

A photograph of a campus scene featuring a large white stone statue of a lion in the foreground, surrounded by yellow and purple flowers. In the background, there are trees and a building. The image is partially obscured by a light blue diagonal overlay.

Purdue University Northwest Embeds campusM Mobile App in a Computer Science Course Curriculum

Executive Summary

The return to campus has taken on new meaning in 2021, as students and institutions grapple with questions about safety, educational value and the Student Experience on a changed campus. For Purdue University Northwest (PNW), a core strategy for mitigating these issues has been to consistently include students in the discussions on how best to welcome students back to in-person classes.

In February 2021, the university took student involvement in the return to campus a step further through a Computer Information Technology Course senior project. Seniors in the course leveraged the university's existing mobile app, powered by Ex Libris' campusM, to enhance existing Wayfinding services.

Key Benefits

- Enabled a student-led initiative to improve life on campus using existing campusM platform
- Enhanced Wayfinding services in anticipation of students returning to campus
- Participating seniors gained valuable work experience through a campusM sandbox environment

Though classes at PNW took place in hybrid formats during 2020-2021, in the spring of 2021, the university began to welcome increasing numbers of students back onto its campuses. Looking forward to a full return in Fall 2021, the university started to explore new ways to connect students

across the university and increase engagement with campus initiatives.

While many policies about the safe return to campus would need to be determined by the university, PNW felt strongly about involving students in the process of reimagining the student experience on campus.

In addition to ongoing conversations with students and student government leaders about how to ease the transition back onto campus, the university's Information Services team partnered with College of Technology seniors to develop a mobile feature that will make it easier for students to find their way around campus when they return.

About Purdue University Northwest

Purdue University Northwest (PNW) is a premier metropolitan university dedicated to empowering transformational change in our students and in our community. Located in Northwest Indiana, near Chicago, PNW values academic excellence, supports growth, and celebrates diversity. For more information about PNW, visit www.pnw.edu.

Computer Information Technology Seniors Build on PNW's campusM Mobile App

The Computer Information Technology department's senior project gave students hands-on programming, collaboration, and project management experience to improve their employability outlook.

"We know that employers are looking at tangible skills and competencies as well as credentials," said George Stefanek, assistant professor of Computer Information Technology in the PNW College of Technology, who oversaw the project. "In addition to the coding the students had to do throughout the course, we also had them practicing project management skills by documenting their progress within Microsoft Projects. By the end of the course, the students gained valuable expertise that will serve them well in their job searches."

CampusM, PNW's mobile app, offered a compelling platform for the course participants. The solution's Application Extension Kit (AEK), a web-based software development framework, would allow students to extend campusM capabilities. Simultaneously, adding a feature to the institution's existing campus app would enable PNW to reach and impact the entire student body.

"We were very excited about the idea that our College of Technology students would be influencing the app," said Carol Coupet, former executive director of enterprise application services. "This type of student direction is very valuable and would help us broaden exposure to campusM, as the functionalities these students chose to add would be directly tied to their lived experiences as students."

The Goal: Create a campusM Wayfinding Feature

To ease the transition from remote to on-premise learning, the team of 4 students, headed by student project manager Ryan Sparling, decided to integrate the university's iBeacons with the campusM PNW mobile app. iBeacons are hardware transmitters that can trigger an action on nearby mobile devices based on Bluetooth signals received from these devices. In this case, the action the students wanted to trigger was Wayfinding Services.

Wayfinding Services is an interactive map that provides end-users with detailed information for a hyperconnected campus experience. Wayfinding uses push notifications to identify points of interest, such as alerting end-users of cafeteria menu options, enable search and navigation for walking directions from point to point on the campuses, locate campus parking, and more. By linking campusM with the institution's iBeacons, the capstone course students worked to improve location-based services, helping fellow students connect with peers, staff, and the greater campus community on the go.

Payton Pietron, a campusM full stack developer, served as a campusM liaison and advisor throughout the project, which spanned the entire Spring 2021 semester. Using Slack, Pietron answered student questions in real-time and helped students navigate the campusM sandbox environment in which they were testing their Wayfinding feature.

"The practical experience the students gained throughout the Wayfinding project has given them a sense of what to expect in a real programming job and will hopefully open some doors to these jobs," said Pietron. "The fact that we were able to tie this capstone senior project to an initiative that is set to improve the student experience across campus motivated the students to go above and beyond – and that is 100% reflected in their work."

The Results: New campusM Wayfinding Feature Added to the Fall IT Roadmap

After four months of working on expanding campusM Wayfinding capabilities, the student team was on schedule to deliver their solution by the conclusion of the course in May. There will then be a hand-off from the students to the professional IT team at PNW to review the code and release it at a professional level in the PNW mobile app.

PNW's Information Services and College of Technology are hopeful that this student-led initiative will inspire more students to connect with one another and engage with university services through the campusM mobile app.

"Increasing student communication and engagement and fostering a sense of community are strong strategic goals this year," added Coupet. "By leveraging our existing mobile platform, campusM, and incorporating the student voice through this senior project, we're empowering our students to discover new opportunities and friendships. The timing for this project could not have been better."

About Ex Libris campusM

Ex Libris is a leading global provider of cloud-based solutions for the management, discovery, and delivery of the full spectrum of library materials, as well as mobile campus solutions for driving student engagement and success. Ex Libris solutions are in use by over 5,600 institutions in 90 countries, including 43 of the top 50 universities worldwide and more than 40 national libraries.

