

Brothers, Sheila C.

From: Cramer, Aaron M.
Sent: Saturday, January 18, 2020 8:37 PM
To: Bird-Pollan, Jennifer; Brothers, Sheila C.; Ett-Mims, Joanie; Woolery, Stephanie L.
Cc: Vernon, Mitzi R.
Subject: NEW BS: Product Design
Attachments: Product Design BS-new (revised 01-14-20)_mrv.pdf

Proposed New BS in Product Design

This is a recommendation that the University Senate approve, for submission to the Board of Trustees, the establishment of a new BS degree: Product Design, in the College of Design.

Rationale: Product design is a strategic problem-solving process that drives innovation, builds business success, and leads to a better quality of life. There is significant demand for graduates in this area in Kentucky, but there are no current degree programs in the state. Product designers are employed wherever products are produced, and creating a pool of local design talent will create space for new businesses to emerge. The proposed 120-hour program, involves sequences of design studios, supportive coursework, technical classes, and specialized courses with advancing complexity in thematic areas such as ergonomics, history and theory, and design visualization. An initial 18 students growing to 93 students is anticipated.

Aaron

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Office of Strategic Planning and Institutional Effectiveness (OSPIE). The new program approval process begins when a contact persons submits a “Notification of Intent” (NOI) and substantive change checklist (available [HERE](#)) to OSPIE. Units have six months from the point of NOI submission to the time when the completed proposal is approved by Senate. After the NOI is submitted, a contact person should begin working to complete this form. Contact persons should work with OSPIE to identify the program’s degree designation and CIP, as well as to solicit a letter of administrative feasibility from the Provost (per SR 3.2.3.A.2).

Pre-proposal. The CPE requires that a pre-proposal be submitted after a proposed program has achieved approval at the college level. Answers to questions identified with a * by the question number on this form will be used by OSPIE staff to submit the pre-proposal to the CPE (Council on Postsecondary Education).

Form structure. This form has two sections. The first half (white background) contains information required by the University Senate and Registrar’s office and the second half (beige/brown background) contains information required by two external entities, the CPE and SACSCOC (Southern Association of Colleges and Schools Commission on Colleges). Although only the first half is required for University Senate approval, every question must be answered to receive CPE approval. Please do not leave any area blank, but instead write “not applicable” wherever that is the appropriate response.

Approval process. Once approved at the college level, your college will send the proposal to the appropriate Senate academic council (possibly HCCC and/or UC) for review and approval. Once approved at the academic council level, the academic council will send your proposal to the Senate Council office for additional review via a committee and then to the SC and Senate. (The contact person listed on the form will be informed when the proposal has been sent to committee and other times as appropriate.) Once approved by the Senate, the Senate Council office will submit the proposal for it to be placed on an agenda for the Board of Trustees. After approval by the Board, OSPIE will ensure the proposal is submitted to the CPE for final approval. Generally, a new program proposal must have received approval from the Senate by early spring (February or March) in order for the new program to be effective for the following fall semester.

INFORMATION REQUIRED BY UNIVERSITY SENATE		
1. Basic Information: Program Background and Overview		
1a	Home College: <i>Design</i>	
1b	Home Educational Unit (school, department, college ¹): <i>College of Design</i>	
1c*	Office of Strategic Planning and Institutional Effectiveness (OSPIE) (Please contact OSPIE (OSPIE@L.uky.edu) for help with questions in this section.)	
	Date of contact with OSPIE:	<i>06/01/17</i>
	<input checked="" type="checkbox"/> Appended to the end of this form is a PDF of the reply from OSPIE.	
	<input type="checkbox"/> Appended to the end of this form is a letter of administrative feasibility from the Provost.	
	<input type="checkbox"/> Appended to the end of this form is a letter(s) of administrative feasibility from the dean(s) of the college(s) offering the degree.	

¹Only interdisciplinary undergraduate degrees may be homed at the college level.

