## Application Details

## Manage Application: Textbook Transformation Grants: Round Eleven

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| **Award Cycle:** | Round 11 |
| **Internal Submission Deadline:** | Tuesday, January 23, 2018 |

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|---|---|
| **Application Title:** | 366 |
| **Application ID:** | 002085 |
| **Submitter First Name:** | James |
| **Submitter Last Name:** | Castle |
| **Submitter Title:** | Lead Instructional Designer |
| **Submitter Email Address:** | jcastle@uga.edu |
| **Submitter Phone Number:** | 706-357-0048 |
| **Submitter Campus Role:** | Proposal Investigator (Primary or additional) |
| **Applicant First Name:** | James |
| **Applicant Last Name:** | Castle |
| **Applicant Email Address:** | jcastle@uga.edu |
| **Applicant Phone Number:** | 706-357-0048 |
| **Primary Appointment Title:** | Lead Instructional Designer |
| **Institution Name(s):** | University of Georgia |
| **Co-Applicant(s):** | Dr. Ilse Mason, Dr. Stephen Balfour, Stephen Bridges |
| **Submission Date:** | Tuesday, January 23, 2018 |

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|---|---|
| **Proposal Title:** | 366 |
| **Proposal Category:** | No-Cost-to-Students Learning Materials |
| **Final Semester of Instruction:** | Fall 2018 |
| **Are you using an OpenStax textbook?:** | No |

**Team Members (Name, Email Address):**

James Castle, jcastle@uga.edu

Dr. Ilse Mason, isannen@uga.edu

Dr. Stephen Balfour, Stephen.Balfour@uga.edu

Stephen Bridges, stephen.bridges@uga.edu

Graduate Assistant, TBD

Stephanie Leary (The Web Craftory), steph@stephanieleary.com

**Sponsor, (Name, Title, Department, Institution):**

Dr. Rahul Shrivastav, Vice President for Instruction, Office of Instruction, University of Georgia

Dr. Janet Buckworth, Department Head and Professor, Department of Kinesiology, University of Georgia

**Course Names, Course Numbers and Semesters Offered:**

| Prefix | Course Number | Short Title |
|---|---|---|
| PEDB | 1010 | Adapted PE |
| PEDB | 1020 | Beg Badminton |
| PEDB | 1040 | Beg Basketball |
| PEDB | 1070 | Challenge Course |
| PEDB | 1080 | Beg Bowling |
| PEDB | 1090 | Outdoor Adventure |
| PEDB | 1100 | Beg Bkpkg-Hiking |
| PEDB | 1120 | Beg Golf |
| PEDB | 1130 | Intermediate Golf |
| PEDB | 1140 | Advanced Golf |
| PEDB | 1150 | Self Defense |
| PEDB | 1230 | Beg Racquetball |
| PEDB | 1240 | Inter Racquetball |
| PEDB | 1260 | Softball |
| PEDB | 1270 | Soccer |
| PEDB | 1280 | Ultimate |
| PEDB | 1300 | Beg Swimming |
| PEDB | 1310 | Inter Swimming |

| | | |
|---|---|---|
| PEDB | 1331 | Beg Scuba |
| PEDB | 1350 | Beg Tennis |
| PEDB | 1360 | Inter Tennis |
| PEDB | 1380 | Beg Volleyball |
| PEDB | 1390 | Inter Volleyball |
| PEDB | 1400 | Intro to Wt Train |
| PEDB | 1900 | Fitness for Life Group Fitness |
| PEDB | 1910 | FFL Indoor Cycling |
| PEDB | 1920 | FFL Body Condition |
| PEDB | 1930 | FFL Jogging |
| PEDB | 1940 | FFL Swimming |
| PEDB | 1950 | FFL Walking |
| PEDB | 1990 | Directed Study |
| PEDB | 1950E | FFL Walking |

*Courses are offered Fall, Spring, and Summer*

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|---|---|
| **List the original course materials for students (including title, whether optional or required, & cost for each item):** | |
| **Average Number of Students per Course Section:** | 30 |
| **Number of Course Sections Affected by Implementation in Academic Year:** | 240 |
| **Average Number of Students Per Summer Semester:** | 7,000 |
| **Average Number of Students Per Fall Semester:** | 3,200 |
| **Average Number of Students Per Spring Semester:** | 3,200 |

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| **Total Number of Students Affected by Implementation in Academic Year:** | 600 |
| **Requested Amount of Funding:** | $30,000 |
| **Original per Student Cost:** | $30 |
| **Post-Proposal Projected Student Cost:** | $0 |
| **Projected Per Student Savings:** | $30 |
| **Projected Total Annual Student Savings:** | $210,000 |

**Creation and Hosting Platforms Used ("n/a" if none):**

Part of this project will be to develop and implement a UGA OER publishing resource with a custom implementation of PressBooks, a free and open source plugin for the WordPress content management system. The system will be hosted on Pantheon, which provides managed hosting for WordPress sites. The UGA Office of Instruction will support a request for annually recurring student technology funds ($12,700) to support the ongoing hosting and maintenance of the platform.

**Project Goals:**

This project aims to facilitate the creation and editing of OER content for physical education courses at UGA. An additional goal of the project is to establish an environment that can be used for OER authoring more widely among faculty at UGA. Broadly stated, the goals of this project are to remove textbook costs as a barrier for course enrollment, improve student retention, and ultimately improve the four-year graduation rate.

Author robust and comprehensive OER content for 21 physical education courses, incorporating existing OER content where available.

Make authored OERs freely accessible via the UGA Pressbooks website.

Enable 7,000 UGA students per academic year consistent access to OER physical education content, saving students a total of $210,000 per year.

Provide an environment conducive to the authoring and editing process of OERs for the greater UGA faculty community.

**Statement of Transformation:**

The cost of textbooks represents a growing burden on higher education students in the US. In one study, the average cost of a textbook was found to be $90.61, or over $900 annually (Hilton, Robinson, Wiley, & Ackerman, 2014). The issue of textbook affordability has become an issue of state law in California, where the *College Textbook Affordability Act of 2015* appropriated $5,000,000 to fund specific open education initiatives. Textbook affordability is an especially pointed problem for economically disadvantaged students, with many students simply not buying required courses texts if their financial aid does not cover them (Donaldson, Nelson, & Thomas, 2012).

Students at the University of Georgia are no exception to the burden of high textbook costs. In a recent survey, 49% (n=609) of UGA students surveyed reported spending $300 or more on textbooks per semester and 81% (n=1007) report spending at least $200 per semester (Watson, Domizi, & Clouser, 2017). Additionally, 71% (n=922) of students reported that they sometimes do not buy required textbooks for their courses. Of the 71% who sometimes do not buy textbooks, 57% (n=656) reported cost as the reason for not buying the book (Watson, Domizi, & Clouser, 2017).

One strategy for addressing the high cost of textbooks is to adopt materials that are free and openly available in their place. These materials are commonly referred to as open educational resources (OER). Many UGA faculty have made strides to adopt existing OER, and UGA students have realized a cost savings of over $3,000,000 since fall 2013 (UGA Center for Teaching and Learning, 2017a). However, the resource list promoted by the University of Georgia's Center for Teaching & Learning presents a glaring gap: UGA does not provide a platform for faculty to publish OERs (Center for Teaching and Learning, 2017b). As a result, faculty must either (a) use only existing OER resources or (b) cobble together a third-party publishing solution, accepting whatever copyright, privacy, and accessibility terms the third party puts forward. The result has been an uneven, and at times unstable, OER environment.

In 2014, Dr. Ilse Mason received a $5,000 grant to transform the entire undergraduate physical education curriculum using OERs. The initial creation of these OERs was done using SoftChalk, an HTML authoring tool marketed to the education sector. The resulting HTML packages proved difficult to maintain and update, as there was no mechanism to make changes to content across courses or across all pages within a course. In 2016, using internal

support from the Center for Teaching and Learning, the SoftChalk content was imported into a basic WordPress instance. While this basic WordPress site has functioned to serve the content to the students, there have been issues with site stability, the site architecture, and the site updates. This is a platform that evolved in order to survive, not one that was designed intentionally from the beginning.

Even with the challenges outlined, the Physical Education OER Project is a high impact project at UGA. Every undergraduate student is required to complete a basic PE credit in order to graduate, and every basic PE class uses this course content. In all, 7,000 students per year use the content, and the cost savings to those students is $210,000 per year. This proposal will build on the success of the Physical Education OER Project by (a) building a platform for hosting these OERs from the ground up using a custom instance of the Pressbooks Open Source Plugin for Wordpress and (b) revising all of the Physical Education open content to be more rigorous and more closely reflect the goals of the program. This development will happen in collaboration with expert Wordpress design firm *The Web Craftory*, led by Stephanie Leary, who has more than a decade of experience working on web projects for higher education institutions.

In addition to reaching 7,000 UGA students, allowing them to save $210,000 per year for physical education content, our team plans to deliver a platform that can be used to author OER texts by any UGA faculty. This project will allow UGA to add an OER publishing platform to the list of resources provided to faculty. Finally, the ongoing hosting and support of the OER platform will be sustainable through funding provided by the UGA student technology fees. In this regard, the Affordable Learning Georgia grant is planting a seed that will meet both an existing need (enhancing and solidifying the open PE content) and a future need (authoring resources for future OER adoption at UGA).

**Transformation Action Plan:**

This project will involve team members from the UGA College of Education, the UGA Office of Online Learning, and Wordpress experts *The Web Craftory*. The design phase of the project will begin in spring 2018, with Ilse Mason, Steve Balfour, and James Castle collaborating with Stephanie Leary from *The Web Craftory* to ensure that the platform being developed for OER

authoring aligns with the vision of the project. Development of the platform will occur in summer 2018, and authoring of the OERs will take place in fall 2019. The authoring portion of the project will be led by Ilse Mason, with a graduate student from kinesiology dedicated to the project. The content of each course will be comprised of a common “Fitness for Life” text, which will be married with course-specific text to make up the textbook for each individual course. The authoring platform will allow for the creation and editing of the broader “Fitness for Life” text for all courses from a single site, while the course-specific text will be able to flexibly change for each course. The platform, along with the content for all 33 physical education courses, will launch in January 2019, at which time all of the materials and the authoring platform will be available to the UGA community (and the course materials will be available to any person in the world with an internet connection).

Roles for each team member will be as follows: *The Web Craftory* will be responsible for providing Wordpress development and consulting on the best approach to use Wordpress for our desired outcomes. Office of Online Learning staff will consult on the instructional design aspects of the project and, in collaboration with Dr. Mason, provide the overarching project management to see the project to completion. Dr. Mason and her graduate student will serve as subject matter experts and primary authors of the text for the 32 courses affected by this grant. Additionally, Stephen Bridges from the Office of Online Learning will be responsible for creating a set of tutorial videos and documentation to be used as just-in-time learning resources for faculty who want to use the platform.

During the semester post-launch, the Office of Online Learning will collect data from students regarding their satisfaction with both the course content and the OER platform. The survey will be conducted using Qualtrics, and the results will inform future decisions for the evolution of the OER platform. We will also survey future OER authors on the platform to gauge their perception of the platform’s usability in order to be able to evolve the platform based on the needs of our students and instructors.

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| **Quantitative & Qualitative Measures:** | Evaluation of the project's effectiveness will be measured in several ways: (1) the total amount of money saved by students on an annual basis, (2) the number of students using the OER platform, (3) the number of courses using the OER platform, (4) student and instructor satisfaction with the OER platform, and (5) the total uptime of the OER platform, and (6) ensuring that the DFW rate for courses using the OER platform is not harmed. At launch, we expect this project to save 7,000 students $30 each by removing the cost of their physical education textbook. As other courses and faculty begin to use the platform, the amount saved by students will increase. For example, if a course that serves 100 students per year replaces a $100 textbook with OERs, the total savings to students will increase $10,000. As OER adoption is a priority at UGA, we expect to see OER creation to be incentivized for high enrollment courses. This will drive both the use of the OER platform and the amount saved/number of students using the platform. We will conduct surveys of students and faculty who use the platform to monitor their satisfaction and look for ideas for improvement. These surveys will take place during the course authoring period (for instructors) and during course delivery (for students). Finally, we will monitor the uptime of the OER platform. A problem with the current usage of self-created OER at UGA is lack of reliable hosting. Our goal is to have no service disruptions during semesters when the course content is in use. This will be a great improvement over the current arrangement, where the content might be unavailable to students multiple times in a given week. By centralizing this resource for UGA courses and faculty, we will be able to offer reliable hosting on a platform that was designed to host Wordpress for high traffic and high demand sites. Finally, we want to ensure that the use of the OER platform does not contribute to an increase in the DFW rate of the physical education courses.We will analyze each measure to monitor success. The total amount of money saved for students will be calculated by |

multiplying the number of students by the individual amount saved by not buying a textbook. That total amount saved will be balanced against the cost of maintaining the platform. At launch, we expect the cost of maintaining the platform to be around 6% of the total amount saved students. We will monitor this percentage as the platform adoption increases. To analyze the DFW rates, we will compare the DFW rate of the courses going forward with the DFW rates of past course offerings. DFW is a better indicator than overall course grades in this situation because the physical education courses are simply pass/fail (not graded on a traditional A-F scale). Finally, we will monitor general satisfaction with the platform using Likert scale questions, and we will ask for qualitative suggestions to find trends for features that students and faculty would like to see added to the platform.

**Timeline:**

| Activity | Begin Date | End Date | Responsibility |
|---|---|---|---|
| Design outlines for OER Platform | Feb. 2018 | Apr. 2018 | Office of Online Learning, *The Web Craftory* |
| Development of OER Platform | May 2018 | Jul. 2018 | *The Web Craftory* |
| Authoring of Physical Education Content | Aug. 2018 | Dec. 2018 | Ilse Mason, Graduate Student |
| Documentation & Tutorials | Jul. 2018 | Dec. 2018 | |
| Platform Launch | Jan. 2018 | | Office of Online Learning |
| Internal Marketing | Jan. 2019 | | Office of Online Learning |
| Spring 2019 Student Surveys | Apr. 2019 | May 2019 | Ilse Mason |
| Spring 2019 Faculty Surveys | Apr. 2019 | | Office of Online Learning |

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|---|---|---|---|
| Platform & Curriculum Improvements based on feedback | May 2019 | July 2019 | Ilse Mason, Office of Online Learning |
| Fall 2019 Student Surveys | Nov. 2019 | Dec 2019 | Ilse Mason |
| Fall 2019 Faculty Surveys | Dec. 2019 | | Office of Online Learning |
| Data Analysis & Final Report Completion | Dec. 2019 | Jan. 2020 | Office of Online Learning, Ilse Mason |

**Budget:**

| Line Item | Amount |
|---|---|
| Pressbooks Website Development | $12,750 (See attached proposal) |
| Overall Project Expenses and Travel | $800 |
| PrinceXML License | $1,900 |
| Graduate Student (Content Authoring) | $5,000 |
| Dr. Ilse Mason (Project Management) | $3,550 |
| Office of Online Learning (Instructional Design & Project Management) | $6,000 ($2,000 per team member) |
| **Total** | **$30,000** |

**Sustainability Plan:**

Dr. Mason coordinates the instruction for all PEDB courses. She oversees the curriculum, and she will continue to direct all instructors to use the OER curriculum for all offerings of PEDB courses going forward.

