Project Intent

The goal of this project is to provide UW-Green Bay students with a safe, functional, and technologically-upgraded Electrical Engineering Technology (EET) Laboratory and Physics Laboratory to conduct EET and Physics coursework and research. In the summer of 2017 the EET department purchased about $100,000 in EET Automation Laboratory equipment to install in the current lab space. However, due to code compliance and lack of square footage, the equipment could not be assembled in the existing space. This project will provide a cost-effective solution for repurposing recently vacated campus space that can meet all technical requirements to house the specialized EET and Physics laboratory equipment students need for a high-level learning experience. The space that EET and Physics will be leaving will create space to accommodate a growing Human Biology program and a new (UWSA-approved) Masters in Athletics Training program, as determined by academic planning efforts.

The project will develop spaces within the Instructional Services building that have become vacant as a result of a lease termination. The space is adjacent to an area being targeted for the EET program in 2018 and can benefit from some of the electrical engineering classes that will be taught in that space. Creation of classrooms with high end audio and video capabilities and group learning stations will be included in this space. The university would greatly like to expand the quality and scope of what can be performed in the studio space including producing in high definition (HD), green screen set ups, and news programs.

Project Description

The project entails the renovation of 6,300 square feet of space recently vacated by a leaseholder on the first floor of the UW-Green Bay Instructional Services building. The renovated space will become the new Electrical Engineering Technology (EET) and Physics Learning Center. The center will include three co-laboratory/lecture spaces, a designated research area/maker space, and 2-4 faculty and student office spaces. For a size comparison, the existing shared EET, Physics laboratory and prep space is 2,850 square feet. Specific renovation items include:

1. New HVAC installation (including air handlers, supply and return ductwork and distribution) to bring the lab and prep areas up to current building codes for fresh air and required air changes.
2. New LED lighting installation throughout the entire space. The current system is geared for 1970s era TV production and storage space.
3. Installation of specialized EET and Physics Level Three equipment/technology.
4. Basic demolition, including ceiling overhaul to generate higher ceiling height in the basement-level space.
5. Installation of basic laboratory finishes.
6. Installation of the majority (about 72) work stations, the majority of which are moveable.

This project will also develop and support a sports communication emphasis in the electronic media format and will appeal to sports-minded students/athletes who wish to pursue a career in sports media and journalism in the Social Media Production Labs. There currently exists some television studio space and audio/video production editing rooms that can easily be retooled to meet the needs of this curriculum. Minor renovation will need to occur and new HVAC / lighting systems will need to be installed. This project will upgrade obsolete audio and video equipment that is currently housed in these studios. The equipment is currently used for Introduction to Video Production, Advanced Video Production, Cases in Communication, and Newswriting and Reporting. The studio is also used for many university recordings for a wide variety of users.

Project Justification

8/26/2019
EET and Physics students currently share a laboratory space. For multiple reasons, it is not desirable or functional for the EET students to conduct necessary lab coursework in a shared space. First, the existing 2,850 square foot space is not large enough to allow the EET students to keep their EET equipment on the shared tables for daily use. Each day, students must pull equipment out of storage, reconfigure, use, and put back into storage prior to physics students’ use of the space. The reconfiguring and storage processes consume a significant amount of time that would otherwise be spent learning. Time spent setting up and storing equipment also generates a significant misrepresentation of room utilization data. Traditional EET laboratory spaces keep all equipment out in the open in static positions for regular use. When students cannot regularly access the equipment, use of the equipment outside of regular classroom and laboratory hours is greatly limited. As an additional equipment issue, EET faculty cannot construct already-purchased specialized teaching equipment in the current space due to lack of square footage and the need to assemble the equipment in a fixed position.

In addition, the existing water infrastructure (including sprinkler system, sinks (eye baths, hand wash stands) and showers in the current space are not desirable for an EET laboratory, or even the physics laboratory. Analysis by the UW-Green Bay Facilities team shows that it will be more cost effective to maintain the existing water infrastructure, than to remove and then renovate the current space that is already too small for both the EET and physics laboratories. The current Exercise Physiology program and the oncoming Masters in Athletics Training program can then occupy the existing lab space (and can use the existing water infrastructure) for their laboratory needs.

Finally, in 2019-2020, EET will be going through the Accreditation Board for Engineering and Technology (ABET) accreditation process. ABET will require that EET students have access to certain specialized technology in their laboratories. UW-Green Bay cannot meet those requirements in the current shared lab space set-up. Traditional university EET programs house an Electronics Laboratory, an Electrical Machinery Laboratory, and an Electrical Simulation Laboratory—all of which are necessary to teach the curriculum. The UW-Green Bay EET program does not currently have the square footage available in the current space to incorporate all of the technology and equipment required for students to conduct the necessary laboratory coursework. The proposed renovated space will have the increased square footage and technological upgrades to accommodate all three different laboratories.