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CIP Code (confirmed by OSPIE): <i>50.0404</i>			
Degree Type (BA, BS, etc.) ² : <i>BS</i>			
Is this degree designation on the CPE's list of degree designations ² ?			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If "No," please provide an explanation for OSPIE's use in external reporting purposes.			
1d*	Major Name (Interior Design, Social Work, etc.): <i>Product Design</i>		
1e	Is there a specialized accrediting agency related to this program?	Yes	No <input checked="" type="checkbox"/>
	If "Yes," name:		
	Do you intend to seek accreditation from this agency?	Yes	No <input type="checkbox"/>
1f	Was this particular program ever previously offered at UK but subsequently suspended?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	If "Yes," describe. (300 word limit)		
1g*	Requested effective date:	Semester after approval.	OR <input type="checkbox"/> Specific Date ³ : _____
1h	Anticipated date for granting first degree(s): <i>05/15/2024</i>		
1i*	Contact person name: <i>Dean Mitzi R. Vernon</i>	Email: <i>vernon@uky.edu</i>	Phone: <i>859.257.7619</i>
2. Program Overview			
2a*	Provide a brief description of the proposed program. (300 word limit)		
	<p>Product design, also known as industrial design, is a strategic problem-solving process that drives innovation, builds business success, and leads to a better quality of life through innovative products, systems, services, and experiences. The Bachelor of Science in Product Design (Bachelor of Science in Product Design) is a new program in the College of Design that offers an undergraduate degree to students pursuing professional careers in product design. The Bachelor of Science in Product Design is a 4-year program requiring 120 total credits, consisting of sequential design studios with sequential support courses in ergonomics and user experience (UX); a history and theory course sequence; a steady menu of technical classes in computer-aided design (CAD), visualization, and materials and manufacturing processes; research classes; entrepreneurship, integrated studios with other disciplines; and specialized short courses (modules) for advanced focus. The sequential courses are progressive parts of an overall area, like ergonomics, which advance in complexity each semester.</p>		

² Visit <http://dataportal.cpe.ky.gov/cpedegreedesignations.aspx> for the CPE's list of approved degree designations.

³ Programs are effective for the fall semester following approval. No program will be made effective until all approvals, up through and including Board of Trustees and CPE approval, are received.

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	<p>The Bachelor of Science in Product Design program aligns with the University of Kentucky Strategic Plan by fulfilling the goal of undergraduate student success by offering a new degree choice in the Commonwealth and, for applicants outside of Kentucky, a product design degree with special emphasis on ergonomics, UX, and healthcare solutions. The Bachelor of Science in Product Design is part of a suite of new offerings that include a collaboration with Biomedical Engineering (BME); some of the courses throughout the curriculum are jointly created by College of Design and BME faculty to enhance a deeper foundation in ergonomics, better preparing students for future specialization.</p> <p>The Bachelor of Science in Product Design program also advances the College of Design Strategic Plan by expanding program offerings in the College and creating synergy with existing degrees. The program further contributes to achieving the Kentucky Council on Postsecondary Education Strategic Agenda by offering a new option to Kentucky students and a potential new entrepreneurial workforce in the region.</p>
2b	<p>List the program objectives of the proposed program. These objectives should deal with the specific institutional and societal needs that the program will address, such as how students will benefit from the program, both tangibly and intangibly. (Please note that “program objectives” are different from “student learning outcomes.”) (300 word limit)</p>
	<p><i>The following objectives illustrate the opportunity for Product Design at the University of Kentucky (UK) and in the Commonwealth.</i></p> <p><i>Kentucky/Region: There are no schools in Kentucky offering a degree in Industrial or Product Design. Objective 1) offer a new design program to Kentucky high schoolers that they would otherwise have to travel outside the Commonwealth to experience. From 2017 marketing statistics, we know there is significant and growing demand for Product Design graduates that align with Kentucky’s labor force. The manufacturing industry accounts for 18.3% of Kentucky’s annual economic output. Since product designers are employed wherever products are mass produced, the College of Design’s program will deliver graduates into a lucrative Kentucky employment market – e.g., Kentucky’s motor vehicle manufacturing industry employs nearly 95,000 people and is the 3rd largest light-vehicle producer in the United States; yet there is no local resource of design talent from which to pull. Objective 2) provide manufacturing businesses a pool of local talent, in turn creating space for new businesses to emerge.</i></p> <p><i>UK/College of Design: Objective 3) increase program offerings and enrollment for the College of Design, which will offer a progressive program at a state university with lower enrollment fees, a copious job market, and salary earning potential of 21% higher than the national average. The user experience (UX) and medical device specialization options will make the College and the University of Kentucky unique in the U.S., generating a national audience.</i></p> <p><i>Students: Objective 4) create a distinctive product design program through collaborative specializations across campus (specifically with engineering and healthcare colleges). Nearly 90% of all Product Design jobs require a bachelor’s degree. We propose both a BS in Product Design and allow students to specialize, including UX and healthcare (UX specialists can anticipate salaries 50% higher than related design fields).</i></p> <p><i>Data provided by analysis conducted by STAMATS (higher education research and consulting firm)</i></p>
2c*	<p>List the intended student learning outcomes (SLOs) for the proposed program. Address one or more of the five areas of learning (1. broad, integrative knowledge; 2. specialized knowledge; 3. intellectual skills; 4. applied learning; and 5. civic learning). Include the SLO for the Graduation</p>