In order to provide ongoing hosting and maintenance fees, we will seek yearly funding in the amount of $12,700 from the student technology fee budget. We believe this is a sound investment given the first year savings to students of $210,000, which will only increase as more faculty author material on the platform. The hosting for the site, which will be provided by pantheon.io, allows for unlimited traffic and authoring, meaning that the site will scale as usage of the platform increases. Finally, this project is meant to empower UGA faculty to create the content that will best allow them to teach their students. A significant barrier to the creation of

OERs at UGA has been the lack of a provided tool to author and maintain the texts. By removing this barrier, we will enable the usage and adoption of open textbooks at UGA to grow across the university.

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UNIVERSITY OF GEORGIA

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TEL 706-583-0690
ovpi@uga.edu
www.ovpi.uga.edu

January 22, 2018

To the Affordable Learning Georgia Review Committee,

On behalf of the UGA Office of Instruction, I am pleased to offer support for the grant application for "Establishing an Open Content Platform: Physical Education and Beyond". This grant will enable the distribution of no-cost textbooks to students, with over 7,000 students anticipated to use the platform in the first year, representing $210,000 in savings to students.

The project is a collaboration between Dr. Ilse Mason from the UGA College of Education and the UGA Office of Online Learning. Dr. Mason is an award-winning faculty member with five years of experience developing and teaching online classes, and our Office of Online Learning has collaborated with faculty to develop hundreds of online courses over the past six years. Another recent collaboration between Dr. Mason and the Office of Online Learning, UGA's online walking class, has received national exposure on Amazon's AWS Blog and in eCampusNews.

In addition to providing no-cost physical education texts to students, this grant will result in the implementation of a UGA-provided platform that will allow any UGA faculty to author texts that are open to anyone, anytime. This is a huge step forward for empowering faculty to join in the effort to lower textbook costs. In order to ensure the continued success of this project, the UGA Office of Instruction will support a request for $12,700 annually toward the hosting and maintenance of the platform from the Student Technology Fee Committee. We believe this investment will be more than offset by the cost savings realized by students using the platform.

Thank you for consideration of this project in the Affordable Learning Georgia grant program.

Sincerely,

Rahul Shrivastav, Ph.D.
Vice President for Instruction

College of Education
*Department of Kinesiology*
UNIVERSITY OF GEORGIA

16 January 2018

To the Affordable Learning Georgia Review Committee:

It is with great pleasure that I place my enthusiastic support as Department Head behind Dr. Ilse Mason's participation in the University of Georgia's ALG proposal titled "Establishing an Open Content Platform: Physical Education and Beyond."

This proposal is an outstanding opportunity for Dr. Mason to collaborate with UGA's Office of Online Learning to further the work that she has done with open educational resources. The courses that will be immediately impacted in this grant are required for all undergraduates at UGA and enroll more than 7,000 students each academic year. The impact of this proposal on enhancing the quality of instruction and reducing the financial burden is significant, representing $210,000 per year in savings to our students.

Dr. Mason has extensive experience managing the courses that are the focus of this grant. She has been a pioneer in online learning at UGA, having developed the institution's only online physical education class in 2013. This course has been updated and revised each offering and has been recognized locally with UGA's Innovative Teaching Award and nationally in a eCampus News front page article. This grant will extend Dr. Mason's work, make the materials for this class open to any faculty member at USG and nationally, and provide a platform for other UGA faculty members to author no-cost textbooks to the benefit of their students.

Dr. Mason's expertise and enthusiasm is critical to this project, and she has my full support.

Thank you for the opportunity to improve our students' access to high quality, free learning materials through participation in this grant program.

Sincerely,

Janet Buckworth

Department Head and Professor
Jb1@uga.edu

**Affordable Learning Georgia Textbook Transformation Grants**
**Round Nine**
**For Implementations beginning Summer Semester 2017**
**Running Through Spring Semester 2018**

## Proposal Form and Narrative

- *The proposal form and narrative .docx file is for offline drafting and review. Submitters must use the InfoReady Review online form for proposal submission.*
- ***Note: The only way to submit the proposal is through the online form in Georgia Tech's InfoReady Review at:*** *https://gatech.infoready4.com/#competitionDetail/1757803*
- *Italicized text is provided for your assistance; please do not keep the italicized text in your submitted proposal. Proposals that do not follow the instructions may be returned.*

| | |
|---|---|
| **Submitter Name** | James Castle |
| **Submitter Title** | Lead Instructional Designer |
| **Submitter Email** | jcastle@uga.edu |
| **Submitter Phone Number** | 706-357-0048 |
| **Submitter Campus Role** | *Other* |
| **Applicant Name** | *James Castle* |
| **Applicant Email** | jcastle@uga.edu |
| **Applicant Phone Number** | 706-357-0048 |
| **Primary Appointment Title** | *Lead Instructional Designer* |
| **Institution Name(s)** | University of Georgia |

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|---|---|
| **Team Members** | ***James Castle, Lead Instructional Designer, Office of Online Learning (jcastle@uga.edu)***<br><br>***Stephen Balfour, Director, Office of Online Learning (stephen.balfour@uga.edu)***<br><br>***Stephen Bridges, Instructional Designer, Office of Online Learning (stephen.bridges@uga.edu)***<br><br>***Ilse Mason, Senior Lecturer, Department of Kinesiology (isannen@uga.edu)***<br><br>***Graduate Student, Department of Kinesiology***<br><br>***Stephanie Leary, CEO & Lead Developer, The Web Craftory (steph@stephanieleary.com)*** |
| **Sponsor, Title, Department, Institution** | *Rahul Shrivastav, Vice President for Instruction, Office of Instruction, UGA*<br><br>*Janet Buckworth, Department Head, Department of Kinesiology, UGA* |
| **Proposal Title** | Establishing an Open Content Platform: Physical Education and Beyond |
| **Course Names, Course Numbers and Semesters Offered** | |

| Prefix | Course Number | Short Title |
|---|---|---|
| PEDB | 1010 | Adapted PE |
| PEDB | 1020 | Beg Badminton |
| PEDB | 1040 | Beg Basketball |
| PEDB | 1070 | Challenge Course |
| PEDB | 1080 | Beg Bowling |
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| PEDB | 1100 | Beg Bkpkg-Hiking |
| PEDB | 1120 | Beg Golf |
| PEDB | 1130 | Intermediate Golf |
| PEDB | 1140 | Advanced Golf |
| PEDB | 1150 | Self Defense |
| PEDB | 1230 | Beg Racquetball |
| PEDB | 1240 | Inter Racquetball |
| PEDB | 1260 | Softball |

| | | |
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| PEDB | 1270 | Soccer |
| PEDB | 1280 | Ultimate |
| PEDB | 1300 | Beg Swimming |
| PEDB | 1310 | Inter Swimming |
| PEDB | 1331 | Beg Scuba |
| PEDB | 1350 | Beg Tennis |
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| PEDB | 1930 | FFL Jogging |
| PEDB | 1940 | FFL Swimming |
| PEDB | 1950 | FFL Walking |
| PEDB | 1990 | Directed Study |
| PEDB | 1950E | FFL Walking |

*Courses are offered Fall, Spring, and Summer*

| | | | | | |
|---|---|---|---|---|---|
| **Final Semester of Instruction** | *Spring 2018* | | | | |
| **Average Number of Students Per Course Section** | 30 | **Number of Course Sections Affected by Implementation in Academic Year** | **240** | **Total Number of Students Affected by Implementation in Academic Year** | 7000 |
| **Average Number of Students Per Summer Semester** | *600* | | | | |

| | |
|---|---|
| **Average Number of Students Per Fall Semester** | *3200* |
| **Average Number of Students Per Spring Semester** | *3200* |
| **Award Category (pick one)** | ☒ No-or-Low-Cost-to-Students Learning Materials<br>☐ Specific Core Curriculum Courses |
| **Are you planning on using an OpenStax textbook?** | ☐ Yes<br>☒ No |
| **List the original course materials for students (including title, whether optional or required, & cost for each item)** | Required: Mason, I. (2013) UGA Physical Education & Fitness Activities, 4th Edition. Retrieved fromhttp://www.mhlearningsolutions.com/PE_Georgia with McGraw-Hill $30 |
| **Requested Amount of Funding** | $30,000 |
| **Original Per Student Cost** | $30 |
| **Post-Proposal Projected Per Student Cost** | $0 |

| | |
|---|---|
| **Projected Per Student Savings** | $30 |
| **Projected Total Annual Student Savings** | *$210,000* |

## NARRATIVE

### 1.1 PROJECT GOALS

This project aims to facilitate the creation and editing of OER content for physical education courses at UGA. An additional goal of the project is to establish an environment that can be used for OER authoring more widely among faculty at UGA. Broadly stated, the goals of this project are to remove textbook costs as a barrier for course enrollment, improve student retention, and ultimately improve the four-year graduation rate.

1. Author robust and comprehensive OER content for 21 physical education courses, incorporating existing OER content where available.
2. Make authored OERs freely accessible via the UGA Pressbooks website.
3. Enable 7,000 UGA students per academic year consistent access to OER physical education content, saving students a total of $210,000 per year.
4. Provide an environment conducive to the authoring and editing process of OERs for the greater UGA faculty community.

### 1.2 STATEMENT OF TRANSFORMATION

The cost of textbooks represents a growing burden on higher education students in the US. In one study, the average cost of a textbook was found to be $90.61, or over $900 annually (Hilton, Robinson, Wiley, & Ackerman, 2014). The issue of textbook affordability has become

an issue of state law in California, where the *College Textbook Affordability Act of 2015* appropriated $5,000,000 to fund specific open education initiatives. Textbook affordability is an especially pointed problem for economically disadvantaged students, with many students simply not buying required courses texts if their financial aid does not cover them (Donaldson, Nelson, & Thomas, 2012).

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One strategy for addressing the high cost of textbooks is to adopt materials that are free and openly available in their place. These materials are commonly referred to as open educational resources (OER). Many UGA faculty have made strides to adopt existing OER, and UGA students have realized a cost savings of over $3,000,000 since fall 2013 (UGA Center for Teaching and Learning, 2017a). However, the resource list promoted by the University of Georgia's Center for Teaching & Learning presents a glaring gap: UGA does not provide a platform for faculty to publish OERs (Center for Teaching and Learning, 2017b). As a result, faculty must either (a) use only existing OER resources or (b) cobble together a third-party publishing solution, accepting whatever copyright, privacy, and accessibility terms the third party puts forward. The result has been an uneven, and at times unstable, OER environment.

In 2014, Dr. Ilse Mason received a $5,000 grant to transform the entire undergraduate physical education curriculum using OERs. The initial creation of these OERs was done using SoftChalk, an HTML authoring tool marketed to the education sector. The resulting HTML packages proved difficult to maintain and update, as there was no mechanism to make changes to content across courses or across all pages within a course. In 2016, using internal support from the Center for Teaching and Learning, the SoftChalk content was imported into a basic WordPress instance. While this basic WordPress site has functioned to serve the content to the students, there have been issues with site stability, the site architecture, and the site updates. This is a platform that evolved in order to survive, not one that was designed intentionally from the beginning.

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In addition to reaching 7,000 UGA students, allowing them to save $210,000 per year for physical education content, our team plans to deliver a platform that can be used to author OER texts by any UGA faculty. This project will allow UGA to add an OER publishing platform to

the list of resources provided to faculty. Finally, the ongoing hosting and support of the OER platform will be sustainable through funding provided by the UGA student technology fees. In this regard, the Affordable Learning Georgia grant is planting a seed that will meet both an existing need (enhancing and solidifying the open PE content) and a future need (authoring resources for future OER adoption at UGA).

### 1.3 TRANSFORMATION ACTION PLAN

This project will involve team members from the UGA College of Education, the UGA Office of Online Learning, and Wordpress experts *The Web Craftory*. The design phase of the project will begin in spring 2018, with Ilse Mason, Steve Balfour, and James Castle collaborating with Stephanie Leary from *The Web Craftory* to ensure that the platform being developed for OER authoring aligns with the vision of the project. Development of the platform will occur in summer 2018, and authoring of the OERs will take place in fall 2019. The authoring portion of the project will be led by Ilse Mason, with a graduate student from kinesiology dedicated to the project. The content of each course will be comprised of a common "Fitness for Life" text, which will be married with course-specific text to make up the textbook for each individual course. The authoring platform will allow for the creation and editing of the broader "Fitness for Life" text for all courses from a single site, while the course-specific text will be able to flexibly change for each course. The platform, along with the content for all 33 physical education courses, will launch in January 2019, at which time all of the materials and the authoring platform will be available to the UGA community (and the course materials will be available to any person in the world with an internet connection).

Roles for each team member will be as follows: *The Web Craftory* will be responsible for providing Wordpress development and consulting on the best approach to use Wordpress for our

desired outcomes. Office of Online Learning staff will consult on the instructional design aspects of the project and, in collaboration with Dr. Mason, provide the overarching project management to see the project to completion. Dr. Mason and her graduate student will serve as subject matter experts and primary authors of the text for the 32 courses affected by this grant. Additionally, Stephen Bridges from the Office of Online Learning will be responsible for creating a set of tutorial videos and documentation to be used as just-in-time learning resources for faculty who want to use the platform.

During the semester post-launch, the Office of Online Learning will collect data from students regarding their satisfaction with both the course content and the OER platform. The survey will be conducted using Qualtrics, and the results will inform future decisions for the evolution of the OER platform. We will also survey future OER authors on the platform to gauge their perception of the platform's usability in order to be able to evolve the platform based on the needs of our students and instructors.

### 1.4 QUANTITATIVE AND QUALITATIVE MEASURES

Evaluation of the project's effectiveness will be measured in several ways: (1) the total amount of money saved by students on an annual basis, (2) the number of students using the OER platform, (3) the number of courses using the OER platform, (4) student and instructor satisfaction with the OER platform, and (5) the total uptime of the OER platform, and (6) ensuring that the DFW rate for courses using the OER platform is not harmed. At launch, we expect this project to save 7,000 students $30 each by removing the cost of their physical education textbook. As other courses and faculty begin to use the platform, the amount saved by students will increase. For example, if a course that serves 100 students per year replaces a $100 textbook with OERs, the total savings to students will increase $10,000. As OER adoption is a

priority at UGA, we expect to see OER creation to be incentivized for high enrollment courses. This will drive both the use of the OER platform and the amount saved/number of students using the platform. We will conduct surveys of students and faculty who use the platform to monitor their satisfaction and look for ideas for improvement. These surveys will take place during the course authoring period (for instructors) and during course delivery (for students). Finally, we will monitor the uptime of the OER platform. A problem with the current usage of self-created OER at UGA is lack of reliable hosting. Our goal is to have no service disruptions during semesters when the course content is in use. This will be a great improvement over the current arrangement, where the content might be unavailable to students multiple times in a given week. By centralizing this resource for UGA courses and faculty, we will be able to offer reliable hosting on a platform that was designed to host Wordpress for high traffic and high demand sites. Finally, we want to ensure that the use of the OER platform does not contribute to an increase in the DFW rate of the physical education courses.

We will analyze each measure to monitor success. The total amount of money saved for students will be calculated by multiplying the number of students by the individual amount saved by not buying a textbook. That total amount saved will be balanced against the cost of maintaining the platform. At launch, we expect the cost of maintaining the platform to be around 6% of the total amount saved students. We will monitor this percentage as the platform adoption increases. To analyze the DFW rates, we will compare the DFW rate of the courses going forward with the DFW rates of past course offerings. DFW is a better indicator than overall course grades in this situation because the physical education courses are simply pass/fail (not graded on a traditional A-F scale). Finally, we will monitor general satisfaction with the platform

using Likert scale questions, and we will ask for qualitative suggestions to find trends for features that students and faculty would like to see added to the platform.

