

Rooftop Garden

DESIGN COMPETITION

Rooftop Garden Design Competition 2017

About Us:

The mission of Arizona Student Unions is to enhance the University community by providing:

- Inclusive environments where all people are valued for their individual differences through quality programs, dining, retail and support services.
 - Student involvement and leadership development opportunities through employment and volunteer activities that promote learning beyond the classroom.
 - Facilities and programs that foster interaction among the University community.
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Topic:

The Student Union Memorial Center would like to design a Rooftop Garden in order to provide fresh produce for the Campus Pantry and Pangea.

- The majority of the produce from the garden will be donated to the Campus Pantry, a non-profit organization addressing food insecurity within the Wildcat community. Additional produce will also be used in Pangea, a Student Union restaurant serving international cuisine.
- The garden design budget must not exceed \$50,000.

Available gardening space includes the rooftop of the Student Union Memorial Center, the Pangea Patio at the Student Union Memorial Center, and the food stall on the Mall north of the Nugent building.

You will be conducting the preliminary research for the Student Union Memorial Center's Rooftop Garden.

These criteria will guide your study:

- 1. Garden Models:** Please research at **least 3** models that might possibly be worth replicating and/or modifying in order produce a Rooftop Garden suitable for the Student Union. Based on your research, which model would you suggest be used and why?
 - a. What are the benefits of this model versus other models?
 - b. How does plant selection play into these garden models? Does the weather in Tucson affect the way that these models will function?
 - c. If your plans include utilizing two or more available spaces, how will the different locations affect your garden model? Will different models need to be utilized in the different locations?
- 2. Labor Schedule:** In order to provide proper garden maintenance, maintain a garden supply chain to the Campus Pantry and Pangea, and properly record all documentation as needed, the Rooftop Garden must be a staffed entity. Labor costs exist outside of the \$50,000 design budget and do not need to be subtracted from your available dollars.

- a. What will the labor schedule look like for one full calendar year? Please consider complications due to university scheduled holidays and breaks as well as the pros and cons of hiring students versus full-time employees.
- b. How many employees need to be hired to maintain the garden and how much will they be paid? Please note that student employee pay will increase to \$10/hour in July 2017 and \$10.50/hour in January 2018.
- c. How many different positions must be created? What are the responsibilities of these positions?

3. Construction: Currently the only available equipment for the garden includes 10 six-foot, oval, galvanized troughs. All other equipment must be purchased and all structures related to the garden must be constructed. The garden must fit within the allotted design space available on the rooftop, the Pangea patio, and the food stall mentioned under the Case Study Topic category. Additionally, the building must be able to safely support any construction. The rooftop design area provided for this competition can support a live load of 20 pounds per square foot.

- a. Diagrams of the available design space will be provided to you. Final presentations must include a garden layout for all spaces being utilized. Layouts need not be created in a CAD program, however they must detail equipment sizing and placement.
- b. Will construction of your design be outsourced to a company, or can the structures and equipment be setup by garden staff? If construction will be outsourced, what vendors will be utilized to construct your design and why?
- c. What are the costs associated with construction? How do construction costs affect your other costs including plant, soil, and other garden collateral purchases?

4. Nutritional Plant Details: Include information regarding your research on the types of plants that will be grown in the Rooftop Garden. What does your research say about the nutritional value of each plant and their benefits? Will the plant have a significant effect on the population that dines at the Student Union? Are these plants that the student population will eat and enjoy?

- a. How do these plants need to be maintained and how does this affect labor and construction costs?
- b. How does the weather in Tucson affect the choices you make regarding plant selection?

5. Business Plan: Provide a business plan detailing the feasibility and sustainability of your garden design, plant choices, and labor schedule.

- a. What goals do your project choices accomplish and why are these goals important?
- b. Why have you made these final selections and recommendations? What makes these superior choices to other models?
- c. How will you measure the success of your garden design? Quantity/quality of vegetables, efficiency of labor and maintenance, or some other criteria. Are there other models against which to compare your success?
- d. How will you educate the university community about the product and service your garden design offers to the Campus Pantry and Pangea?
- e. Provide a detailed summary of all costs associated with this project.

6. Benchmark and Best Practices: Benchmark a timeline to create the Rooftop Garden.

- We recommend approaching this project from a Design Thinking perspective and utilizing the process of Empathizing, Defining, Ideating, Prototyping, and Testing.

- Consider partnering with students from majors or concentrations other than your own who can complement your skills and knowledge. For teams of fewer than five registered members, additional team members will be assigned to you from the pool of individual registrants.

Goal 1: Decide Model

Action A: Review information from stakeholders and conduct further research.

Action B: Decide key components essential to a garden.

Action C: Research best practices from different garden models.

Goal 2: Costs

Action A: Determine construction costs.

Action B: Determine equipment and gardening costs.

Action C: Research advantages and disadvantages of student labor versus full-time employees.

Goal 3: Steps to Launch

Action A: Secure or build facilities; equip Union with necessary supplies, furniture, etc.

Action B: Identify operational procedures such as keys needed and rooftop access.

Action C: Hiring timeline

Action D: Educate public