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	<p>Composition and Communication Requirement (GCCR). (300 word limit) (More detailed information will be addressed in a subsequent question.)</p>
	<p><i>Graduates of the Bachelor of Science in Product Design program will be able to (please see attached Assessment Plan for expanded discussion):</i></p> <p><i>1: Successfully employ the design process to investigate, conceptualize and generate relevant solutions for design problems, both independently and within teams.</i></p> <p><i>2: Strategically apply technical skill, knowledge and craft through two- and three-dimensional, analog and digital, prototypes to prove feasibility of design concepts.</i></p> <p><i>3: Clearly reference design history, trends in contemporary design, and current global issues in developing design strategies.</i></p> <p><i>4: Convey project ideas in a clear and concise manner, through oral, written and visual formats.</i></p> <p><i>5: Apply knowledge of user experience, ergonomics, contextual inquiry, user research methods and usability assessments in the design development process.</i></p> <p><i>6: Perform as a professional designer as expressed through ethics, collaboration and leadership.</i></p>
2d	<p>Describe the rationale and motivation for the program. Give reference to national context, including equivalents in benchmark institutions. (150 word limit)</p>
	<p><i>Our competitive opportunity lies in the growing demand for specialized product designers, the absence of any programs in Kentucky, and the juxtaposition of the engineering and healthcare colleges at UK – close academic collaboration that will make us unique in the U.S.</i></p> <p><i>The manufacturing industry accounts for 18.3% of Kentucky’s annual economic output; the Bachelor of Science in Product Design could deliver graduates into a lucrative employment market within its own state.</i></p> <p><i>This new program will increase enrollment and program opportunities for the College of Design, which will offer a progressive program at a state university with lower enrollment fees, a copious job market, and salary earning potential of 21% higher than the national average. With an emphasis on healthcare design, we can focus on a current trend in U.S expenditure: 17.1% of the GNP was on healthcare in 2014 (19.9% by 2025).</i></p> <p><i>Benchmark institutions:</i></p> <ul style="list-style-type: none"> <i>- Auburn: Limits admission to 45 undergraduates/year</i> <i>- University of Cincinnati: Confers an average of 79 Product Design degrees/year</i> <p><i>Data provided by analysis conducted by STAMATS (higher education research and consulting firm)</i></p>
2e	<p>Describe the proposed program’s uniqueness within UK. (250 word limit)</p>

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There is no undergraduate or graduate product design program at UK (or within the Commonwealth).

The proposed Bachelor of Science in Product Design curriculum is currently unique within UK as well as other product/industrial design programs in the U.S. because of the dual degree opportunities with other disciplines and the planned collaboration with BME. Further, the proposed incorporates an innovative system of modular courses with variable credit allowing for intensive,

