

The 2024 SCU Maker Product Design Challenge

Design + Making + Marketing

Fame, Fortune, and a \$5,000 Grand Prize!

Theme: Vintage Santa Clara

Product design involves applying creativity and innovation in the development and fabrication of items that delight and bring value to others. This competition provides a fun and real-world opportunity for student teams to flex their product design skills in a variety of ways.

Your challenge, if you choose to accept it, is to form a student team and design a compelling product relating to SCU's annual Vintage Santa Clara [VSC] event. This is billed as "The University's Premier Wine and Food Festival." The next event will be Saturday, Sept 7, 2024; see <https://www.scu.edu/vintage>. This event is held in the Mission Gardens, with more than thirty participating wineries, breweries and restaurants, many owned and/or operated by SCU alumni! Products could address any possible customers/clients relating to this event; possibilities include but certainly are not limited to products that might appeal to alumni who attend the event, items aligned with or possibly in cooperation with specific vendors, gift items presented to participating vendors in appreciation of their participation, and so on.

This challenge requires design teams to conceive, pitch, produce and sell 20 units of their product. The product concept must be acceptable to the VSC organizers and comply with SCU branding criteria. A significant portion of fabrication must be performed within the Maker Lab with the fabrication plan acceptable to Maker Lab staff. And 19 units will be sold in the Campus Bookstore with the packaging and display approved by Bookstore managers; one unit is kept for judging. Representatives from VSC, the Maker Lab, and the Bookstore will be available to answer questions from the design teams early in the concept formulation process.

The competition has two phases. All teams will submit a Phase A design proposal/pitch. The top three teams will be selected to move to Phase B, which consists of production and sales; these teams will be provided a modest budget to fabricate their units.. The grand prize is \$5,000. In addition, one or more teams may win the opportunity to produce a large number of their product to provide to / sell in association with the VSC event itself. In previous competitions, top teams have contracted to provide from 50 to 300 units of their product.

Although you have latitude with your ideas, the price target is roughly in the \$3-\$10/unit for quantities of hundreds. Such a price point implies that the cost to produce units, to include materials and labor, should be 25% to 50% of the sale price. Also, the price should relate to the type of product it is. A nice, retail-style item to be sold to VSC attendees might be appropriate at a relatively high price point (perhaps even more than \$10 if the market can support that), while

an appreciation gift given away to vendors might be appropriate at the lower price point. The product team's duty to figure all of this out!

In brainstorming possibilities, teams are encouraged to consider a wide range of issues. What types of items relate to food and wine? What product aspects appeal to SCU graduates? What are the demographics of the attendees? Teams are encouraged to explore items offered by vintners/brewers/restaurateurs, sold in the SCU Bookstore, available through promotional companies [like brucelli.com and 4imprint.com). That said, don't feel bound by these ideas – traditionally, the winners of these competitions are highly novel and are not at all items that might be typically found elsewhere. Ultimately, we seek ideas that celebrate the VSC event, promote SCU, that exploit the capabilities of our Maker Lab, and that provide great value at low cost.

This competition is being supported by the Alumni Relations VSC team, the SCU Maker Lab, the SCU Campus Bookstore, Ciocca Center for Innovation and Entrepreneurship, the School of Engineering, and the Kern Family Foundation through the KEEN program.

Details of the Maker Challenge Design Guidelines and Judging Criteria:

The competition will be conducted in two phases.

Phase A: Concept & Plan: Teams shall consist of 3-8 currently registered students (undergraduate or graduate, any major, any college/school). An unlimited number of teams may participate in Phase A. A judging panel will select the top 3 teams (or more at the discretion of the panel) to proceed to Phase B.

Phase A entries should include the following:

- A cover sheet with product name and a list of all team members (name, year, major);
- A coordination sheet (to be provided) stating the extent to which the product concept has been reviewed or is consistent with VSC staff, Maker Lab staff, Campus Bookstore staff, and SCU branding policies;
- A product concept summary (1 page max) that describes the project and describes how it addresses VSC objectives and why it will be valued by recipients/customers/clients;
- Conceptual design sketches/drawings (2 pages max) that visually indicate the look and structure of the design; no physical prototype submissions are permitted);
- A fabrication plan (1 page max) that describes fabrication tasks and indicates ones to be performed in the Maker Lab; note that there should be a significant amount of fabrication and that at least 50% of fabrication tasks should be performed in the Maker Lab;
- A prototyping materials list and budget for acquiring all materials needed to produce 20 prototype units of the design; within reason, teams will be provided the funds to acquire necessary materials;
- A marketing/sales plan (2 page max) providing an initial costing estimate for producing 250 units, a pricing strategy for selling items in the bookstore, advertising plans, and packaging/display considerations for the bookstore.

