MongoDB for Academia Educator QuickStart Guide

Teach NoSQL in One Class or More!

Want to introduce your students to the importance of NoSQL databases? With MongoDB's academic resources, you can easily get started in just one or two class periods, lectures, or homework assignments. These flexible materials—such as introductory videos, hands-on modules, and teaching guides—make it simple to teach modern, scalable database concepts and familiarize students with MongoDB's powerful document-based architecture.

Before You Begin

If you're not yet enrolled, complete the MongoDB for Educators Program Application to receive:

- $500 in MongoDB Atlas credits
- Free certification voucher after completing a MongoDB University learning path
- Teaching materials crafted by MongoDB experts for Academia

Recommended Flow for Using Resources

This guide outlines a simple format to help you deliver introductory MongoDB content to your students within 1-2 class periods, lectures, or homework assignments.

- Pick any of the resources to build your intro lectures or homework assignments.

Step 1: Spark Student Interest

Start with one or both of these resource options.

Video: Beyond Tables - the Document Model for Modern App Development

Description: A 6-minute video that introduces key database concepts highlighting MongoDB's document-based model as essential for modern IT and Computer Science professionals. It covers scalability, flexibility, and efficiency, making it a must-know technology for students aiming to excel in data-driven fields.

Virtual Student Info Session: Schedule a 1-hour guest lecture where Kim Yohannan, Sr. Academia Partnership Manager, provides an overview of the company, the platform, and the importance of MongoDB for IT and Computer Science students. In addition, students will learn about the benefits of using MongoDB and available learning resources.

How to Use: Show the Beyond Tables video to introduce students to the need for NoSQL in modern application development the class before the virtual student info session if you schedule one.

Step 2: Introduce Foundational Concepts

1-Hour Intro Lecture: MongoDB 101: Non-Relational Databases for Beginners
Description: A 1-hour slide deck covering the differences between relational and non-relational databases, the types of non-relational models, and an overview of MongoDB's document model, schema design, and data modeling.
How to Use: Use this slide deck for a comprehensive class lecture or share with students for asynchronous learning. Designed to provide foundational knowledge on non-relational databases and MongoDB's architecture.

Step 3: Build Practical Skills

MongoDB Skill Badge: MongoDB Basics for Students
Description: A 1-hour elearning unit where students learn database types, schemas, data models, and scalability, dive into MongoDB's document model, and deploy a MongoDB Atlas cluster. Completion of the 10-question Skill Check earns students a Credly badge.
How to Use: Assign this Skill Badge as homework to give students hands-on experience with MongoDB, including deploying their first cluster. Great for skills development and to motivate progress with badging.

Step 4: Expand Knowledge

How To Guide: How to Use a Sample Database with MongoDB
Description: Provides an overview of how example datasets can be used for testing and experimenting with MongoDB features.
DataCamp Tutorial: MongoDB find(): A Complete Beginner's Guide to Querying Data
Description: Step-by-step tutorial covering querying, filters, projections, sorting, and optimizing performance using the **sample_mflix dataset**.
How to Use: Optional activities for students to practice querying and exploring sample datasets, ideal for independent study or extra assignments.

Extend MongoDB Learning

15-Hour Course: Introduction to Modern Databases with MongoDB
Description: Consists of 21 lessons, starting with foundational concepts and progressively increasing in complexity
MongoDB Skill Badge: Relational to Document Model
Description: A 1.25-hour elearning unit that equips learners with the ability to map relational database models to MongoDB's document-based architecture. Upon completion, learners will earn a Credly Badge to showcase their expertise.
How to Use: Use the course fully or partially to teach key topics like querying data, structuring data models, and using MongoDB features like transactions and aggregations. Assign this Skill Badge as a follow-up homework activity.

For additional teaching resources, visit MongoDB for Academia Program.
For support contact, kim.yohannan@mongodb.com.