Case study

Texas A&M University

The College of Engineering recommends HP ZBook Mobile Workstations as an approved BYOD option

Industry
Education
Engineering

Objective
Provide College of Engineering students with a professional mobile workstation—and service and support—for processing- and graphics-intensive engineering applications

Approach
Standardize devices including HP ZBook Mobile Workstations as a recommended BYOD option

IT matters
• Deliver high performance for engineering applications

• Offer local support and service on all statewide campuses

• Ensure uptime, avoid disruption of educational activities

• Enable growing use of collaboration tools

Business matters
• Support goal to increase engineering student enrollment to 25,000 by 2025

• Prepare students with technology platforms they will encounter in industry

• Continuously advance performance and features to meet evolving need

• Enable academic and research excellence

"We have stringent benchmarks. We need strong CPU and GPU processing. The HP ZBook delivers the power and mobility our engineering students need to prepare for today's jobs."

– Ed Pierson, director of IT, Texas A&M College of Engineering

The oldest public university in Texas, Texas A&M University serves more than 64,000 students with nearly 400 degree programs. The College of Engineering is the largest college on campus, with more than 500 faculty members and 17,000 students in 14 departments. Use of demanding software applications is integral to the engineering programs. Incoming freshmen purchase their own mobile workstations from a list of approved devices carefully screened by the university to meet stringent performance specifications. For many Texas A&M engineering students, this leads to the mobile power of the HP ZBook.

The Texas A&M College of Engineering, one of the best in the world, is providing access to more students to pursue an engineering education through an ambitious growth plan, 25 by 25: By 2025, it wants to reach a student enrollment of 25,000. The college understood that enrollment increased by a third would require more than the traditional presence of computers in campus labs and classrooms. The engineering school wanted each student to bring their own mobile device to free them to work where and when they wished.

"We want students to have high-performance platforms for their academic work—and also to give them experience for when they go to work at Fortune 50 companies."

– Ed Pierson, director of IT, Texas A&M College of Engineering

The College of Engineering launched a Bring Your Own Device (BYOD) program guiding incoming freshmen toward approved devices. "Technology is a critical part of the educational process," says Ed Pierson, director of IT for Texas A&M's College of Engineering. "The BYOD program enables students to use engineering applications without having to come to campus. It helps them manage their time better. In addition, the BYOD program enables the college to optimize use of the on-campus resources we maintain, to manage the periods of high and low utilization."

Preparing students for professional demands

 The engineering applications students use depends on their major. All incoming freshmen use SOLIDWORKS and MATLAB software. In subsequent years, they add different packages for mechanical engineering, electrical engineering,

petroleum engineering, aerospace—or whatever their particular field of study requires. Texas A&M steers students toward software and hardware platforms like those they will encounter after they graduate and find jobs.

The way students on campus use computers is changing. Now in addition to software applications, students use tools that provide virtual meetings and team collaboration to communicate with one another and with faculty—driving demand for high quality microphones and audiovisual capabilities.

"We want them to have high-performance platforms for their academic work—and also give them experience for when they go to work at Fortune 50 companies," Pierson says.

HP ZBook delivers reliable mobile power

Every year, the College of Engineering reviews workstations and their vendors to select that year's approved options for students. The college looks for mobile workstations that deliver reliable high performance and sophisticated graphics capabilities, from vendors able to support students on every Texas A&M campus. Among recent winners was HP's most powerful mobile workstation: the HP ZBook 15.

The HP ZBook 15 is endowed with Thunderbolt™ technology enabling fast data transfer and easy connection to multiple devices; professional NVIDIA® Quadro® 3D Graphics; and fourth generation Intel® Core™ i5 or i7 processors. Already subjected to the HP Total Test process, the HP ZBook 15 again passed with flying colors when Texas A&M applied its own rigorous tests.

"We have a tight set of benchmarks we measure against. We need strong CPU and GPU processing," Pierson says. "We're pleased with the solutions HP has brought us for that market space."

Customer at a glance

Application
College of Engineering student mobile workstations; faculty and staff compute devices

Hardware
• HP ZBook 15 Mobile Workstation
• HP ZBook Studio Mobile Workstation
• HP Z240 Desktop Workstation
• HP Z640 Desktop Workstation
• HP Z840 Desktop Workstation

HP service and support seal the deal

When students go to the Texas A&M Engineering web page of approved devices, they see a link to purchase the device from HP Partner Avinext. Like Texas A&M itself, Avinext is headquartered in College Station, TX. The university also leverages the ecosystem of HP Partners to deliver local service and support for campuses throughout Texas. Students are presented with options for HP Care Pack Service, Accidental Damage Protection, security upgrades, and other enhancements.

"With HP, I've seen a consistent focus on quality and innovation for both academia and industry."

—Ed Pierson, director of IT, Texas A&M College of Engineering

Texas A&M chooses robust workstations, with strong support and feature options, with the goal that students will be able to use their chosen devices for four years with minimal extra cost and disruption. HP assists to assure seamless rollout during the six-day window when freshman arrive on campus and receive their imaged, ready-to-go devices.

"HP has a strong distribution channel," Pierson says. "What's more, when a device is a critical part of the student's day-to-day activity, the local support and service that HP can provide through its partners is very important."

Considering the advice he'd share with other universities, Pierson says several lessons stand out:

• Standardize on chosen platforms, to ensure quality of service and performance
• Make sure that platform meets benchmark requirements, to provide a consistent student experience
• Make spare devices available, but turn repairs around quickly
• Always keep an eye on emerging requirements and capabilities

HP innovation touches entire university

Texas A&M has been an HP customer for years, relying on HP guidance and the broad solution portfolio to stay up-to-date with optimal solutions for a variety of academic and administrative needs throughout the university. In addition to his College of Engineering role as IT director, Pierson is CIO of the Texas Engineering Experiment Station (TEES), a statewide engineering and technology research agency that maintains research units at the Texas A&M College of Engineering.

Pierson sees Texas A&M faculty, researchers, and administrators use HP Z Workstations, HP LaserJet Printers, and an expanding array of innovative HP technologies such as the HP Zvr Interactive Virtual Reality Display in the College of Architecture and the HP Z240, HP Z640 and HP Z840 Desktop Workstations in the College of Engineering. "With HP, I've seen a consistent focus on quality and innovation for both academia and industry," Pierson says. "It's a real advantage to work with a vendor that's always moving the performance bar forward."

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