Judging will be based on the quality of the Phase A submission package, to include the design (concept, applicability, aesthetic, quality, novelty, etc.), the manufacturing approach, the price point and costing analysis, the marketing/sales plan, and the quality/experience of the team (ability to perform the broad set of tasks required for success).

Phase A Considerations:

- The general expectation for products produced for this competition is a tangible item that can be held, worn, used and/or displayed by an individual; any deviation from this concept may be possible – and highly innovative - but certainly should be discussed with the competition personnel. A set of multiple items may be permitted if they complement each other and collectively meet the cost objective. Items should be easily stored and appropriately packaged.
- As a promotional item relating to Santa Clara University, consider the use of appropriate colors, words, and logos; such use should conform with SCU marketing/branding guidelines.
- Think carefully about your design to ensure that it won't be misinterpreted in embarrassing or insulting ways.
- The competition manager team reserves the right to halt production/sale of any item that may be deemed inappropriate or inconsistent with the University/School brands.

Phase B: Production & Sales: - Teams selected to compete in Phase B will produce and sell their product. Teams will produce 20 items; 19 of these will be sold in the Campus Bookstore, and 1 will be provided to the judging panel. Bookstore items typically require appropriate packaging and display, all of which is the responsibility of the product team. Teams will have an opportunity to meet with competition stakeholders (from VSC, Maker Lab, and the Campus Bookstore) in order to refine their concepts and plans. Students requiring Maker Lab training will be provided this opportunity. Maker Lab personnel will also be available to assist in the use of Lab resources; this may include suggestions relating to the design for manufacturability elements of the design.

Phase B submissions should include the following:

- A cover sheet with product name and a list of all team members (name, year, major); one team member must be designated as the Team Point of Contact;
- An updated product concept summary (1 page max);
- Design description, to include design/engineering drawings of all parts, a bill of materials, and any other relevant design information regarding possible mechanical, electrical and/or software elements;
- Photos of aspects of the fabrication process, to include ‘students in action’;
- An expense summary including all expenses, vendors, receipts with a total cost for prototyping the necessary 20 units;
- An updated cost analysis per unit based on 250 units, to include a quote for producing 250 units, which you will honor if the university wishes to exercise it. The quote should include all costs (no profit) to include all materials (and any external services) for the product and its packaging, student labor for production (quoted at \$19/hr), etc.; Machine time (e.g., # hrs of 3d printer time, laser cutter time, etc.) should be included as a number of hours (rather than an equivalent cost);
- A summary of advertising and sales activities to include copies of any advertisements, photos of final unpackaged products, photos of products packaged for sale, and photos of products on sale in the bookstore;
- Provide a photo of all team members in the Maker Lab with at least one unit of product.

Phase B Considerations:

- Team members performing fabrication tasks should ideally have all required training prior to the start of Phase B;
- Fabrication in the Maker Lab should be possible during Lab open hours (~35-40 hrs/wk are available); although it is not guaranteed, additional open hours to support competition fabrication may be arranged;
- Items may require packaging for Campus Bookstore sales; this may or may not be necessary when given/sold to SVC customers;
- Bookstore revenue will not be provided to the student team.

Competition Details

Key Contacts & Resources

Competition Web Site:	https://www.scu.edu/engineering/about/innovation-and-entrepreneurship/contests-and-competitions/
Competition Manager:	Dr. Kitts Coordinates overall competition, establishes rules, and is the final authority on all aspects of the competition. Student teams should NOT contact Dr. Kitts – rather, they should contact the competition coordinator, listed below.
Competition Coordinator:	Dr. Neumann, maneumann@scu.edu Primary point of contact for students teams for all competition process steps such as registration, submissions, general questions, etc.
VSC POC:	Maureen Muscat, mmuscat@scu.edu
Maker Lab POCs:	Jiayi Wang, jwang21@scu.edu TA Demilade Kunle-Kunbi, dkunlekunbi@scu.edu TA Harry Clark, hlclark@scu.edu
Campus Bookstore POC:	Linda Cullens, lcullens@scu.edu
SCU Brand and Visual Identity Guides:	www.scu.edu/umc/the-scu-brand/ www.scu.edu/umc/visual-identity-elements/

Competition Timeline & Deadlines: These may change based on progress with the project, Maker Lab and bookstore schedules, etc. Teams should frequently consult the lab web page for updates.

