAC. The add on course was coordinated by Ms Munnoo Maria Charles, Assistant Professor, Department of Commerce. The course was properly planned and organised to provide maximum support to students during their learning process. The course duration was 30 hours, 25 students enrolled for the program. The course started on 04.01.2022 and ended on 21.02.2022. During the end of course, an exit examination(lab) was conducted. All students attended the examination. Final assessment was done based on the marks secured by them during the practical examination. All students who appeared passed. Certificates were also provided to them after the successful completion of the course.

Course Coordinator

Principal

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Name of Course	ADD-ON COURSE (2021-2022) Hands-on Training on SQL FOR DATA SCIENCE
Course Code	COM.ADS.22.1
Department offering the Course	Department of Commerce
Course Duration	30 Hours
Faculty In Charge	Ms. Munnoo Maria Charles

#### Course Title: COM.ADS.22.1 Hands-on Training on SQL for Data Science

SQL is an excellent choice for data querying and data analysis. The demand for SQL experts is at an all-time high at companies across multiple sectors, ranging from start-ups to established companies. This course reviews basic SQL syntax and the rules for constructing valid SQL statements.

#### **Course Objectives:**

The objective of the course is to present an introduction to database management systems, with an emphasis on how to organize, maintain and retrieve - efficiently, and effectively - information from a DBMS.

Course Outcomes: At the end of the course, students should be able to:

- Describe the fundamental elements of relational database management systems
- Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.
- Design ER-models to represent simple database application scenarios
- Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data.
- Improve the database design by normalization.
- Familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B tree, and hashing.

Course Coordinator

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#### Assessment and Certification:

- Practical assessment: Participants will be evaluated based on their ability to create and retrieve information from a database efficiently.
- Course completion certificate.

#### **Syllabus**

MODULE	TITLE	CONTENT	HOURS
1	Basic Overview	Conceptual Designing using ER Diagrams (Identifying entities, attributes, keys and relationships between entities, cardinalities, generalization, specialization etc.)	5
2	Querying Data with SQL	<ul> <li>Getting set up with MySQL</li> <li>Introduction to DB and SQL</li> <li>Fetching the data- concepts</li> <li>Fetching the data hands-on</li> <li>Filtering the data- concepts (GROUPBY,ORDERBY,HAVING etc)</li> <li>Filtering the data hands-on</li> </ul>	7
3	Querying Data with In- built Functions	<ul> <li>In-built functions in SQL</li> <li>Aggregating data - concepts</li> <li>Aggregating data - hands-on</li> <li>SQL-Constraints-concepts(Primary key,Foreign key,unique)</li> <li>SQL-Constraints -Hands on</li> </ul>	6
4	Advanced Querying to extract quick business insights	<ul> <li>Joining data - concepts</li> <li>Joining data - hands-on</li> <li>Window functions - theory</li> <li>Window functions - hands-on</li> <li>Subqueries- theory</li> <li>Subqueries- hands-on</li> <li>Order of execution</li> <li>SQL views - concepts</li> <li>SQL views- hands-on</li> </ul>	7

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