### 1.5 TIMELINE

| Activity | Begin Date | End Date | Responsibility |
|---|---|---|---|
| Design outlines for OER Platform | Feb. 2018 | Apr. 2018 | Office of Online Learning, *The Web Craftory* |
| Development of OER Platform | May 2018 | Jul. 2018 | *The Web Craftory* |
| Authoring of Physical Education Content | Aug. 2018 | Dec. 2018 | Ilse Mason, Graduate Student |
| Documentation & Tutorials | Jul. 2018 | Dec. 2018 | |
| Platform Launch | Jan. 2018 | | Office of Online Learning |
| Internal Marketing | Jan. 2019 | | Office of Online Learning |
| Spring 2019 Student Surveys | Apr. 2019 | May 2019 | Ilse Mason |
| Spring 2019 Faculty Surveys | Apr. 2019 | | Office of Online Learning |
| Platform & Curriculum Improvements based on feedback | May 2019 | July 2019 | Ilse Mason, Office of Online Learning |
| Fall 2019 Student Surveys | Nov. 2019 | Dec 2019 | Ilse Mason |
| Fall 2019 Faculty Surveys | Dec. 2019 | | Office of Online Learning |
| Data Analysis & Final Report Completion | Dec. 2019 | Jan. 2020 | Office of Online Learning, Ilse Mason |

## 1.6 BUDGET

| Line Item | Amount |
|---|---|
| Pressbooks Website Development | $12,750 (See attached proposal) |
| Overall Project Expenses and Travel | $800 |
| PrinceXML License | $1,900 |
| Graduate Student (Content Authoring) | $5,000 |
| Dr. Ilse Mason (Project Management) | $3,550 |
| Office of Online Learning (Instructional Design & Project Management) | $6,000 ($2,000 per team member) |
| **Total** | **$30,000** |

## 1.7 SUSTAINABILITY PLAN

Dr. Mason coordinates the instruction for all PEDB courses. She oversees the curriculum, and she will continue to direct all instructors to use the OER curriculum for all offerings of PEDB courses going forward.

In order to provide ongoing hosting and maintenance fees, we will seek yearly funding in the amount of $12,700 from the student technology fee budget. We believe this is a sound investment given the first year savings to students of $210,000, which will only increase as more faculty author material on the platform. The hosting for the site, which will be provided by pantheon.io, allows for unlimited traffic and authoring, meaning that the site will scale as usage of the platform increases. Finally, this project is meant to empower UGA faculty to create the content that will best allow them to teach their students. A significant barrier to the creation of OERs at UGA has been the lack of a provided tool to author and maintain the texts. By removing this barrier, we will enable the usage and adoption of open textbooks at UGA to grow across the university.

## 1.8 REFERENCES & ATTACHMENTS

Attachment: Web Development Proposal

References

College Textbook Affordability Act of 2015, Cal Assemb B. 798 (2015-2016), Chapter 663 (Cal. Stat. 2015)

Donaldson, R. L., Nelson, D. W., & Thomas, E. (2012). *2012 Florida student textbook survey*. Retrieved from: http://www.openaccesstextbooks.org/pdf/2012_Florida_Student_Textbook_Survey.pdf

Hilton III, J. L., Robinson, T. J., Wiley, D., & Ackerman, J. D. (2014). Cost-savings achieved in two semesters through the adoption of open educational resources. *International Review Of Research In Open & Distance Learning*, *15*(2), 67-84.

UGA Center for Teaching and Learning. (2017a). Open Educational Resources (OERs). Retrieved from: http://ctl.uga.edu/oer

UGA Center for Teaching and Learning. (2017b). OER Resources. Retrieved from: http://ctl.uga.edu/oer_resources

Watson, C.E., Domizi, D.P., & Clouser, S.A. (2017). Student and faculty perceptions of OpenStax in high enrollment courses. *The International Review of Research in Open and Distributed Learning 18*(5), doi:http://dx.doi.org/10.19173/irrodl.v18i5.2462

*A letter of support must be provided from the sponsoring area (unit, office, department, school, library, campus office of the Vice President for Academic Affairs, etc.) that will be responsible for receipt and distribution of funding. Letters must reference sustainability. In the case of multi-institutional affiliations, all participants' institutions/departments must provide a letter of support.*

# UGA Fitness Online Learning Site

Prepared for: James Castle

Prepared by: Stephanie Leary, The Web Craftory

October 24, 2017

# PROJECT SUMMARY

The University of Georgia's Office of Online Learning and the Department of Kinesiology need a web-based platform to deliver customized materials for Basic Physical Education courses. Similar to paper-based custom course packets, each course's collection will include a common core PEDB module in addition to the materials specific to that course.

The materials currently reside in separate WordPress installations for each course. While this allows instructors to edit the course materials in a relatively easy interface, it involves duplicating the core materials without ensuring consistency, and it requires staff to update and maintain the various WordPress sites individually.

We propose to bring all the PEDB materials together into a single WordPress multisite network and use the Pressbooks plugin to turn each site into an online textbook. We will be able to include the common PEDB materials in each course's book using the remix functionality from the Pressbooks Textbook plugin, either as-is or removed into a separate custom plugin for UGA. WordPress's multisite user management will allow instructors to continue editing their own materials, as they have been doing, while requiring staff to maintain only one WordPress installation.

While the current project scope is limited to PEDB courses, we will approach the proposed solutions with an eye toward creating a system that can be extended or replicated for other departments' online courses.

## WORK PLAN

For this project, we plan to begin by setting up a test installation of WordPress, Pressbooks, and the Pressbooks Textbook plugin. We will then import a copy of the existing course material sites' content and experiment with the Pressbooks Textbook functionality, which is the focus of most of the Discovery phase. Does Pressbooks work as expected? Can the Textbook plugin be used as-is, or do we need to extract and/or rewrite its remix logic to fulfill our requirements for core content inclusion? Does the Textbook plugin designate only one set of core content for the entire multisite network, or could a single network be used to host course content for multiple departments, each with its own designated core content?

Once these questions have been addressed and we are satisfied with the network's setup, we will work on customizing one or more Pressbooks themes to comply with UGA branding. The complete set of custom code (themes and plugins) will then be sent to a third party WordPress firm (most likely Valet.io) for a code review.

Prior to launch, we plan to delete the working copy of the course content and perform a fresh import from the live PEDB sites, in order to capture any edits instructors have made during the project.

## BUDGET AND TIMELINE

| Task Description | Hours | Rate | Cost |
|---|---|---|---|
| Discovery | 10 | $150 | $ 1,500 |
| WordPress and Pressbooks installation and setup | 12 | $150 | $ 1,800 |
| Core content plugin setup or rewrite | 8 | $150 | $ 1,200 |
| Content import | 4 | $150 | $ 600 |
| Pressbooks theme design with UGA branding | 16 | $150 | $ 2,400 |
| QA and accessibility testing | 10 | $150 | $ 1,500 |
| Documentation and training | 14 | $150 | $ 2,100 |
| Overhead | 6 | $150 | $ 900 |
| External code review | | | $ 750 |
| **Total** | **80** | | **$ 12,750** |
| **Annual Maintenance** | **18** | **$ 150** | **$ 2,700** |

# ABOUT OUR WORK

### Themes vs. Plugins

We recommend that some features (particularly a content model) be implemented as custom plugins rather than theme functions. This best practice allows you to change designs in the future without losing access to the functionality. The custom plugin(s) will be provided to the client alongside the theme, with documentation for maintenance, and will not be considered an increase in the scope of the project.

### Industry Best Practices and Accessibility Compliance

Themes will be based on the principles of responsive web design, allowing the same site content to be optimized for a variety of devices and display sizes. The Web Craftory generally employs a mobile-first design strategy, ensuring that the site functions well on small screens and older devices but offers enhancements on larger screens.

Markup will validate to HTML5 and CSS3 standards, and sites built with the distribution will comply with WCAG 2.0 A requirements as well as most federal (Section 508) accessibility guidelines. The theme will display and perform properly in current versions of major desktop web browsers (Chrome, Firefox, Safari, Internet Explorer) and current default web browsers for iOS and Android mobile devices at the time of launch. Support for older browsers should be specified before development begins and may increase the budget and QA timeline.

All of our themes and plugins are coded according to WordPress best practices, PHP coding standards, data validation and security guidelines, the theme review checklist, and WP Engine's performance and cache compatibility recommendations. The theme and plugins will be internationalized and ready to translate, should the client wish. Custom code is thoroughly documented for ease of maintenance and uses WordPress core hooks and functions whenever possible.

# COMPARABLE PROJECTS

## BERKELEY COLLEGE OF ENGINEERING THEME & CONTENT MODEL, 2016

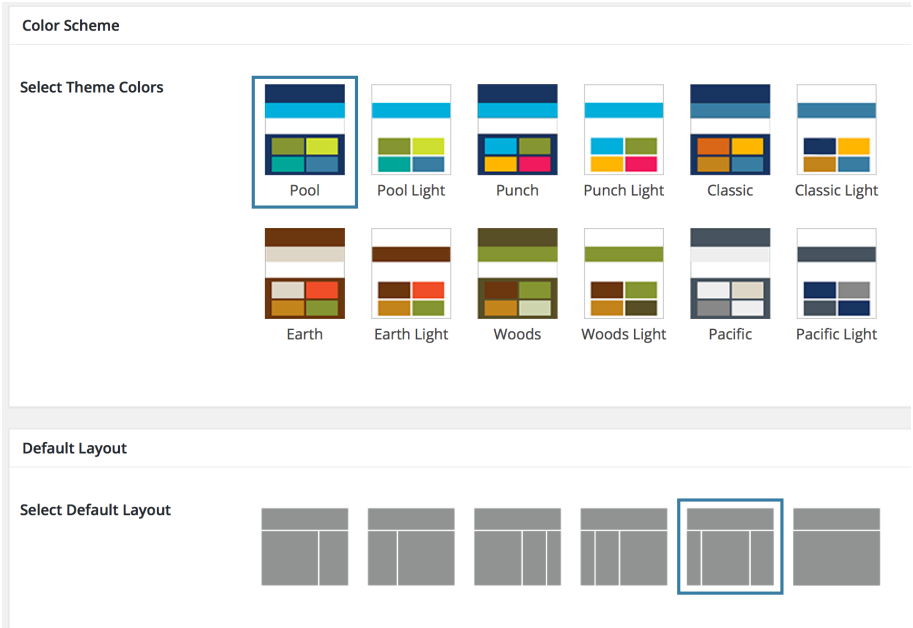
The University of California at Berkeley's College of Engineering had a huge demand for WordPress sites and not enough staff to handle each request individually. Their marketing team asked us to build a theme framework that would offer a few color scheme options in compliance with the university's brand guidelines and WCAG 2.0 AA standards. The project would also include five custom post types that the marketing team had determined were common to most of their departments and research teams. Each post type had a list of options, custom fields, and display guidelines.

The resulting theme and plugin suite is the most flexible site framework we've ever built. The theme and custom plugins follow WordPress best practices, PHP coding standards, data validation and security guidelines, and the theme review checklist. The theme and plugins are internationalized and ready to translate, should the university wish.

A template site has been set up with all the necessary plugin settings and some preset content. The marketing team plans to use WP Engine's cloning tools to quickly deploy new sites. Because the theme is based on the highly respected Genesis framework, sites that do not require university branding can use commercially available Genesis plugins and still work seamlessly with the rest of the custom features.

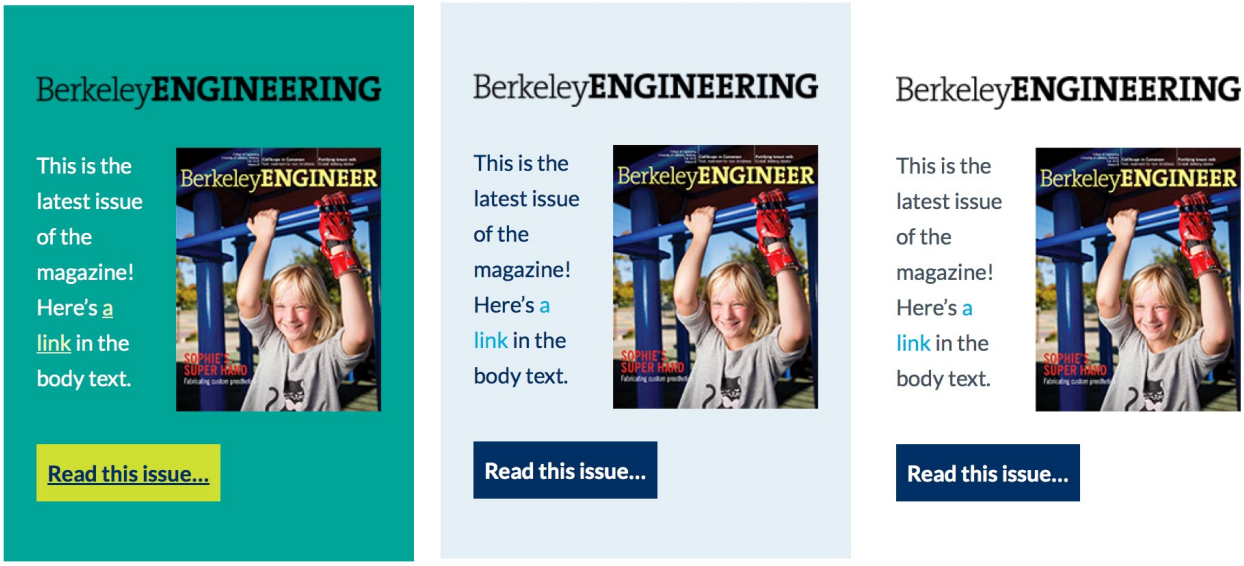
### Color Schemes and Layout Options

The theme includes six color schemes, each with a light and dark variant, for a total of twelve options. There are six layouts available as a site-wide setting that may be overridden on a per-page basis. Since most Genesis-based themes' color schemes include only a single accent color, the standard interface is a simple text dropdown.



Each of the Berkeley schemes involve six or seven prominent colors, so we created a custom visual selector that mirrors Genesis's built-in layout options.

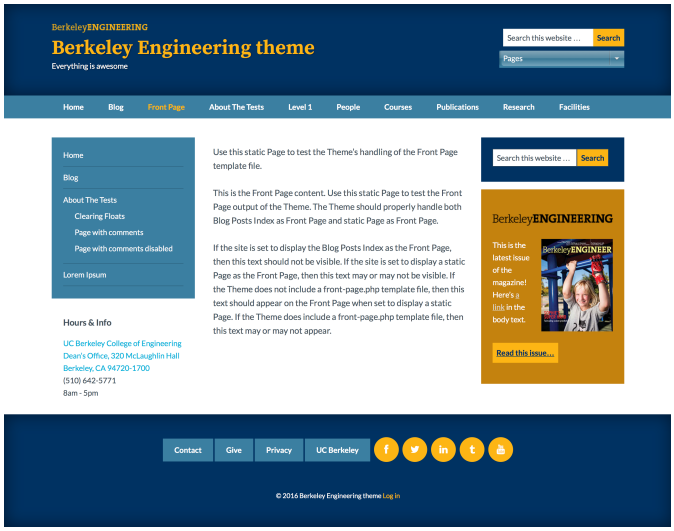
The College requested a special feature: a color selector to be added to the WP Editor Widget plugin, which would allow site owners to add flexible featured content to their sidebars in color-coordinated boxes. Each color scheme has bold, subtle, and transparent variations. The color selector option could be applied to any standard WordPress widget; the College decided to limit it to a single one for the time being.