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	<i>specialized investigation of advanced topics (both at the undergraduate and graduate level), allowing the program to respond to the growing trend of specialization within the profession. The modular system also responds to trending higher education media on “stackable credits” and offers a potential model for other programs across campus. At this point, these credits might better serve undergraduates as certificates (as opposed to tracks), which will be part of a future proposal. We further envision a future minor in user experience for product design. This focus is significant enough in the field of product design that a minor is a more substantial complement for practice.</i>	
2f	Describe the target audience. (150 word limit)	
	<i>Product design appeals to students who are interested in a trans-disciplinary profession that harnesses creativity to resolve problems and co-creates solutions with the intent of making a product, system, service, experience or a business, better. Product design attracts students who are inventors and physical and digital makers, who have an optimistic way of looking at the future by reframing problems (vehicular, healthcare, computer technology, housewares, athletics, apparel, agriculture, furniture, exhibition, et al.) as opportunities. It links innovation, technology, research, business, and customers to provide new value and competitive advantage across economic, social, and environmental spheres.</i>	
2g*	Does the program allow for any tracks (a.k.a. options)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	If “Yes,” name the track(s). (Specific course requirements will be described in a subsequent section.)	
	Track #1:	
	Track #2:	
	Track #3:	
	Track #4:	
	Track #5:	
	Track #6:	
2h	Does the program <u>require</u> a minor?	Yes ⁴ <input type="checkbox"/> No <input checked="" type="checkbox"/>
	If “Yes,” what is the name of the minor?	
2i	Describe how the proposed program will be administered, including admissions, student advising, retention, etc. (150 word limit)	
	<i>Please see attached Addendum for Program Administration.</i>	

⁴ If “Yes,” in conjunction with the submission of this form to the home unit, you must also fill out the form for a new minor and submit it to the home unit.

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2j	Are multiple units/programs collaborating to offer this program?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	If "Yes," please discuss the resource contribution(s) from each participating unit/program. (150 word limit) (Letters of support will be addressed in subsequent sections.)		
2k	List all UK programs ⁵ which the proposed program could be perceived as replicating. Give a rationale for why this is not duplication, or is a necessary duplication. (250 word limit)		
	None		
2l	The faculty of record is the faculty body responsible for ALL aspects of the program, including courses, credit hours, rigor, changes to the program, etc. Please identify the program's <i>faculty of record</i> by choosing ONE of the four scenarios below. For more information on each faculty of record scenario, visit http://www.uky.edu/Faculty/Senate/Forms/UndegDegPgm_Help.html .		
	<input type="checkbox"/>	Scenario 1	
			OR
	<input checked="" type="checkbox"/>	Scenario 2	
			OR
	<input type="checkbox"/>	Scenario 3	
			OR
	<input type="checkbox"/>	Scenario 4	
	If Scenarios 2, 3, or 4 are chosen, please provide describe/list/name the members of the faculty of record and describe the voting rights of members of the faculty of record. Include the process and standards for identifying the program director, as well as adding and deleting members of the faculty of record. (150 word limit)		
	Angus Eade (Angus.Eade@uky.edu) Daniel Livingston (daniel.livingston@uky.edu) Bill Massie (William.Massie1@uky.edu) Wallis Miller (wmiller@uky.edu) David Pienkowski (pienkow@uky.edu)		
	Members each carry a vote regarding concerns of the new Product Design program including the determination an acting Director/Chair and as part of a search process for a new Director/Chair. The membership overall also votes to add or delete members of the body.		
2m	Will the program have an advisory board ⁶ ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	If "Yes," please describe the standards by which the faculty of record will select members of the advisory board, the duration of service on the board, and criteria for removal. (150 word limit)		
	<i>All current academic units with the College of Design have advisory boards. There is also a new college-level advisory board (College Advocacy Board), which had its inaugural meeting in November, 2018, and 25% of the membership is product design based (with experience in industry, government, and academia). While the Bachelor of Science in Product Design program may not</i>		

⁵ You must include a letter of support from any other program's home unit. Please convert the letter to a PDF and append to the end of this form.

⁶ An advisory board includes both faculty and non-faculty who are expected to advise the faculty of record on matters related to the program, e.g. national trends and industry expectations of graduates.

