Master of Science in Information Technology (MSIT) Concentration in Database Architecture and Design

We live in the era of Big Data. In both private industry and governmental organizations, data is used to increase efficiency, help improve decision-making, anticipate trends, and more. But those data systems must be designed, refined, and kept running. That makes database architecture professionals important in today's world.

AIU's Master of Science in Information Technology degree with a concentration in Database Architecture and Design is designed to provide students with the knowledge, skills, and abilities relevant to the database administration and architecture industry. The program uses problem-based, hands-on curriculum that can help students prepare to pursue a career path in the data architecture field.

**WHY AIU?**
AIU offers a streamlined, real-world curriculum and flexibility designed to help you schedule school around your life, not the other way around.

To accommodate busy lives, we offer full- and part-time program options and transfer-in credit* for eligible college, work and military experience, which could cut down on the time it takes to earn a degree.

American InterContinental University™ is part of the American InterContinental University System, which is accredited by the Higher Learning Commission (hlcommission.org), a regional accreditation agency recognized by the U.S. Department of Education.

**CURRICULUM INCLUDES**
Through the courses offered in the MSIT-Database Architecture and Design program, you will be able to take part in data mining and data warehousing courses. In this industry-focused curriculum, students will have the opportunity to learn how to design, analyze, test, and implement systems, and explore software development management, global technology management, enterprise architecture, and technological innovations. The program also focuses on technical communications, such as:

**System Analysis and Design:** focuses on advanced concepts in systems analysis, modeling, system design, testing, and implementation. Dynamic, static, and structural models are covered. Students have the opportunity to learn and use Computer-Aided Software Engineering (CASE) tools.

**Advanced Database Systems and Technologies:** explores the design and implementation of modern database management systems. Emphasis is placed on database architectures, structured query language, and techniques for efficiency and security. Students will have the opportunity to examine and apply concepts such as normalization and query execution.

**Data Warehousing and Mining:** focuses on data warehousing models and methodologies as well as data mining theory, techniques, and tools. Topics include data acquisition, architectures, modeling, and strategies for extract, transform, and load (ETL) operations. Students will have the opportunity to develop a data warehousing strategy to support organization requirements.

**Distributed Database Services:** focuses on database optimization and performance of distributed, multi-user database services. Students will have the opportunity to analyze and architect distributed database services.

* Transfer credits are evaluated on an individual basis. Not all credits are eligible to transfer. See the University Catalog for transfer credit policies.
Master of Science in Information Technology (MSIT) Concentration in Database Architecture and Design

The goal of the Master of Science in Information Technology degree with a concentration in Database Architecture and Design is to provide students with knowledge, skills, and abilities relevant for the database architecture and design field.

INDUSTRY-FOCUSED CURRICULUM
The specialized curriculum in AIU’s MSIT-Database Architecture and Design program allows students to study the skills needed to evaluate database environments and processes. This program also gives students the opportunity to evaluate database models, techniques, and best practices.

The curriculum includes distributed database architectures, Big Data, data warehousing, data mining, and industry-relevant tools.

TAUGHT BY EXPERIENCED PROFESSIONALS
AIU’s MSIT program is taught by a team of experienced professionals who bring their real-world perspectives into the classroom. This approach can help students better understand the qualities and skills utilized in today’s information technology industry.

WE CAN HELP YOU LEARN HOW TO:

• Assess and design IT architecture and systems for solutions to business needs.
• Design plans for IT projects, programs, and operations.
• Communicate technical information to internal and external stakeholders, including those with and without technical knowledge.
• Research, evaluate, and select appropriate technologies to support business requirements.
• Demonstrate the ability to manage processes specific to database architecture and design.

CORE COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ITDB 500</td>
<td>Advanced Database Systems and Technologies</td>
<td>4.5</td>
</tr>
<tr>
<td>ITDB 510</td>
<td>DataWarehousing and Mining</td>
<td>4.5</td>
</tr>
<tr>
<td>ITDB 520</td>
<td>Distributed Database Services</td>
<td>4.5</td>
</tr>
<tr>
<td>ITCO 502</td>
<td>Systems Analysis and Design</td>
<td>4.5</td>
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<tr>
<td>ITCO 512</td>
<td>Advanced Technical Communication</td>
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<tr>
<td>ITCO 522</td>
<td>Software Development Management</td>
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<tr>
<td>ITCO 532</td>
<td>Global Technology Management</td>
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<td>ITCO 542</td>
<td>Enterprise Architecture</td>
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<td>ITCO 552</td>
<td>Innovations and Emerging Media</td>
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<tr>
<td>ITCO 592</td>
<td>Capstone</td>
<td>4.5</td>
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Total MSIT Degree Requirements: 45 Credits

AIU cannot guarantee employment, salary, or career advancement. Not all programs are available to residents of all states.
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