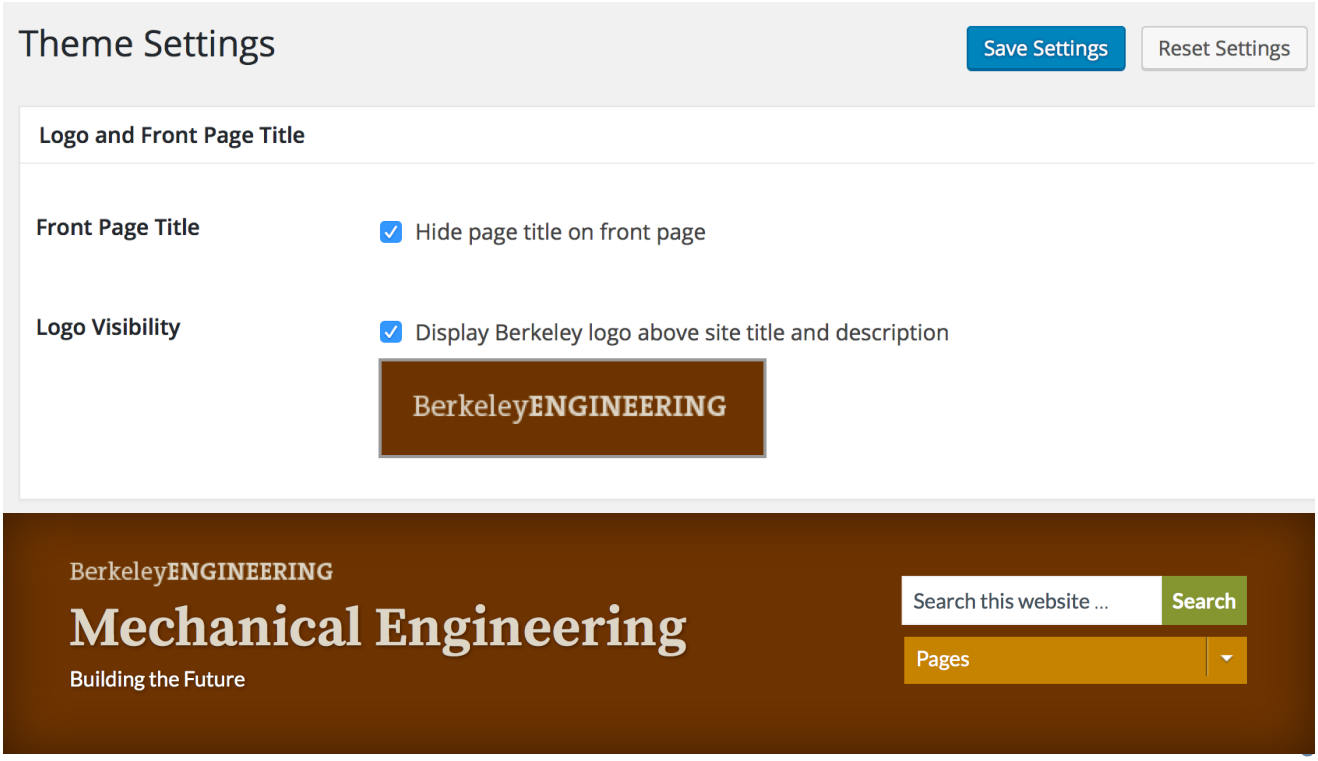

*Featured content bold, subtle, and transparent variations in the Pool and Pool Light color schemes*


*Featured content bold, subtle, and transparent variations in the Earth and Earth Light color schemes*

Forms and navigation menus appearing in the sidebars have their own color presets. When combined with the featured content widget, they give the sites cheerful pops of color in keeping with the College's existing site and the University's brand guidelines. Site owners could use the transparent color settings for a more somber tone.

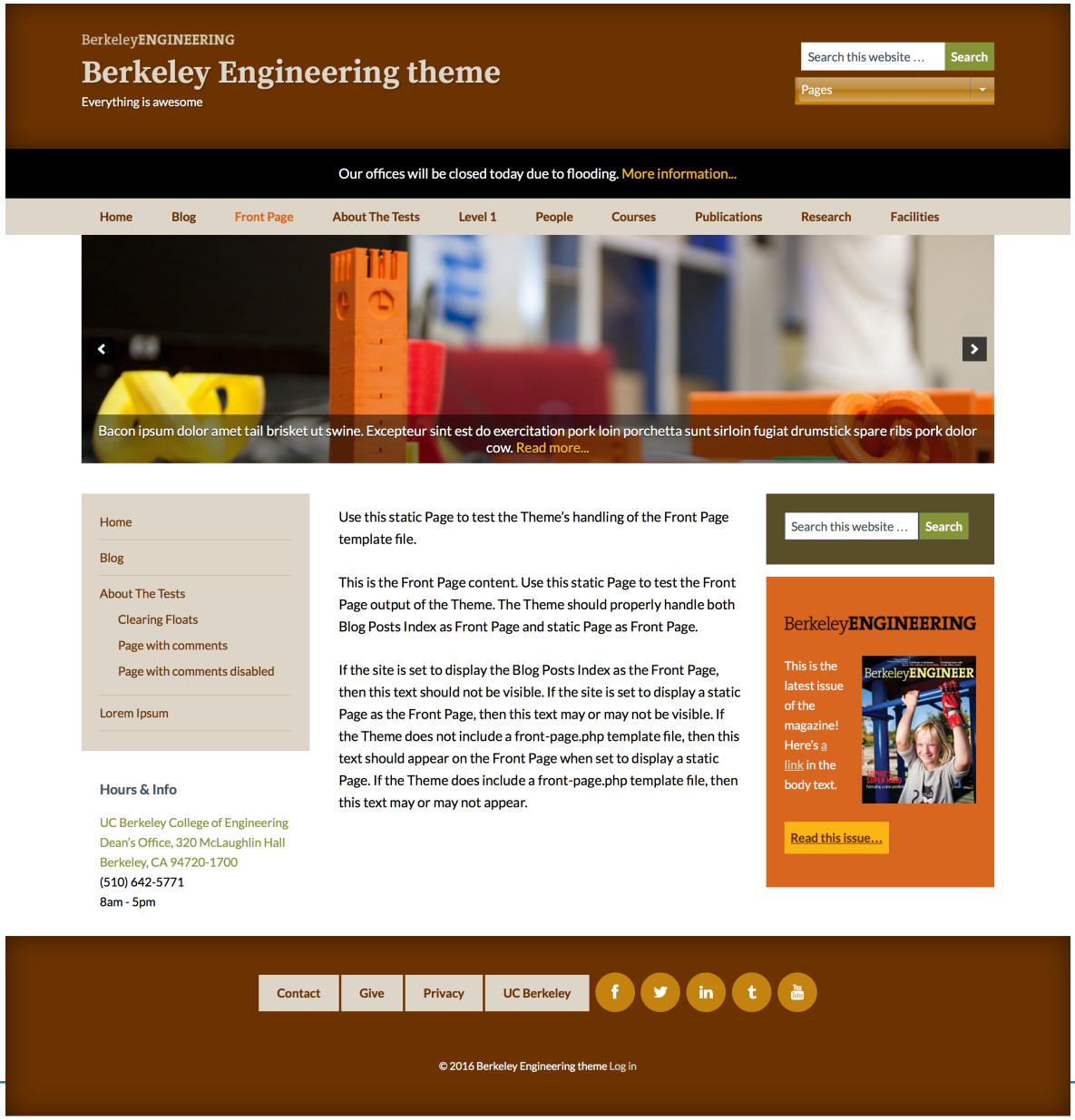

The College requested a branding option that would appear above the title in the site header. Rather than allow site owners to upload arbitrary image files, they requested color-coordinated logos that would be turned on or off with a simple toggle.

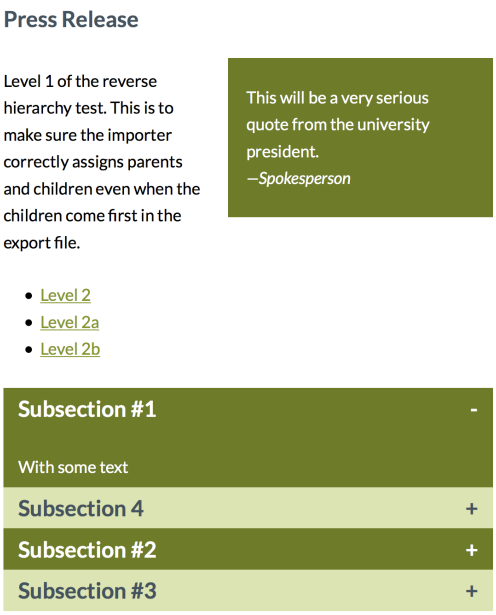


## Slideshows, Banners, and Emergency Announcements

The theme includes widget areas above and below the main navigation. The area above the navigation is intended for emergency announcements. Any widget could be placed here, but a simple text widget will appear as a black bar.

The area below the navigation is intended for banner images and slideshows. While the College does not want to encourage its constituents to rely on slideshows, they have included the Soliloquy plugin for those who can't live without one. Slideshows can be placed in the banner area, in a sidebar, or in any single post or page.







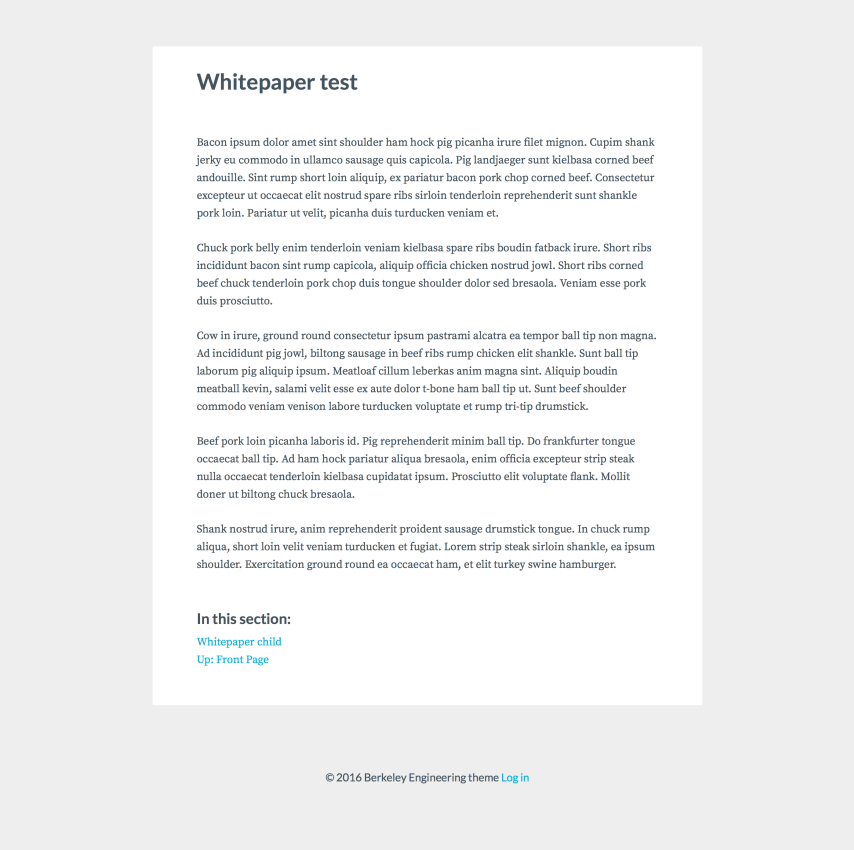
## Pull Quotes

The College wanted to be able to add pull quotes to their text, and they disliked the plain text block quotes offered by the WordPress rich text editor. We created a custom toolbar button that provides a more flexible input, an optional linked citation, and three alignment settings (left, right, center).

The College also asked for collapsible sections for additional content. Like the pull quotes and sidebar widgets, these have presets for each color scheme.

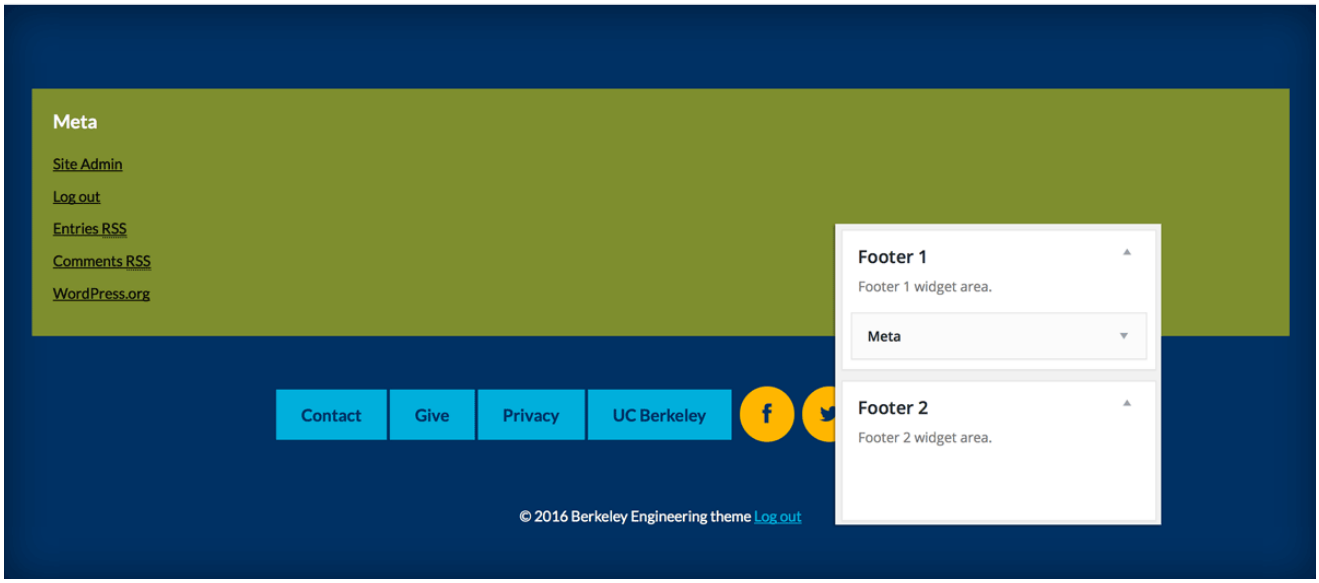
## Whitepaper Template

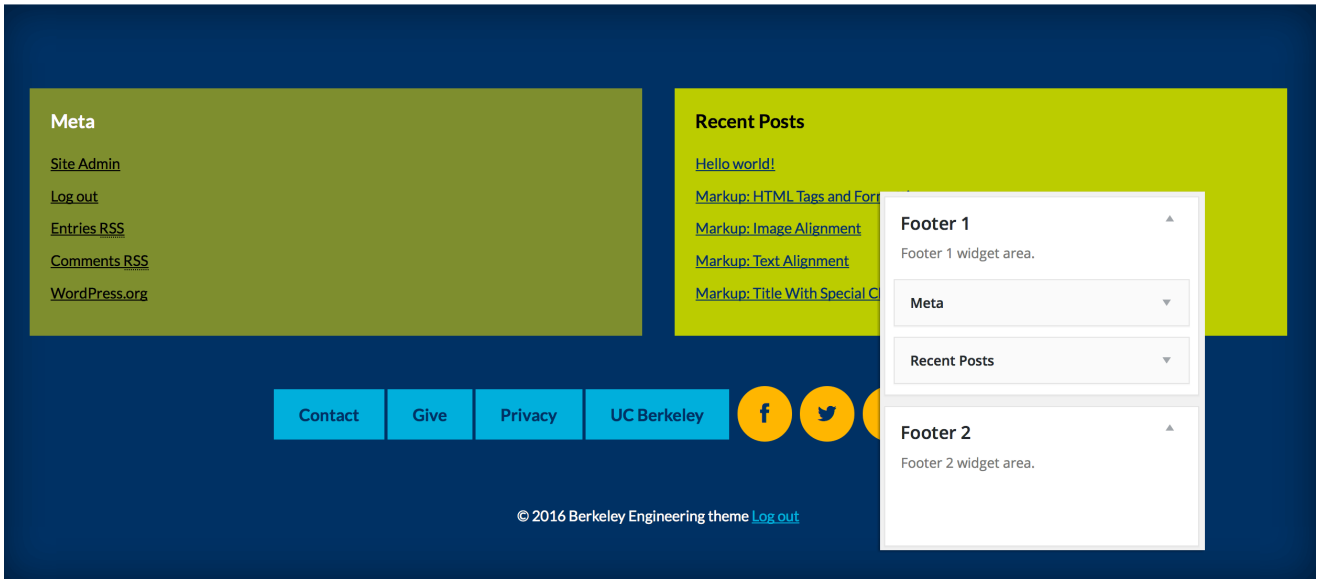
To help the College move away from PDF documents, we included a Whitepaper page template in the theme. This stripped-down look is applied to individual pages. It removes the site title, navigation, sidebars, and most of the footer. Instead, it displays the page title and contents in a monochrome format with fonts and line length optimized for easy reading, and includes navigation only to other Whitepaper documents. Using this template on multiple pages, it's possible to present anything from a research abstract to a book in an accessible, mobile-friendly web-based format.