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<p><i>have an individual advisory board for the first formative years, it will have the consultancy of the college board and also external advisors from other product design programs.</i></p> <p><i>The College Advocacy Board will meet annually during each fall semester with smaller group meetings throughout the year. Membership service, term limits, and rules will be established during 2019. We have a mutual understanding that our guidelines will develop during our 2019 subgroup meetings. A unit-level Bachelor of Science in Product Design board, when established, will follow similar guidelines to this and the other academic unit boards.</i></p>	
<p>If "Yes," please list below the number of each type of individual (as applicable) who will be involved in the advisory board.</p>	
	Faculty within the college who are within the home educational unit.
1	Faculty within the college who are outside the home educational unit.
1	Faculty outside the college who are within the University.
2	Faculty outside the college and outside the University who are within the United States.
	Faculty outside the college and outside the University who are outside the United States.
1	Students who are currently in the program.
	Students who recently graduated from the program.
4	Members of industry.
	Community volunteers.
	Other. Please explain:
9	Total Number of Advisory Board Members

3. Delivery Mode		UK DLP and eLearning Office ⁷			
3a*	Initially, will any portion of the proposed program's core courses be offered via distance learning ⁸ ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	If "Yes," please indicate below the percentage of core courses that will be offered via distance learning.				
(check one)	1% - 24% <input type="checkbox"/>	25% - 49% <input type="checkbox"/>	50% - 74% <input type="checkbox"/>	75 - 99% <input type="checkbox"/>	100% <input type="checkbox"/>
3b*	If <i>any</i> percentage of the program will be offered via the alternative learning formats below, check all that apply, below.				
	<input type="checkbox"/>	Distance learning.			
	<input type="checkbox"/>	Courses that combine various modes of interaction, such as face-to-face, videoconferencing, audio-conferencing, mail, telephone, fax, email, interactive television, or World Wide Web.			
	<input type="checkbox"/>	Technology-enhanced instruction.			
	<input type="checkbox"/>	Evening/weekend/early morning classes.			
	<input type="checkbox"/>	Accelerated courses.			
	<input type="checkbox"/>	Instruction at nontraditional locations, such as employer worksite.			
	<input type="checkbox"/>	Courses with multiple entry, exit, and reentry points.			
	<input type="checkbox"/>	Modularized courses.			

⁷ For questions about alternative delivery modes, please contact UK's Distance Learning Programs and e-Learning office (URL above).

⁸ Per the Southern Association of Colleges and Schools Commission on Colleges (SACS) definition of distance education, distance education is a formal educational process in which the majority of the instruction (interaction between students and instructors and among students) in a course occurs when students and instructors are not in the same place. Instruction may be synchronous or asynchronous.

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3c	<p>Give pedagogical rationale for the use of alternative delivery modes in the proposed program. Consider the aspects below and elaborate as appropriate. (200 word limit)</p> <ul style="list-style-type: none"> • Synchronous and asynchronous components. • Balance between traditional and non-traditional aspects. • Hybrid elements.
4. UK Resources	
4a*	<p>Will the program’s home educational unit require new or additional faculty? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
	<p>If “Yes,” provide a plan to ensure that appropriate faculty resources are available, either within UK or externally, to support the program. Note whether the new and additional faculty will be part-time or full-time faculty. If “No,” explain why. (150 word limit)</p>
	<p><i>A proforma for this program was created, which outlines all necessary hires over five years. That proforma lays out a projection of student enrollment based on experience creating a prior similar program in a similarly positioned state (Virginia) and contemporary costs of faculty and staff hires. The College is committed to providing all necessary resources to support the new Product Design program.</i></p>
	<p>If “Yes,” when will the faculty be appointed? (150 word limit)</p>
	<p><i>YEAR 1: an acting (visiting) director will be appointed for the first year, assisted by one visiting faculty and one new junior faculty member. YEAR 2: a new permanent director will be in place, one existing junior faculty, and two visiting faculty. YEAR 3: a director, two junior faculty and two visiting faculty. YEAR 4: a director, one senior faculty, two junior faculty and one visiting faculty. YEAR 5: a director, one senior faculty, three junior faculty and one visiting faculty.</i></p>
4b	<p>Will the program’s home educational unit require additional non-faculty resources, e.g. classroom space, lab space, or equipment? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
	<p>If “Yes,” provide a brief summary of additional non-faculty resources that will be needed to <input type="checkbox"/> implement this program over the next five (5) years. If “No,” explain why. (150 word limit)</p>
	<p><i>Similar to the other studio-based academic units in the College, the Bachelor of Science in Product Design will require 4 studio spaces, one for each of the 4 years of the program, and we will need to access lecture spaces and use the existing shared shop and technology spaces within the College.</i></p>
4c	<p>Will the program include courses from another educational unit(s)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
	<p>If “Yes,” list the courses and identify the other educational units and subunits that have approved the inclusion of their courses. (150 word limit) <input type="checkbox"/></p>
	<p><i>Biomedical Engineering (BME).</i></p>
	<p>If “Yes,” append to the end of this form a letter of support from the appropriate educational unit chair/director from whose unit individual courses will be used. A letter must include the following:</p> <ul style="list-style-type: none"> • Demonstration of true collaboration between multiple units⁹; • Impact on the course’s use on the home educational unit; and • Verification that the chair/director has consent from the faculty members of the unit.