- Apr 2 Full competition details are released, and teams may begin to register for the competition.
- Apr 16 Competition registration deadline at 11:59 pm; email team roster (full names, student ID numbers, years, majors) with product/team name a single student designated as the competition point of contact NLT midnight to maneumann@scu.edu
- Apr 23 Phase A submission packages due NLT 11:59 pm; email package as a single .pdf file to maneumann@scu.edu

Apr 29	Top teams selected for Phase B are notified and may begin Phase B work
May 20	20 units provided by noon, and bookstore sales begin
May 27	Phase Bookstore sales end
May 30	Phase B submission package due NLT 11:59 pm; email package as a single .pdf file to mneumann@scu.edu
TBD	Award announcement

Contest Rules, Procedures, and Guidance:

- Teams of students may enter, with 3-8 students per team. All team members must be enrolled SCU students during the Spring 2024 quarter. Interdisciplinary teams are encouraged. It is noted that one of the Phase A judging criteria considers the broad set of skills required for a successful team. Consider having a team with students who are designers, marketers, fabricators, communicators, etc. Consider having a blend of undergraduate and graduate students from across the university;
- A minimum of five teams must enter by the end of the Phase A deadline, or the competition will be cancelled; registered teams will be notified when the five-team minimum requirement has been met;
- The grand prize amount is \$5,000. Honorable mentions may be awarded at the discretion of the judges and the competition coordinators;
- Teams may begin work on their entry as soon as they register - they do not need to wait until the registration deadline; students may be added and removed from the team until the Phase A package has been submitted (students who have contributed to the Phase A package may not be removed);
- Teams are welcome to use this experience and any developed materials for courses they may take during or after the competition; in fact, this experience may be incorporated fully or in part in the Spring quarter ENGR 172A Applied Entrepreneurship course, for which all undergraduate students are welcome to enroll in, and for which all undergraduate and graduate students are welcome to review course materials and sit in on selected lecture sessions (Wed 5-7 pm, Heafy Hall 214; contact Dr. Kitts at ckitts@scu.edu);
- Competition communications will be administered via email and the competition web page; each team's point of contact should check both routinely for updates;
- Designs must meet any criteria established by the VSC team, the Maker Lab, the Campus Bookstore, and any other impacted organization within the university; teams are encouraged to review their concepts with appropriate personnel prior to submitting their Phase A entry;
- Students may only participate on a single team.
- As with product development in the real world, elements of this competition may change over time. Teams should refer often to the competition web site for any news or updates regarding the contest, rules, advice and answers to questions; email updates will also be sent to designated team points of contact;
- Teams agree to abide by the decision of the judging panel and competition administrators regarding competition rules, results, and any approved changes/exceptions;

- Depending on student status and award amounts per student, cash prizes may be subject to tax withholding and may be paid via a university check. Prize funds may be provided in the form of gift cards;
- Students will properly use and acknowledge the use of any existing copyrighted material or media within their entry;
- Students agree to participate in any surveys regarding the educational nature of the competition with the knowledge that aggregate results may be published;
- Ownership of the pre-existing underlying intellectual property of the entry remains the property of the team entering the contest, subject to Santa Clara University's rights to reprint, display, reproduce, perform, use, and exhibit the entries and designs for this event and for Santa Clara University's future marketing and advertising purposes and events. By participating in the contest, each entrant grants to Santa Clara University a non-exclusive, worldwide, fully paid, royalty-free, perpetual, transferable license to reprint, display, reproduce, perform, use, and exhibit (including the right to make derivative works of) the entry and materials and information submitted on and in connection with the contest. Each entrant warrants that the entry and materials and information provided do not contain confidential information and do not violate any laws or regulations.
- To reiterate, based on the previous bullet, independent of the participation of design teams, SCU is permitted to produce/adapt designs for future sale, distribution and/or use.

OK, here's some more stuff that the University lawyers make us say:

RELEASE/LIMITATIONS OF LIABILITY: EACH ENTRANT AGREES TO HOLD THE SANTA CLARA UNIVERSITY HARMLESS FROM AND AGAINST ANY THIRD PARTY CLAIM ARISING FROM USE OF THE ENTRY. SANTA CLARA UNIVERSITY IS NOT RESPONSIBLE FOR LOST, LATE, DAMAGED, MISDIRECTED, ILLEGIBLE, INCOMPLETE, OR MUTILATED ENTRIES, OR FOR ANY COMPUTER, ONLINE, TELEPHONE OR TECHNICAL MALFUNCTIONS, DELAYS OR HUMAN ERRORS THAT OCCUR IN THE PROCESSING, TRANSMISSION OR RECEIPT OF ENTRIES, OR FOR INACCURATE TRANSCRIPTION OF ENTRY INFORMATION, OR FOR ENTRIES THAT ARE STOLEN, MISDIRECTED, GARBLED, LOST OR DELAYED BY COMPUTER TRANSMISSIONS, OR IF FOR ANY REASON, THE CONTEST IS NOT CAPABLE OF BEING CONDUCTED AS PLANNED, SANTA CLARA UNIVERSITY RESERVES THE RIGHT AT ITS SOLE DISCRETION TO CANCEL, TERMINATE, MODIFY OR SUSPEND THE CONTEST.

This contest is being conducted with financial support from Ciocca Center for Innovation and Entrepreneurship, the Kern Entrepreneurship Education Network (KEEN), and the Santa Clara University School of Engineering.



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