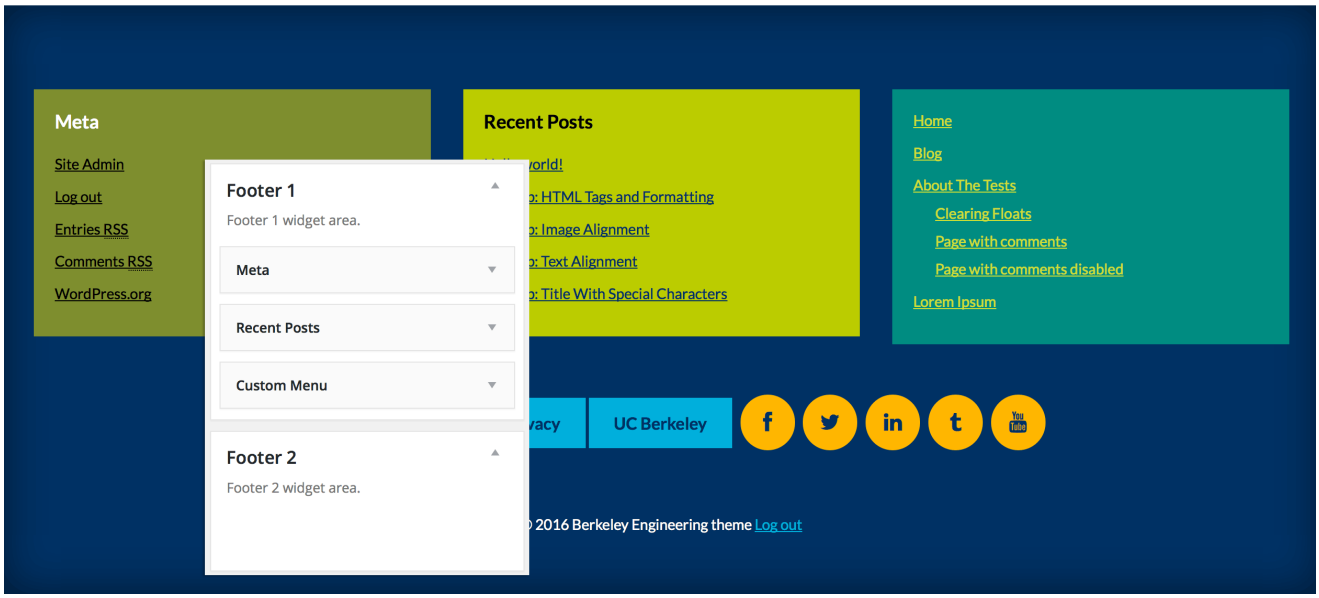


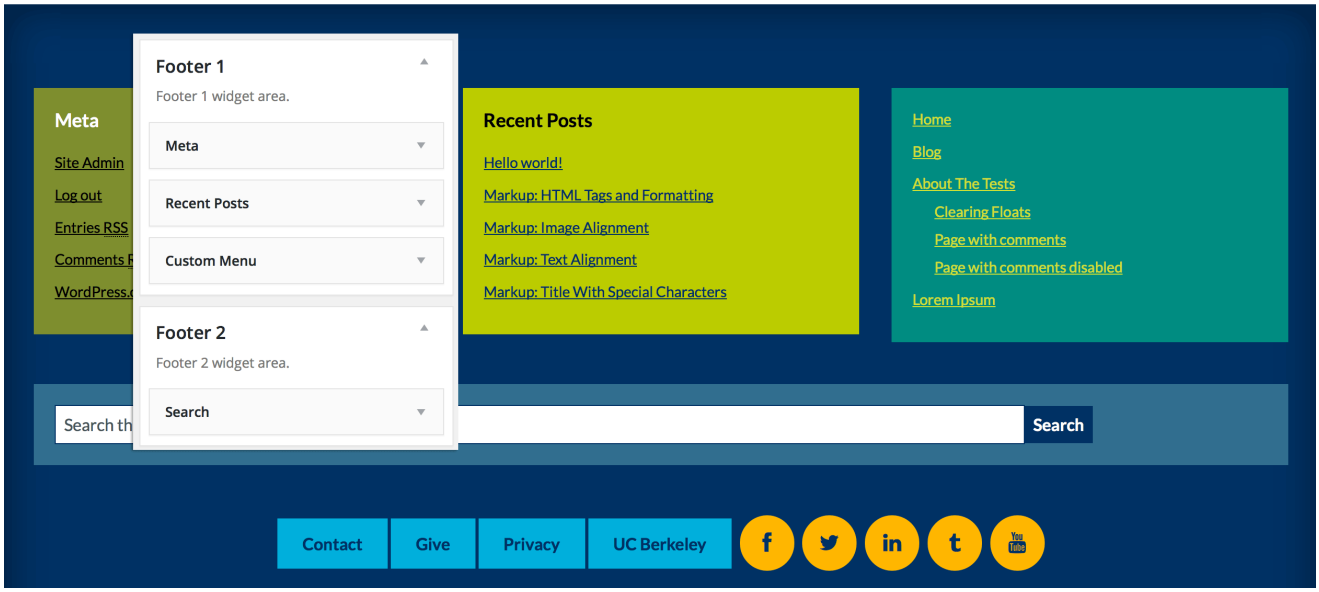
## Footer Magic

The theme supports up to three rows of widgets in the footer area. Each row may contain up to three widgets. The footer widgets use four preset colors (varying by color scheme) and expand to fill their rows. A single widget in a row will fill the entire page width; a row of three widgets will be divided into thirds. On mobile, the widgets become full-width stacked boxes. The color and width assignments are automatic; there are no user settings for widget color or width in the footer.






The footer menu is similarly automatic. Any links to known social media sites will be transformed into icon buttons. Users may also assign social media icons to unrecognized URLs—ideal for URL shorteners or campaign trackers. Again, the colors are preset according to the site's color scheme. On mobile screens, the menu will split into two rows at the division between normal links and social media icons.

## Content Model

At the top of the College's list of requirements was support for a content model that would suit most of their constituents. Because the model they had devised closely matched that of several previous projects of our, we were able to offer a few suggestions and build the model at the outset of the project, long before the design was finalized. The Marketing team had plenty of time to enter content, experiment in the administrative interface, and request changes to the final layout.

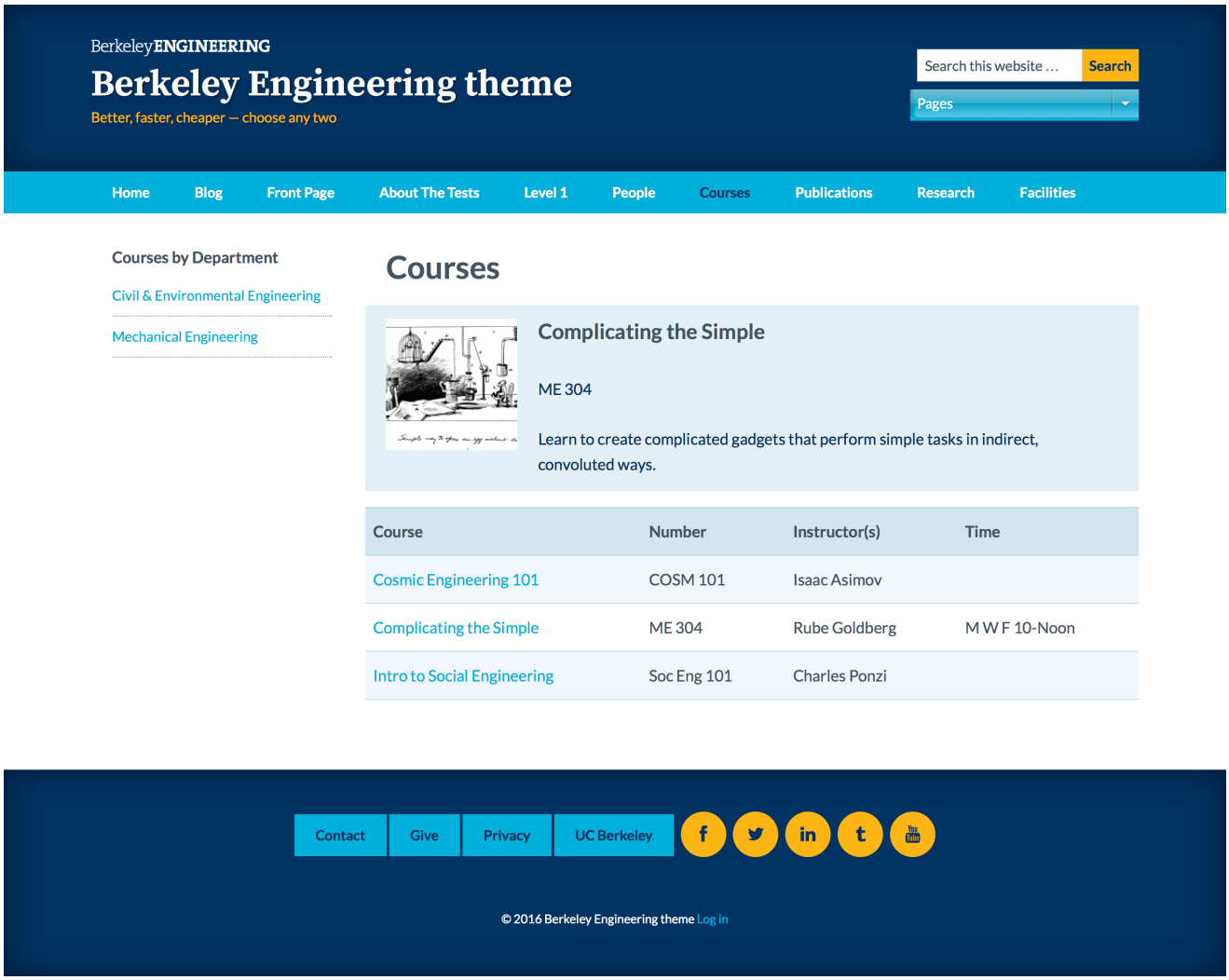
The final model consists of five custom post types, five always-on taxonomies (some shared across post types), and three optional taxonomies for People.

| **People** | **Courses** | **Publications** | **Research** | **Facilities** |
|---|---|---|---|---|
| Subject Areas | Subject Areas | Subject Areas | Subject Areas | Subject Areas |
| Organizations | Organizations | | | Facility Type |
| People Type | | | | |
| Student Type | | | | |
| (Committees) | | | | |
| (Groups) | | | | |
| (Research Areas) | | | | |

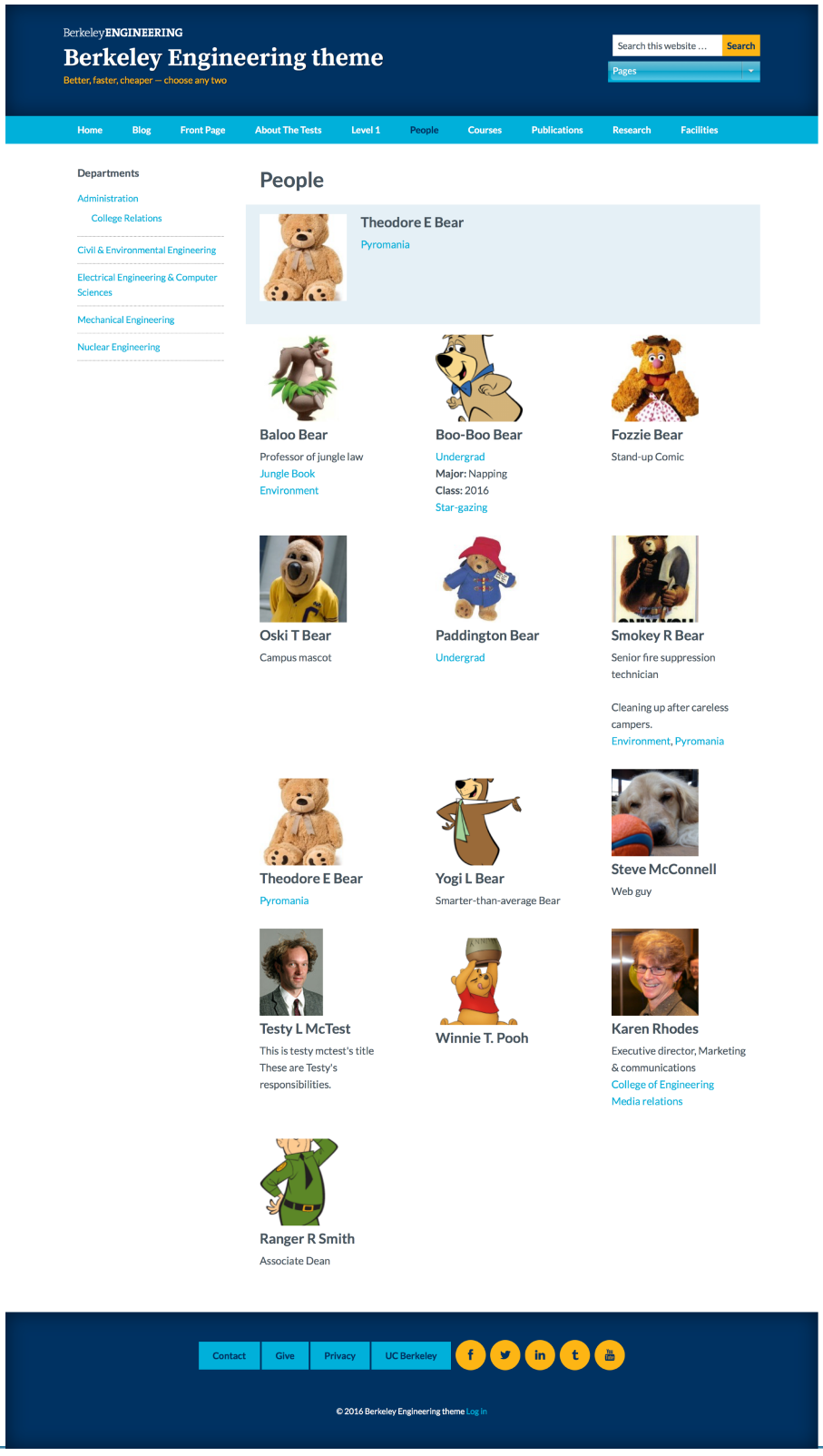
Post types can be turned off in the site's General Settings, if the full range of options is not needed. This keeps the administrative interface as uncluttered as possible.