⁹Show evidence of detailed collaborative consultation with such units early in the process.

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4d	Fill out the faculty roster below for full-time and part-time faculty teaching major core courses in the proposed program.		
NAME	COURSES TAUGHT	ACADEMIC DEGREES AND COURSEWORK	OTHER QUALIFICATIONS AND COMMENTS
List name & identify faculty member as “F” (full-time) or “P” (part-time).	Include term; course prefix, number and title; & credit hours. Identify courses as D, UN, UT or G.	List relevant courses taught, including institution and major.	Note qualifications and comments as they pertain to courses taught.
<i>Dean Mitzi Vernon (F)</i>	<i>Fall, PRD 120, 5 CH (UN) Fall, PRD/EGR 100, 1 CH (UN)</i>	<i>Taught nearly every course in this curriculum during the past 20 years at Virginia Tech. Designed and taught the Form Studio at Virginia Tech for 5 years and taught this level of studio for 10 years at Virginia Tech. Taught similar studios at Arizona State University, University of Southern California (USC), and California College of Arts (CCA).</i>	<i>Dean, College of Design Bachelor of Science in Housing & Interiors (UNC - Greensboro); Master of Architecture (Virginia Tech); Master of Science in Engineering (Stanford University).</i>
<i>Daniel Livingston (P)</i>	<i>Fall, PRD 260, 2 CH (UN) Spring, PRD 272, 2 CH (UN) Spring, PRD/BME 372, 1 CH (UN) Fall/Spring, PRD 510, variable CH (UN)</i>	<i>BCTC (Graphic Design) IMD 115: Elements of User Experience/User Interface Design IMD 228: Introduction to Graphic Design IMD 277: Advanced Photoshop, Typography IMD 280: Portfolio Practicum</i>	<i>BFA in Graphic Design (2005): EKU MFA in Graphic Design (2016): SCAD Also, led a multidisciplinary team through a 7-week IDEO course in human-centered design.</i>
<i>Wallis Miller (F)</i>	<i>Fall, PRD 130, 3CH (UN)</i>	<i>History & Theory of Architecture (UK) Visualizing Contemporary Design (UK) Museum & Exhibition Culture (UK)</i>	<i>Ph.D, History, Theory & Criticism of Architecture (1999): Princeton M.Arch (1986): Columbia B.S. Architecture/B.S. Biology (1982): Yale</i>
<i>New Hire (F)</i>	<i>Fall, PRD 150, 1 CH (UN) Fall, PRD/EGR 250, 2 CH (UN) Spring, PRD 151, 1 CH (UN) Spring, PRD 121, 5 CH (UN)</i>		<i>Master of Industrial Design or similar</i>