The university and regional industry members developed four academic planning tools since the previous Capital Project Request in 2015 that drive the need for the new EET and Physics Learning Center: (1) UW-Green Bay’s 10-year Higher Learning Commission re-accreditation process, (2) the Greater Green Bay Economic Development Plan, (3) state budget approval for the oncoming UW-Green Bay School of Engineering, (4) a proposed Mechanical Engineering Program. All of these items point to UW-Green Bay’s Engineering Technology programs as a critical access point for the region’s large population of first generation college students to enter into engineering degree programs and career pathways. Regional industry members have serious concerns about the lack of a future northeastern Wisconsin engineering workforce. The UW-Green Bay Electrical Engineering Technology Program can play a significant role in producing the high quality local engineering talent that industry members demand. The EET program, however, cannot meet these demands without a laboratory space that can house the instructional equipment necessary to teach the curriculum industry members and accreditation organizations require.

The equipment that is currently available in the Social Media Production Labs is no longer supported by the manufacturer and needs to be replaced. With the correct equipment the university will be able to provide training for students who are interested in producing video for television, education, industry, legal work, independent productions, local, state, and federal government, etc. It is estimated that UWGB losess between 75 and 100 students to programs offered at other schools whose sports communication curricula have a higher visibility in their communities. This program could provide opportunities for internships with professional sports teams and in fact enhance UWGB’s relationship with the Green Bay Packers, as we are the Higher Education Partner of that organization. As an example, recently UW-Green Bay Prof. Phil Clampitt (Information and Computing Science, Communication) co-authored a post in the blog “Social Media Strategy” with UW-Green Bay alumnus and social media manager for the Green Bay Packers, Ryan Hartwig ’09 Communication. This project will provide more of these types of opportunities for students in real life situations. Students have been surveyed and 80% have indicated they support this field of study and add it as an emphasis to their degree path. In addition to the athletic communication track, it is intended that a separate emphasis will also include a social media certificate. Many publicly minded businesses are hiring social media specialists to manage their Facebook and other social media accounts. This is an expanding career path that will only grow with time and our students need to be ready to step into these emerging careers.
### Project Budget

<table>
<thead>
<tr>
<th>Item</th>
<th>Funding Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Cost</td>
<td>General Fund Supported Borrowing</td>
<td>$ 5,763,500</td>
</tr>
<tr>
<td>A/E Design Fees</td>
<td>Institutional Funds (GPR)</td>
<td>$ 0</td>
</tr>
<tr>
<td>Other Fees</td>
<td>Institutional Funds (PR)</td>
<td>$ 0</td>
</tr>
<tr>
<td>DFD Mgmt Fees</td>
<td>Gifts</td>
<td>$ 0</td>
</tr>
<tr>
<td>Contingency</td>
<td>Grants</td>
<td>$ 0</td>
</tr>
<tr>
<td>Movable Equipment</td>
<td>Other</td>
<td>$ 0</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>TOTAL:</strong></td>
<td><strong>$ 5,763,500</strong></td>
</tr>
</tbody>
</table>

### Consultant Requirements

Consultants should have specific expertise and experience in the design and coordination of higher education engineering laboratory spaces, as well as extensive experience in designing university level video and audio classroom and lab spaces. Expertise should include pre-design and project scope / budget verification, designing lab systems for Architectural, Electrical, HVAC, Plumbing, Data, and Audio – Video broadcast systems design in university educational spaces. as part of a design team. Work includes site surveys, acquiring field data, and verifying as-built conditions to assure accurate development of design and bidding documents, and production of necessary design and bidding documents. Consultants should indicate specific projects from past experience (including size, cost, and completion date) in their letter of interest and when known, include proposed consulting partners and specialty consultants.

- An audio-visual consultant is required.

### Project Schedule

- **Bid Opening:** 02/2021
- **Construction Start:** 06/2021
- **Substantial Completion:** 01/2022

### Project Contact

- **Contact Name:** Jeff Schulz, Campus Planner
- **Email:** schulzje@uwgb.edu
- **Telephone:** 920-465-2202

### Project Considerations

1. Are hazardous materials involved? If yes, what materials are involved and how will they be handled?
   - Required hazardous materials abatement of asbestos in floor tiles and mastic has been included in the estimated project schedule and project budget. Comprehensive environmental survey inventory data is available on Wisconsin's Asbestos & Lead Management System (WALMS) <http://walms.doa.state.wi.us/>.
   - Y ☒ N ☐

2. Will the project impact the utility systems in the building and cause disruptions? If yes, to what extent?
   - N/A
   - Y ☐ N ☒

3. Will the project impact the heating plant, primary electrical system, or utility capacities supplying the building, and/or within the building? If yes, to what extent?
   - N/A
   - Y ☐ N ☒

4. Will the construction work be limited to a particular season or window of opportunity? If yes, explain the limitations and provide proposed resolution.
   - This is an occupied building and it will be advantageous to schedule construction activities during non-academic times of the year such as summer break.
   - Y ☒ N ☐