

# Case Study: Next-Gen Nurse Training: Interactive 3D eLearning Courses for Healthcare for a Premium US-Based University

## Overview

This case study outlines our eLearning design and development project for a leading university on the West Coast, USA. Our goal was to provide nursing students with a high-impact, interactive training program that would elevate their learning experience and understanding of complex anatomical topics. The project included developing over 200 web-based training (WBT) modules that combined standard eLearning elements with advanced 3D animations, offering an immersive approach to learning critical nursing concepts.

## Synopsis

The healthcare and nursing education sector is evolving rapidly, with universities increasingly leveraging digital learning to prepare students for the demands of modern healthcare. In the United States, the need for well-trained nurses is growing, driving universities to adopt innovative training methods. Premium universities are seeking advanced eLearning solutions to supplement traditional classroom training and offer students an enriched, flexible learning experience that enhances comprehension and retention.

## Business Need

The university sought a digital solution to transform its nursing training from static presentations into interactive, SCORM-compliant eLearning modules. The primary goal was to make complex medical content accessible and engaging for students by incorporating high-quality, 3D animations and interactive elements that would simulate real-life scenarios.

To meet this need, we designed and developed a complete eLearning solution using Articulate Storyline as the primary authoring tool, embedding high-end 3D animations to visually explain complex topics, such as the anatomy of the heart and Type 2 Diabetes. The solution included end-to-end development, from storyboarding and course creation to LMS hosting and testing.

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## **Business Need**

The university's nursing program faced several challenges with traditional learning resources, which were limited to classroom PowerPoint presentations. The university wanted to address these challenges by:

- Providing a more interactive and visually engaging experience for students to deepen their understanding of complex medical topics.
- Improving flexibility in learning by offering online, SCORM-compliant modules that students could access on demand.
- Ensuring compatibility with the university's LMS and streamlining access for students.

To meet these objectives, the university required over 200 web-based training (WBT) modules covering essential nursing topics, with advanced visualizations of anatomical concepts to ensure students gained a practical understanding of course content.

## **Solution Design**

Our solution involved a comprehensive, end-to-end approach to eLearning development:

- **Needs Analysis and Content Transformation**

We conducted a thorough needs analysis with faculty and instructional designers to determine how best to transform the existing PowerPoint content into engaging eLearning modules. This stage also involved analyzing complex topics that would benefit from high-end 3D animations to facilitate better student comprehension.

- **Storyboarding and Instructional Design**

Detailed storyboards were created for each module, ensuring that every element aligned with educational goals. Interactive elements were strategically placed to engage learners, while intuitive navigation was designed for an accessible user experience. The storyboards also outlined where and how the 3D animations would be integrated to bring complex anatomical and physiological processes to life.

- **3D Animation and Visual Content Creation**

High-quality 3D animations were created for complex topics like the anatomy of the heart, respiratory system, and metabolic conditions such as Type 2 Diabetes. These animations allowed students to visually explore these intricate structures and processes, enabling deeper understanding that is critical for future healthcare practitioners.

- **Development with Articulate Storyline**

Using Articulate Storyline, we developed interactive modules with various features such as drag-and-drop quizzes, scenario-based assessments, and layered information for deeper dives into certain topics. Articulate Storyline's flexibility allowed us to integrate 3D animations and create SCORM-compliant modules ready for LMS deployment.

- **LMS Integration, Hosting, and Testing**

Once the courses were developed, we conducted thorough testing to ensure seamless functionality on the client's LMS. Each module was tested for SCORM compliance, ensuring smooth tracking and reporting. The modules were then hosted on the university's LMS, making them easily accessible for students.

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## **Business Impact**

The implementation of interactive, 3D-enhanced eLearning modules had significant benefits for the university's nursing program:

- **Enhanced Learning and Comprehension:** Students gained a better understanding of complex topics through interactive, visual learning experiences. The 3D animations allowed them to explore intricate anatomical structures, leading to improved knowledge retention and comprehension of essential nursing concepts.
- **Increased Student Engagement and Flexibility:** The interactive elements and high-quality graphics created an engaging learning environment that encouraged active participation. Students appreciated the flexibility to learn at their own pace, particularly valuable for complex topics that require repetition and focused study.
- **Improved Learning Outcomes and Competency:** By enabling a deeper understanding of critical nursing concepts, the eLearning modules helped equip students with the knowledge required to excel in their studies and future healthcare roles.
- **Efficient Delivery and LMS Integration:** The SCORM-compliant courses ensured that the university could effectively track student progress, gather performance data, and make informed decisions on content effectiveness.

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## **Conclusion**

Our comprehensive, eLearning solution successfully met the university's need to provide an immersive, flexible nursing training program. Through interactive, SCORM-compliant modules enriched with 3D animations, we delivered a next-generation learning experience that empowers nursing students with the knowledge and skills needed to succeed in the healthcare industry. This project showcases how digital transformation in education can create meaningful impacts on student learning and engagement, setting a new standard for nursing education.