Each post type has a dedicated editing interface with custom field inputs. For People and Facilities, different sets of inputs are shown depending on the selected People type (faculty, staff, student) or Facility type (building, lab, room, equipment). For example, faculty are invited to list their education, publications, and research interests; whereas students are instead asked to enter their major and class year.

The editing screens include specialized hints and reminders for editors. We have agreed on custom screen option defaults that hide seldom-used options, streamlining the editing interface as much as possible for new users while allowing experienced editors to toggle the inputs they need.




The Courses listing is set to display as a table, sorted by course number. All other post types use archive setting options to determine whether they should be displayed as a list, with or without thumbnail images, or as a grid. In all cases, a single featured item may be displayed above the full listing.


BerkeleyENGINEERING
Berkeley Engineering theme
Better, faster, cheaper — choose any two
Search this website …
Search
Pages
Home
Blog
Front Page
About The Tests
Level 1
People
Courses
Publications
Research
Facilities
Departments
Administration
College Relations
Civil & Environmental Engineering
Electrical Engineering & Computer Sciences
Mechanical Engineering
Nuclear Engineering
People
Theodore E Bear
Pyromania
Baloo Bear
Professor of jungle law
Jungle Book
Environment
Boo-Boo Bear
Undergrad
Major: Napping
Class: 2016
Star-gazing
Fozzie Bear
Stand-up Comic
Oski T Bear
Campus mascot
Paddington Bear
Undergrad
Smokey R Bear
Senior fire suppression technician
Cleaning up after careless campers.
Environment, Pyromania
Theodore E Bear
Pyromania
Yogi L Bear
Smarter-than-average Bear
Steve McConnell
Web guy
Testy L McTest
This is testy mctest's title
These are Testy's responsibilities.
Winnie T. Pooh
Karen Rhodes
Executive director, Marketing & communications
College of Engineering
Media relations
Ranger R Smith
Associate Dean
Contact
Give
Privacy
UC Berkeley
© 2016 Berkeley Engineering theme Log in

Departments

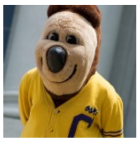
- Administration
  - College Relations
- Civil & Environmental Engineering
- Electrical Engineering & Computer Sciences
- Mechanical Engineering
- Nuclear Engineering

# Faculty

This is a list of our amazing faculty! (To change this intro, go to People → People Types → Faculty and edit the Archive Intro Text field.)

## Baloo Bear

Professor of jungle law
Jungle Book
Environment



## Oski T Bear

Campus mascot

## Karen Rhodes

Executive director, Marketing & communications
College of Engineering
Media relations

There is an optional people directory that can be inserted into any page using a shortcode. It can be filtered by people type—for example, the site owner could create a directory table containing only faculty and staff. This directory is always sorted by last name and does not support featured items or images.

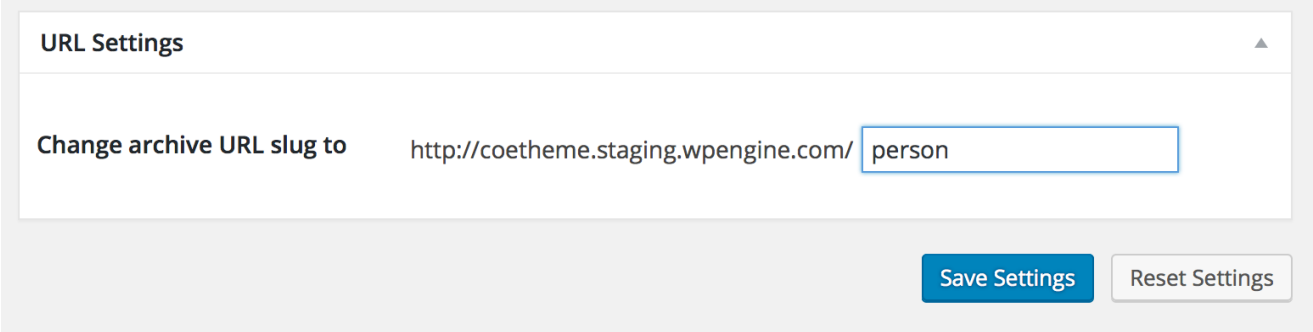
On mobile devices, the phone numbers become links, which you can tap to call. The directory uses microformat markup that allows individuals' contact information to be transformed into downloadable vCards.

## Staff Directory

| Name | Title | Phone | Email |
|---|---|---|---|
| Baloo Bear | Professor of jungle law | 555-3333 | bare@necessiti.es |
| Oski T Bear | Campus mascot | | oski@berkeley.edu |
| Karen Rhodes | Executive director, Marketing & communications | 555-1234 | klrhodes@berkeley.edu |

All Genesis-based themes include archive settings for each post type. This page allows site owners to customize titles and descriptions for the listing pages—for example, one could change the Research heading to Projects.

The College requested a custom option to allow site owners to change the portion of the URLs specific to the custom post types (the slug). For example, WordPress would normally use example.com/people for the complete listing of the people post type. This was a highly unusual request, but was surprisingly easy to implement.

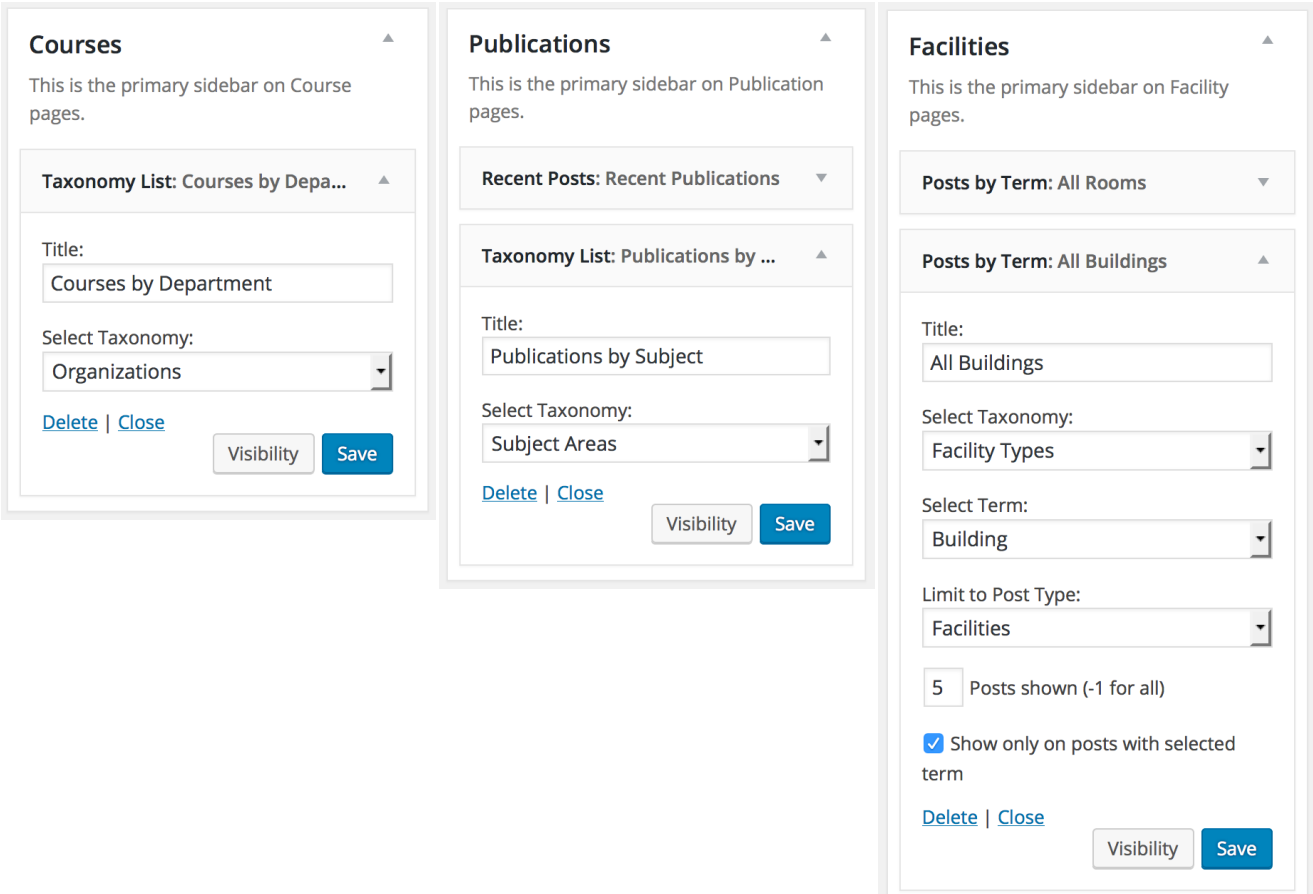


## Widget Magic

Each post type has its own customized primary sidebar. To facilitate navigation within the post type sections, we created two custom widgets that take advantage of the site's numerous taxonomies: Taxonomy List and Posts by Term. Both use smart post type detection for taxonomies shared across multiple post types, like Organizations and Subject Areas. When used in a post type's sidebar, they list only information relevant to that post type (e.g. administrative departments used only for People do not appear in Course listings), and they link to information filtered to the currently-viewed post type. When choosing a department from a Course listing, you'll see only Courses, not a mix of Courses and People.

We've also filtered the built-in WordPress Recent Posts widget to respect the post type of the page on which it appears. When used in the Publications sidebar, it lists recent publications instead of blog posts.

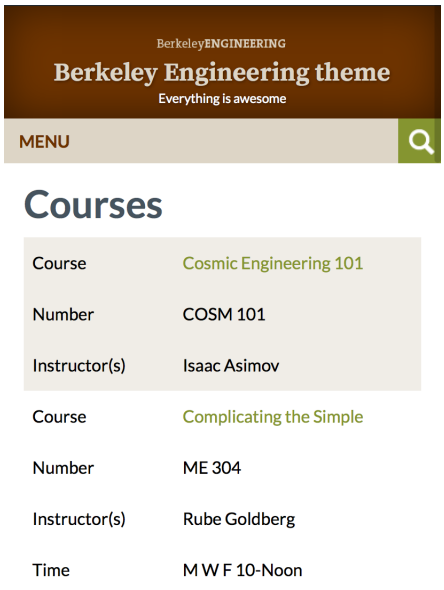
Site owners can replace widgets on a per-page basis in both the sidebars and the footer. However, the widgets we have set up in the template site, which will be the basis for all new sites, should serve for most constituents.

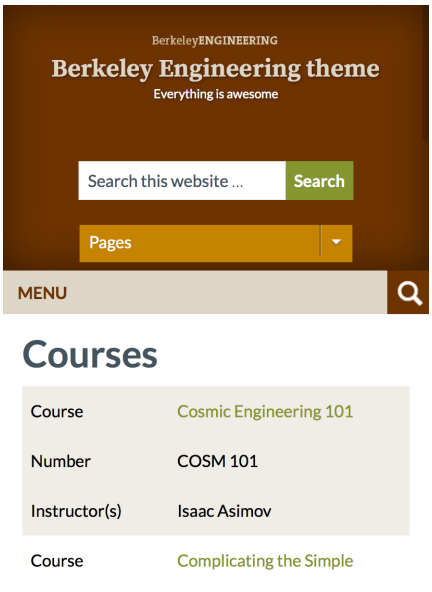


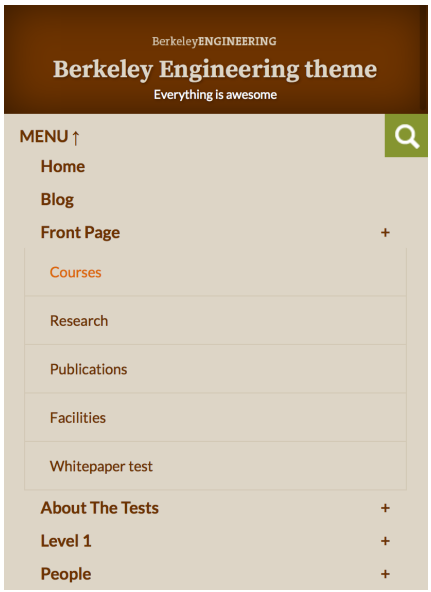
## Mobile Menus, Columns, and Tables

On phone-sized screens, tables rearrange themselves into stacked rows of data, with column headings shifted to the left and repeated for each record. Empty columns are omitted entirely.

The mobile version of the menu accommodates multi-level hierarchies. Both the menu and the header widget area are hidden behind toggles on mobile screens.



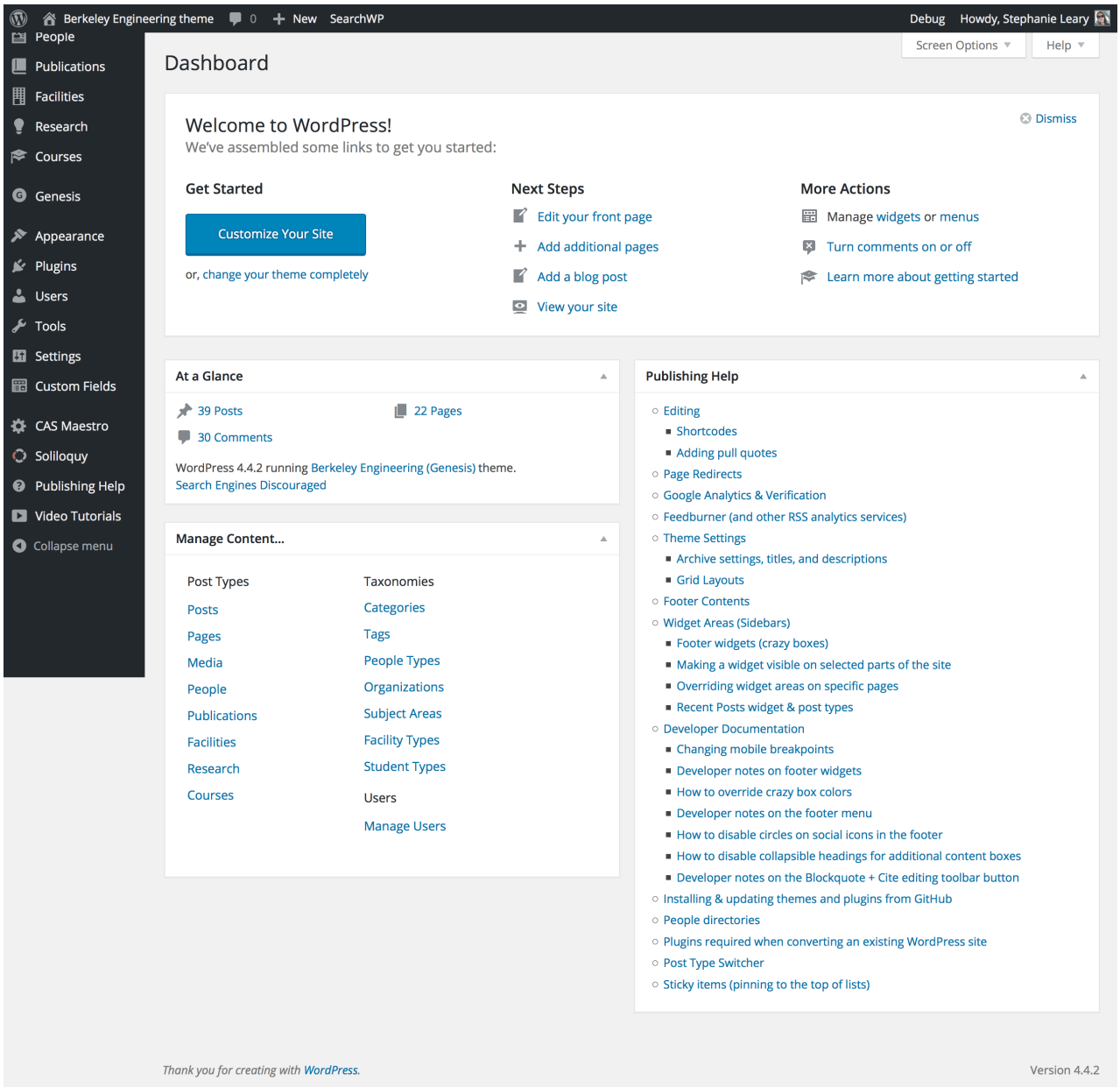




Multi-column and grid layouts are visible on tablet and desktop sizes, but turn into single-column lists on phone-sized screens.

