

NIEA Mini-grant proposal
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Portland Community College, Portland OR

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Course number: ARCH 131

Course title: Sustainable Building Strategies

Part I. Description of content:

The course description from the syllabus is:

Focuses on creating buildings that are sited, designed, constructed, operated and maintained for the health and well being of the occupants, while minimizing impact on the environment.

Part II. Statement of learning objectives/outcomes:

The course outcomes from the existing ARCH 131 syllabus are twofold:

- 1- *Develop design recommendations using identified criteria, strategies, materials and technologies that respond appropriately to climate, site conditions and responsible use of resources.*
- 2- *Communicate ideas and strategies to design professionals using industry specific terminology.*

Part III. Outline of classroom methodologies and activities/out of class assignments/experiential components

Following is an outline of the classroom units, methodologies, assignments and experiential components:

The 10-week, 4-credit course typically includes 5 individual assignments and 2 group projects. While the course is based in Portland, Oregon, the activities, instructor's presentations and class experiential components are in no way limited to US borders.

Lack of diversity is, famously, a problem in Portland, in Oregon, and in the Pacific Northwest in general. It is very much a goal of mine to use what internationalism we have on campus (which is greater than that of Portland as a whole) as an impetus to expand our horizons beyond that which is familiar. Architecture and urban planning are natural fields of study for this, as the impacts of climate change, urbanization, density and migration are of course not limited to borders, and the US can learn so much from other societies (I think of Germany and solar, Sweden and minimizing waste, the Netherlands and stormwater control and Singapore and density).

Thus one key focus is on non-US cities and their resilience to a warming planet in the 21st century. The diverse student population will be encouraged to reference their own experiences and to present them to the class: past student-led research and presentations have included studies of Bangalore, Hong Kong, Rio de Janeiro, Moscow, London, Auckland and Barcelona.

Part IV. List of products proposed (ie syllabus, handouts, student activity materials, pre- and post-tests, maps, charts, study guides, articles, review questions).

Following is an overview of course products I'll be creating for the course, and providing as artifacts for the NIEA to use in their assessment of this grant proposal:

Course syllabus

Course overview (this is an instructor outline I typically work on for a few months prior to the first class)

Class assignments: individual

Class assignments: group/team

Instructor presentations (typically slide shows in PDF form; these include images, maps and charts)

Relevant articles (typically posted for students as PDFs on the course home page)

Note: perusing the course materials from the most recent time I taught the class, in Spring 2017, the following 3 units are ideal for reflecting internationalization and global perspectives. I offer them here in the interest of providing a glimpse into the course materials and topics. I am aware this grant proposal calls for major revisions to the course; that will happen across many units.

Week 1: large scale/global resilience: how global cities tackle climate threats. Possible case studies: Mexico City and Cape Town.

Week 3: small scale/local: residential infill, planning and density. Possible case studies: Barcelona, Hong Kong, Singapore and Bangalore.

Week 7: urban agriculture, hydroponics and aquaponics. Possible case studies: Calcutta and Tokyo/Yokohama.

Part V. Explain how your proposal internationalizes the curriculum on your campus.

PCC is a large institution, with some 75,000 students, offering over 100 degrees and many transfer opportunities on its 5 campuses/centers in the Portland, Oregon, area. The Architecture department is a small CTE (career technical education) program that offers two-year associates (AAS) degrees and certificates, toward the goal of preparing our graduates to succeed in the workplace. Our department has unusual diversity in its faculty and does what I'd describe as a 'pretty good job' in exposing our students to internationalization. That said, we can surely do more.

This class will be positioned to do just that. There is no course better suited to it. We stress urban planning, smart design and resilience to climate impacts: the larger world is, simply, more well-versed at these things than the US is. Ideally, this exposure to internationalization will stimulate more of the same: there is a natural crossover with other required classes at PCC, including Environmental Science courses and our own architectural design studios. Having taught here for 8 years now, I've learned that once a more global perspective is introduced, it tends to be re-applied in many shapes and forms. This is what drives me. Thank you for the impetus!