



KYUSHU UNIVERSITY, JAPAN

Key Facts

Company: Kyushu University, Faculty of Engineering

Website: www.eng.kyushu-u.ac.jp

Industry: Education

Country: Japan

Products Used:

- Intergraph Smart® 3D
- Intergraph Smart Review
- SmartSketch®

Key Benefits:

- Allows for close partnership between academia and technology provider
- Enhanced education for university students via market-leading tools
- Ability for students to learn advanced techniques using real world solutions
- Opportunity for students to be well-prepared for future careers

KYUSHU UNIVERSITY BOOSTS EDUCATION OUTCOMES WITH HEXAGON DESIGN TOOLS

Respected Japanese university complements shipbuilding engineering curriculum with market-leading technology

BACKGROUND

Founded in 1911, Kyushu University is a Japanese public university located in Fukuoka, Kyushu. Home to some 19,000 students and approximately 7,800 employees, Kyushu University has established itself as a leader in education and research throughout Asia.

As the fourth oldest faculty among Japanese universities, the Faculty of Engineering has contributed to the development of engineering, technology and industry, providing leading research and engineering education to more than 43,000 graduates in the past 100 years.

The Faculty of Engineering's Department of Marine Systems Engineering is well respected for the delivery of learning programs in the disciplines of naval architecture, marine engineering, industrial engineering and systems engineering. In particular, its degrees combine structural, fluid, heat, materials and control engineering in a curriculum designed to develop system engineering skills that can be practically applied to the design or construction of ships, marine and offshore structures.

THE CHALLENGE

As part of its education approach to ship design and building, the Department of Marine Systems Engineering sought to provide the industry standard in enterprise engineering software to help prepare students to enter the professional world.

To assist the university, Hexagon offered to roll out its Education Program – an initiative that donates software and services to universities worldwide, to support the advancement of innovative research and teaching, and ensure the recognition of academic excellence.



The university sought the support of Hexagon to introduce and simulate the use of its plant lifecycle engineering software for the shipbuilding industry. As a result, the Education Program was customized to the curriculum of Kyushu University, where around 15 students per year have learned Hexagon solutions since 2009.

THE SOLUTION

Hexagon has provided an education grant to the university for Smart 3D – the world’s first and only next-generation 3D design solution for shipbuilding; SmartSketch – a versatile and cost-effective precision engineering and drafting product; and Smart Review – a problem-solving 3D visualization tool.

The university has now deployed a number of licenses for the Hexagon tools. According to Dr. Satoru Yamaguchi, Associate Professor, Department of Marine Systems Engineering, “This generous software grant from Hexagon enables Kyushu University to prepare our students for careers in shipbuilding prior to entering the workforce.

“Our students will gain valuable experience through hands-on training using Smart 3D, SmartSketch and Smart Review, enabling them to learn sophisticated techniques using the same software as professionals.”

THE RESULTS

Having the market’s leading tools integrated within the Department of Marine Systems Engineering’s curriculum has resulted in enhanced education outcomes for students.

“We have created a well-rounded curriculum with the addition of Hexagon tools,” said Dr. Yamaguchi. “We are complementing our students’ theoretical knowledge of shipbuilding and naval architecture with practical application through the use of technology. Being able to prepare, visualize and manage designs in real-time has benefited our students in learning the value of concurrent engineering – a concept that is increasingly being adopted by owner operators, engineering, procurement and construction companies

(EPCs) and fabricators to improve productivity and reduce costs.

“The Hexagon tools are extremely valuable in demonstrating the power of having access to accurate engineering data and the relationships between deliverables in shipbuilding design projects. These skills will enable our students to be well-prepared for the technological challenges they will face in their future careers.”

THE FUTURE

The vision of the Department of Marine Systems Engineering is to continue upskilling students in the Hexagon tools across its courses.

“We are committed to adding value to our curriculum with Hexagon's tools so we can educate the next generation of engineers on how to streamline engineering design to benefit the shipbuilding industry,” said Yamaguchi.

KEY LEARNINGS

- **Fostering tomorrow’s leaders:** Hexagon’s Education Program supports the advancement of teaching to prepare Kyushu University students for professional careers in the shipbuilding industry
- **Practical skills:** The use of Hexagon tools complements theoretical knowledge of shipbuilding with practical application through the use of technology
- **Concurrent engineering:** Being able to prepare, visualize and manage designs in real-time is benefiting students in learning about the value of concurrent engineering
- **Shaping the future of the shipbuilding industry:** Adding value to its curriculum with Hexagon’s tools helps the university shape the future of the shipbuilding industry by producing graduates focused on streamlining engineering design

ABOUT HEXAGON

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon’s PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us @HexagonAB.