## Documentation

As with almost all of our projects, the Engineering theme and plugin suite includes a custom Dashboard wayfinding widget and extensive in-dashboard documentation.



### Task & Time Breakdown: Berkeley Engineering

| Description | Hours |
|---|---|
| Discovery | 6 |
| Design | 40 |
| Theme development | 50 |
| Plugin development | 40 |
| Setup and configuration | 8 |
| Documentation and training | 20 |
| Overhead: meetings and project management | 8 |
| **TOTAL** | **172** |

## NATIONAL WORK ZONE SAFETY INFORMATION CLEARINGHOUSE CONTENT MODEL AND DATA MIGRATION, 2016

The Texas A&M Transportation Institute's web team offers its services for hire among other state and federal agencies. Among their long-term federal contracts was a library of information related to road construction work zones. The site was approximately ten years old and was running in an outdated and insecure version of Drupal. TTI's web team had long since moved from Drupal to WordPress as their CMS of choice, and finally received funding from the federal sponsor to migrate this site. The project included a new theme and a migration from TTI's in-house web servers to WP Engine.

The migration offered the data librarian an opportunity to make some long-overdue changes to the data model. The project therefore involved several phases:

1. Identify data that did not need to be migrated (including some 10,000 spam user accounts)
2. Create content model in WordPress and set up custom fields corresponding to Drupal fields
3. Configure Drupal exports for approximately 8,000 records
4. Import users and content to WordPress, one post type at a time
5. Verify imported data
6. Update the content model and migrate data within WordPress (moving custom fields to taxonomies, etc.)
7. Re-verify migrated data
8. Match 404 requests to stored Drupal paths and redirect to new URLs
9. Configure theme templates and search result views to match (or exceed) the old Drupal site

While the migration process itself was highly idiosyncratic due to the proliferation of user-submitted content and the changes between the Drupal data model and the new WordPress site, the content modeling process was nearly identical to other past projects: IIAD, TVMDL, and Berkeley (which was in development concurrently with this project).

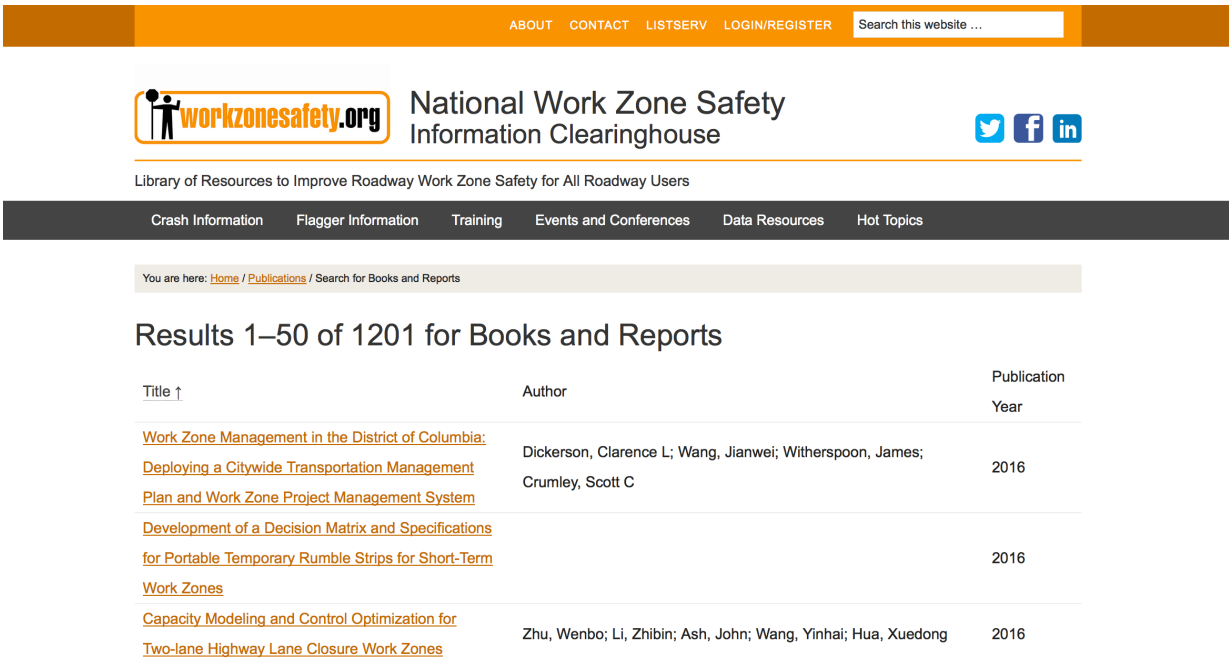
Aside from the data migration, the most challenging part of this project was tweaking the Relevanssi Premium search plugin to gracefully handle the taxonomy-based search filters with shared taxonomies. The search forms look simple, but behind the scenes there are lots of checks ensuring that the filter dropdowns contain only the terms relevant to the post type(s) being searched.

## Content Model

The Work Zone content model consists of six custom post types, with several taxonomies shared across post types. The names of organizations, states, agencies, providers, and manufacturers had all been stored as text fields in Drupal, with the typical array of data entry errors as a result. After the data was imported into WordPress custom fields, we wrote a migration plugin to move these fields into taxonomies. This allowed us to merge the duplicates and establish a consistent naming structure that will be assigned to new database entries. This move also let us tap into WordPress's built-in archive views for taxonomies, making it easy to list, for example, all outreach programs available in a state.

| People | Training Courses | Publications | Outreach Programs | Best Practices | Equipment |
|---|---|---|---|---|---|
| Organization | Organization | Topics | Topics | Organization | Topics |
| Topics | Topics | Provider | Provider | Topics | Manufacturer |
| State/Agency | Format | | State/Agency | Provider | |
| | Provider | | | State/Agency | |
| | State/Agency | | | | |

Each post type has its own sorting mechanism, search form, and search result table columns.



### Task & Time Breakdown: Work Zone Safety

| Description | Hours |
|---|---|
| Discovery | 12 |
| Theme development | 34 |
| Plugin development | 120 |
| Setup and configuration | 27 |
| Data migration | 72 |
| Content editing | 31 |
| Overhead: meetings and project management | 20 |
| **TOTAL** | **316** |

## TEXAS A&M VETERINARY MEDICAL DIAGNOSTIC LABORATORY
## THEME DESIGN AND TEST SEARCH, 2015

The Texas A&M Veterinary Medical Diagnostic Laboratory is a small state agency that provides diagnostic testing services to veterinarians. The website includes a database of available tests, shipping instructions for biological samples, a reference library, an archive of news related to infectious animal diseases, and a podcast.

TVMDL had an old custom database for its diagnostic tests. The database did not support aliases, fuzzy matching, or relevance-based results, and veterinarians found it frustrating to use. Most of the TVMDL staff didn't have permission to correct errors, and the interface could not be updated to match the current website design.

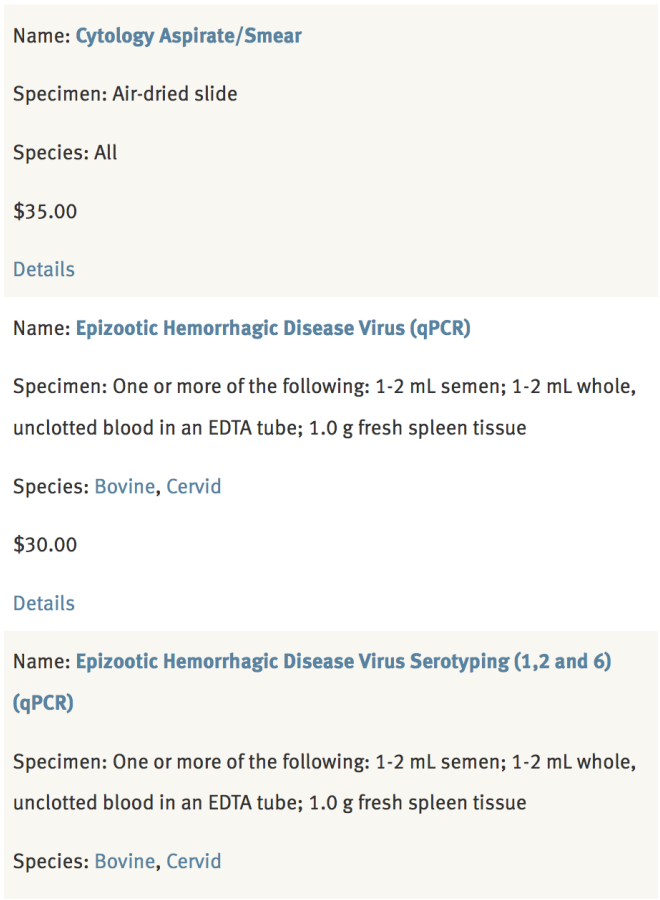
As part of the overall site redesign in 2015, we imported the test data from a CSV file into WordPress custom post types and fields. TVMDL staff initially intended to maintain their existing database and re-import data into WordPress on a nightly schedule, but found the web editing interface so easy to use that they abandoned the old database and began updating the data exclusively in WordPress.

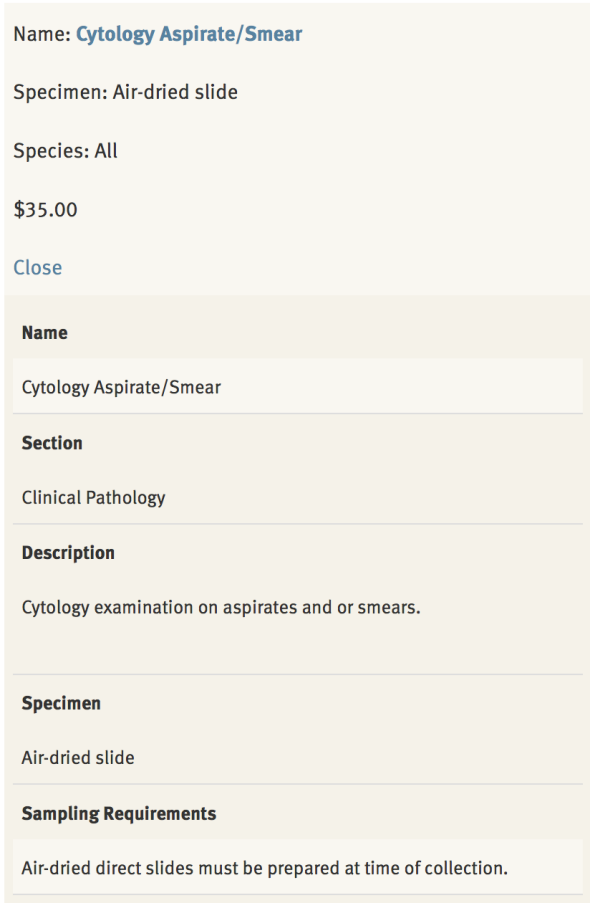
The new test search feature uses the Relevanssi Premium plugin to index the custom field data and provide relevance-based results with fuzzy matching and basic English stemming. Additional custom code allows users to leave the search field blank and submit the form using only the species selections. Empty searches with no species selections redirect to the master list of all tests. Relevanssi allows us to specify synonyms, ensuring that veterinarians can find the relevant tests whether they enter "canine" or "dog."

Each search result row includes a detail view. This data is not retrieved until the user requests it, which keeps the main search result list fast and efficient. On mobile screens, the detail view changes from a side-by-side table layout to a vertical list.

| | | | | |
|---|---|---|---|---|
| Bluetongue Virus (qPCR) | One or more of the following: 1-2 mL semen; 1-2 mL whole, unclotted blood in an EDTA tube; 1.0 g fresh spleen tissue | Bovine, Caprine, Cervid, Ovine | $30.00 | Details |
| Bluetongue-Epizootic Hemorrhagic Disease Panel qPCR | One or more of the following: 1-2 mL semen; 1-2 mL whole, unclotted blood in an EDTA tube; 1.0 g spleen tissue | Bovine, Cervid | $45.00 | Details |
| Brucella Abortus Card Test | 1.0 mL serum or plasma | Bovine, Caprine, Cervid, Equine, Ovine, Porcine | $3.50 | Details |
| Cytology Aspirate/Smear | Air-dried slide | All | $35.00 | Close |

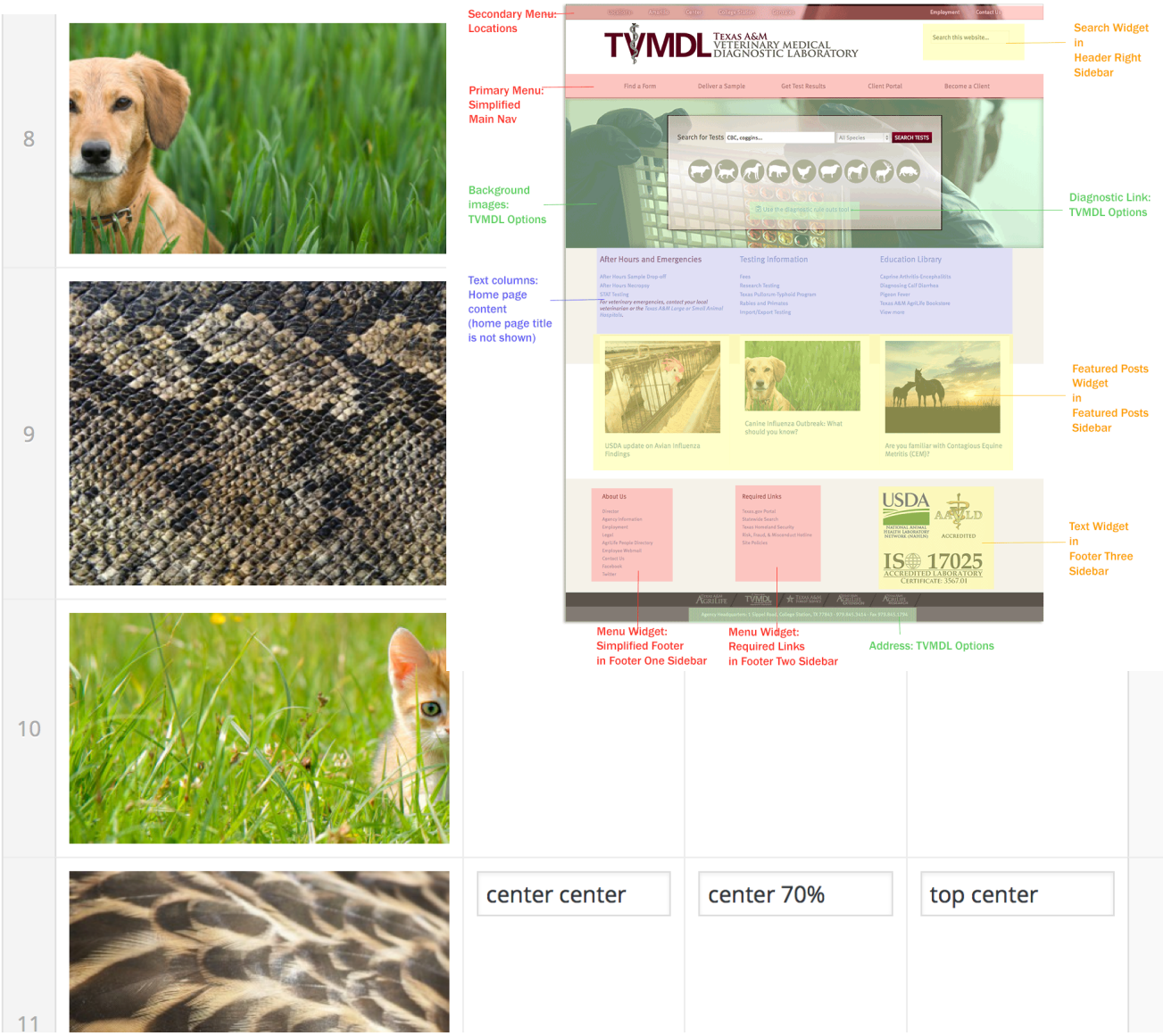
| | |
|---|---|
| **Name** | Cytology Aspirate/Smear |
| **Section** | Clinical Pathology |
| **Description** | Cytology examination on aspirates and or smears. |
| **Specimen** | Air-dried slide |
| **Sampling Requirements** | Air-dried direct slides must be prepared at time of collection. |
| **Collection Container** | Slide container |