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<i>Shop Staff (F) with Dean Vernon (F)</i>	<i>Fall, PRD 115, 1 CH (UN) Fall, PRD 116, 1 CH (UN)</i>		<i>Master of Industrial Design or similar</i>
<i>New Hire</i>	<i>Fall, PRD 220, 5 CH (UN) Fall, PRD 450, 2 CH (UN) Spring, PRD 221, 5 CH (UN) Spring, PRD 160, 2 CH (UN)</i>		<i>Master of Industrial Design or similar</i>
<i>New Hire</i>	<i>Fall, PRD 200, 3 CH (UN) Fall, PRD 320, 5 CH (UN) Spring, PRD 210, 3 CH (UN) Spring, PRD 321, 5 CH (UN)</i>		<i>Master of Industrial Design or similar</i>
<i>New Hire</i>	<i>Fall, PRD 420, 5 CH (UN) Fall, PRD/BME 451, 2 CH (UN) Spring, PRD 421, 5 CH (UN) Spring, PRD 261, 2 CH (UN)</i>		<i>Master of Industrial Design or similar</i>
<i>New Hire</i>	<i>Fall, PRD 271, 2 CH (UN) Fall, PRD/BME 371, 1 CH (UN) Fall, PRD 471, 1 CH (UN) Spring, PRD/BME 170, 3 CH (UN)</i>		<i>Master of Industrial Design or similar</i>
<i>New Hire (P)</i>	<i>Fall, PRD 370, 3 CH (UN) Spring, PRD 400, 1 CH (UN)</i>		<i>Master of Industrial Design or similar</i>
<i>New Hire (P & F)</i>	<i>Fall/Spring, PRD 510, variable CH (UN) Fall/Spring, PRD 520, variable CH (UN) Fall/Spring, PRD 530, variable CH (UN) Fall/Spring, PRD 540, variable CH (UN) Fall/Spring, PRD 550, variable CH (UN) Fall/Spring, PRD 560, variable CH (UN)</i>		<i>Master of Industrial Design or similar</i>
<i>F = full time P= part time</i>	<i>D = developmental UN = undergraduate nontransferable UT = undergraduate transferable G = graduate</i>		

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5. Assessment – Program Assessment and Student Learning Outcomes (SLOs)	
5a	<p>Referring to program objectives, student benefits, and the target audience (questions 2b and 2f), explain how the <i>program</i> will be assessed, which is different from assessing student learning outcomes. Include how the faculty of record will determine whether the program is a success or a failure. List the benchmarks, the assessment tools, and the plan of action if the program does not meet its objectives. (250 word limit)</p> <p><i>The Bachelor of Science in Product Design faculty of record, with support from advisory boards and collaborative faculty in other disciplines in the College, will gauge the success of the proposed program by evaluating the following metrics: a) number of program applicants, b) student within-major grade point average, c) 4 and 5-year graduation rate, d) number and diversity of job offers per graduate.</i></p> <p><i>Success of the program after the 5th year of operation will be evaluated using the following benchmarks: a) 40 or more new applicants, b) mean 3.2 GPA within major per year, c) 4-year graduation rate > 75%; 5-year graduation rate > 90%, d) 2 or more job offers per graduate.</i></p> <p><i>If the program does not meet these benchmarks, then the Bachelor of Science in Product Design faculty will appoint an ad hoc committee to interview: a) accepted applicants who did not matriculate, b) matriculated students who did not meet the required GPA, c) students who changed majors, d) students who withdrew from the degree program and college. Information obtained from these interviews will be used to define the measures needed to obtain these benchmarks.</i></p>
5b	<p><i>(related to section 14) Append an assessment plan¹⁰ for the SLOs to the end of this form. (Click HERE for a sample assessment plan.)</i></p>
5c	<p>Explain how the curriculum achieves the program level student learning outcomes by describing the relationship between the overall curriculum or the major curricular components and the program objectives. (300 word limit)</p> <p>The objectives of the Bachelor of Science in Product Design program as described in Section 2b are met by being the first program of its kind in the Commonwealth of Kentucky, strategically located in Lexington and also by seizing the unique opportunity to collaborate with the extensive healthcare part of the UK campus.</p> <p>The curriculum is driven by the sequential Studio Sequence, which occurs every semester, and is worth 5 credit hours in each of those terms. Studios are supplemented by a sequence of Studio Support courses that are directly related to the respective studio in that semester focusing on specific skills and knowledge for the adjacent studio (e.g., ergonomics, user experience, human anatomy, etc.). In addition to these fundamental components, the UK Core courses and traditional PD (product design) Courses (e.g., computer modeling, materials and processes, professional practice, etc.) flank the central studio sequence. The most innovative aspect of the curriculum, however, is the PD Module system. Modules are essentially special topics courses with variable credit that allow flexibility for faculty or invited guests to teach focused, “deep dive,” short courses in long or compressed time. It allows for a diverse spread of topics under the following related areas: Design Competencies; Design Management; Social Impact & Innovation; Advanced Materials</p>

¹⁰ An assessment plan is typically a tabular grid that illustrates the artifacts, rubrics, assessment team, and periods of assessment for the SLOs.