TVMDL requested a "View All" button that would override WordPress's built-in posts-per-page limit for search results. This was surprisingly tricky to implement; WordPress has failsafes to prevent people from requesting unlimited posts, which would tax the database server on large sites. In this case, the data set is small enough that the occasional use of "View All" does not pose a problem, and of course the pages are cached until the data set changes.

In addition to the many custom fields used in the test database, the Advanced Custom Fields Pro plugin offers an easy site-wide options screen where administrators can manage the footer contact information, emergency announcement banners, and the gorgeously detailed photos used as the backdrop for the search feature. Each photo has its own CSS alignment settings for widescreen, tablet/small desktop, and mobile layouts.




The responsive design called for two navigation menus, one for the labs' locations and one for the main site navigation. On small screens, the location menu is automatically appended to the main menu to save space and avoid confusing visitors.

Other than the site logos and the test search form (including the species icons), the entire home page is built from widgets, menus, options, and editable content areas. The internal site documentation, stored in the

Dashboard using the WP Help plugin, includes a diagram to remind site editors where to locate each home page item for editing.

### Task & Time Breakdown: TVMDL

| Description | Hours |
|---|---|
| Design | 40 |
| Theme development | 40 |
| Plugin development | 40 |
| Setup and configuration | 32 |
| Data migration | 34 |
| Content editing | 31 |
| Documentation and training | 8 |
| Overhead: meetings and project management | 8 |
| **TOTAL** | **233** |

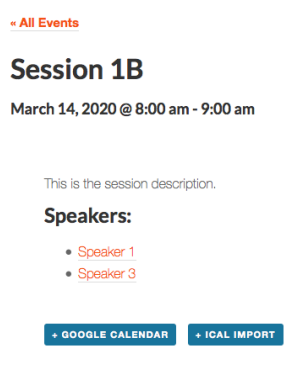
## TEXAS A&M UNIVERSITY AT QATAR CONFERENCE NETWORK, 2014

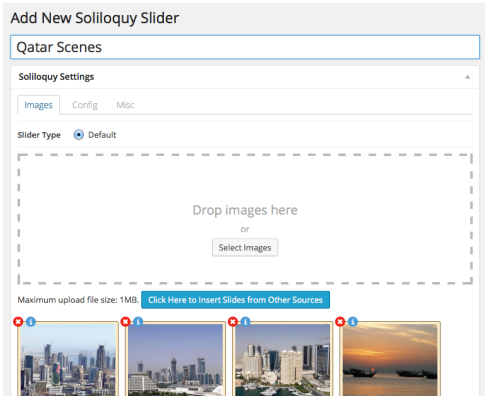
Texas A&M University at Qatar's communications team had worked with us before to set up sites for events—usually at the last minute, due to poor planning from the event organizers. (Friday afternoon: "My symposium opens for registration Monday morning! I've created a Word form to collect credit card numbers and I have all the speaker bios in a PowerPoint file. Can you build me a site?") We were all frustrated by this process, and the team set aside some time for us to create a holistic solution: a network of event sites based on a single template.

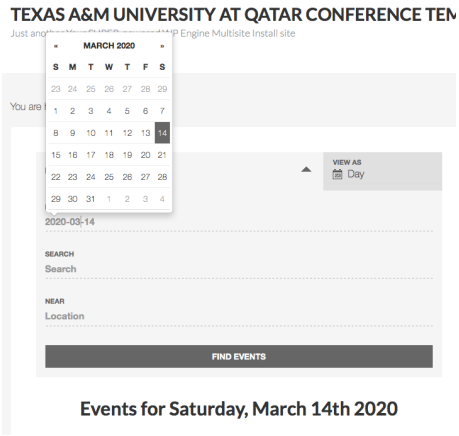
We set up a new multisite instance and created a template site with the basic content outline every event would need: a schedule, travel and lodging information, a sponsors page, and information on how to register for the event. All of these pages were left blank, but were added to the site's menu. Then we set up a site copier plugin so that new sites could be deployed from the template with a couple of clicks.

There was no custom design for this project, since the events were usually externally sponsored and seldom needed to reflect the university's brand. The network has all the commercial Genesis themes available, each with several color schemes, plus the Design Palette Pro and Web Fonts plugins to let the conference organizers customize their designs. The network also includes the Genesis Extender plugin to allow the network administrators to add per-site customizations using Genesis's hooks, if they have small code snippets to accomplish their changes. The site uses the Soliloquy plugin for gorgeous, responsive photo slideshows that can be placed anywhere on the site.

The conference organizers have the choice of using Events Calendar Pro, which is fantastic for big multi-day conferences, or simply entering a single day's schedule in TablePress. Gravity Forms lets them add contact forms or even simple, no-fee registration forms. Events that do require registration fees and are not using the university's in-house event registration system can use Event Calendar Pro's various ticket sales add-ons (like EventBrite) or the very simple CampTix plugin with a PayPal account.



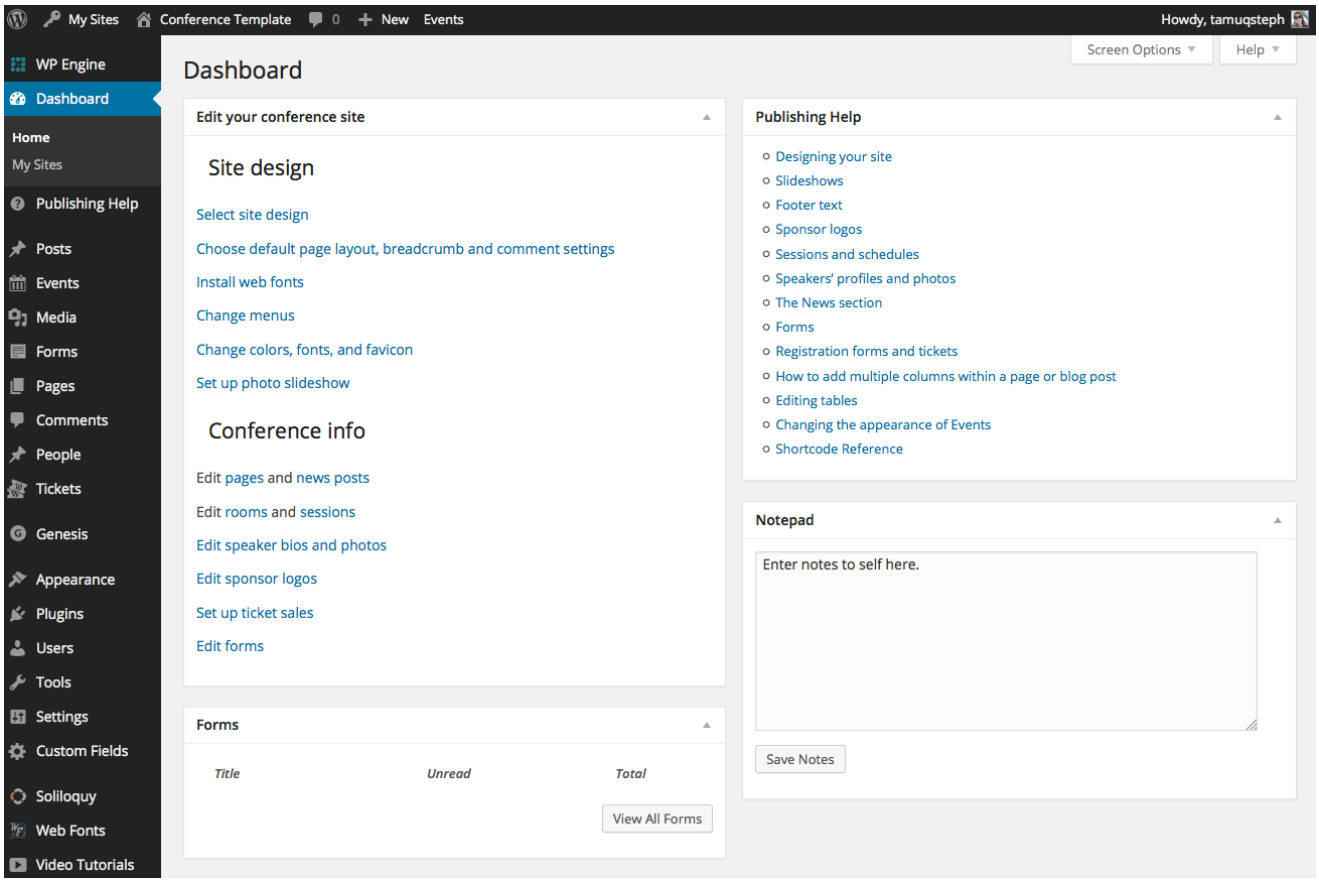



## Custom Development

The bulk of this project involved setting up commercial themes and plugins that worked well together, but there were a few customizations. We created a custom post type for speakers and connected them to events. Session descriptions now include an automatically-generated list of linked speakers' bios, with photos if available. Likewise, the speaker pages include links to that person's sessions. In previous conference sites, these interconnections had to be maintained by hand.

Since placing sponsors' logos on the site was a common problem, we created a site-wide rich text option. On this page, event planners can upload and arrange logos just as they would in the text of a blog post. They can then place the logos in the site footer, in a sidebar widget, or in a page using the custom [sponsors] shortcode.

We wrote extensive documentation for this site in WP Help, so that event planners have a complete guide to setting up their sites on the network. The network also includes WP101 video tutorials and a custom wayfinding Dashboard widget that walks the event planner through the site setup process. They wayfinding widget can be edited on a per-site basis to accommodate future changes to the network.



## Task & Time Breakdown: Qatar Conference Network

| Description | Hours |
|---|---|
| Setup and configuration | 24 |
| Plugin development | 6 |
| Documentation and training | 16 |
| Overhead: meetings and project management | 1 |
| **TOTAL** | **47** |

# TERMS

## Licenses, Rights, and Restrictions

All rights granted; all custom code is open source (GPL 2 license).

Custom themes and plugins may be used on any of the client's sites without restriction. Government and education clients may share themes and plugins within their organizations *and* with other government agencies, schools, and non-profit organizations.

The Web Craftory may abstract features from custom themes and plugins to be distributed as free, open source plugins, unless expressly forbidden by client's contract. The Web Craftory may share custom theme and plugin code publicly on GitHub and/or wordpress.org, with the client's permission, to allow for contributions and updates from the WordPress community at large. We may also write tutorials and/or presentations teaching other developers how to implement functionality similar to that provided in custom themes and plugins, unless the contract forbids our doing so.

Custom themes may not be stripped of the client's branding and resold as commercial products.

Third-party commercial theme and plugins provided under The Web Craftory's developer licenses, not purchased by the client, are subject to renewal or cancellation at our discretion. **Clients are encouraged to purchase and maintain their own product licenses if not covered under a campus site license.**

## Warranty and Maintenance

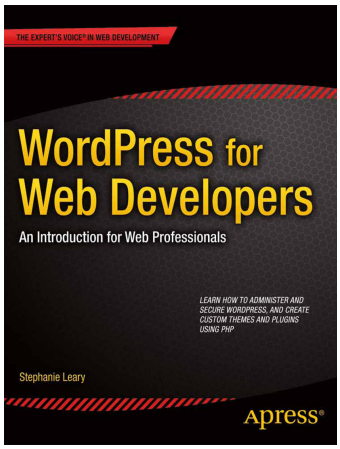
**Work is guaranteed for one year** after launch, including any changes required for compatibility with WordPress or plugin upgrades. Feature changes or new requests after launch will be billed at $150/hour, subject to availability.

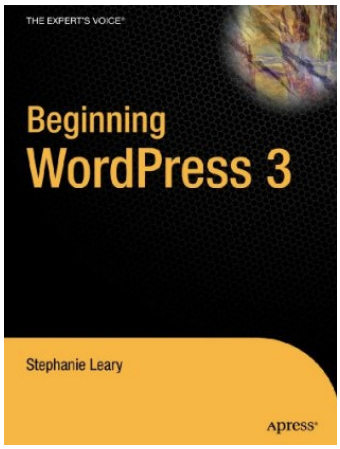
**After launch, customer is responsible for upgrading WordPress (including plugins) when new versions are available.**

# ABOUT THE CONSULTANT

Stephanie Leary spent eight years in various roles at the Texas A&M University System, where she pioneered the use of blogging software as a full content management system for departments' websites. She is now a freelance web consultant (dba The Web Craftory) specializing in WordPress sites for the higher education and publishing industries. She is a core contributor to the WordPress project and has released more than twenty plugins to the open source WordPress community. She is the author of Beginning WordPress 3 (Apress, 2010), WordPress for Web Developers (Apress, 2013), and Content Strategy for WordPress (2015), and is a frequent speaker at WordCamps around the country as well as the annual HighEdWeb conference. (Watch presentations.)

The Web Craftory occasionally employs part-time student workers, remote virtual assistants, and subcontractors.


## Portfolio

View the complete portfolio online.

Berkeley College of Engineering theme framework and content model, 2016

National Work Zone Safety Clearinghouse content model and Drupal migration (managed by TTI), 2016

Texas A&M Veterinary Diagnostic Medical Laboratory (TVMDL) redesign and test database search, 2015

5th Animal Mortality Management Symposium (sponsored by IIAD) theme, content model, and migration, 2015

Texas A&M AgriLife FirstCall help portal theme and content migration, 2014

IIAD grant proposal submission system, 2014

Texas A&M University at Qatar conference network, 2014

Institute for Infectious Animal Disease (IIAD) theme, content model, and migration, 2013

Texas Transportation Institute (TTI) responsive refactoring, 2013