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	& Processes; Professional Development, and; Healthcare. This creates the greatest opportunity for collaborative course development with faculty in Biomedical Engineering, Nursing, Medicine, Dentistry, Pharmacy, Health Sciences and Public Health. At the undergraduate level these modules can be assembled as certificates or a minor.
5d	Append a PDF of the program’s course map ¹¹ to the end of this form. (Click HERE for a sample curricular map.)
5e	(related to 2c) Based on the SLOs from question 2c, which components will be evaluated, i.e. course mapping? For each student learning outcome identify in which courses it is covered in the curriculum and note whether employers, students, alumni, and/or faculty outside of the program were involved in the development of student learning outcomes. (300 word limit).
5f	When will components be evaluated? Identify the review cycle for each student learning outcome. (e.g, every semester or each year) (150 word limit)
	<i>This form is unable to accept type in #5e above. The attached Assessment Plan provides responses for both 5e and 5f.</i>
5g	When will the data be collected? (This may or may not be different from when the assessment is conducted.) (150 word limit)
	<i>Fall and Spring semester coursework performance data for each student will be collected by administrative assistants in the Bachelor of Science in Product Design program and in the Office of Student Services the week after the close of spring semester final examinations. Also, see the attached Assessment Plan for Data Collection and Review.</i>
5h	How will the data be collected? (150 word limit)
	<i>See the attached Assessment Plan for Data Collection and Review.</i>
5i	What will be the benchmarks and/or targets to be achieved? (150 word limit)
	<i>See the attached Assessment Plan Appendix for Evaluation Rubric.</i>
5j	What individuals or groups will be responsible for data collection? (150 word limit)
	<i>Personnel in the UK Registrar's office will compile course grades. Administrative assistants in the Bachelor of Science in Product Design program will be responsible for collecting course grades and presenting data to the faculty for evaluation.</i>
5k	How will the data and findings be shared with faculty? (150 word limit)
	<i>Coursework performance data obtained from student transcripts provided by the UK Registrar will be placed on password protected share drives and made available to Bachelor of Science in Product Design faculty.</i>
5l	How will the data be used for making programmatic improvements? (150 word limit)

¹¹ Course mapping (or “curricular mapping”) is a representation of how faculty intend to approach and assess each of the student learning outcomes identified for the courses for the degree program, with an emphasis on courses required for all degree candidates. It is a master chart that indicates which objectives are being met, to what extent, and how often. This identifies whether an objective is “introduced,” “developed,” and/or “mastered” within a given course; it may be helpful also to chart any classroom-based assessment measures used to demonstrate that claim.

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	<i>Systematic deficiencies in coursework grades will be noted and the instructor of record will be responsible for providing suggestions for future improvements. Grade point averages not meeting established benchmarks will be examined for causation. Courses associated with lower than expected grades will be evaluated by the faculty and remediation efforts will be implemented.</i>
5m	<p>What are the measures of teaching effectiveness? (150 word limit)</p> <p><i>All Instructors of Record teaching courses in the Bachelor of Science in Product Design program will be required to use the on-line Teacher Course Evaluation (TCE) process to obtain teaching effectiveness data from each student. The Director will require TCE data from each instructor each semester he or she teaches a program-relevant course.</i></p> <p><i>For the first three years of the proposed program, because of the ongoing collaborative work with Biomedical Engineering, each product design course in the curriculum will be evaluated by a combination of design, product design, and biomedical engineering faculty at the end of the spring semester of that academic year. Course evaluations will focus on student grades and all metrics obtained from course TCEs. Each instructor will be asked to provide a self-generated SWOT (strengths, weaknesses, opportunities, threats) assessment of this course and their teaching effectiveness.</i></p> <p><i>The Director will review the summarized TCE data and reflective statements and provide necessary feedback to the faculty annually.</i></p>
5n	<p>What efforts to improve teaching effectiveness will be pursued based on these measures? (150 word limit)</p> <p><i>The Bachelor of Science in Product Design Director, and, as appropriate, other unit directors in the College and in Biomedical Engineering, will attend classes taught by the Instructor of Record in which sub-standard teaching metrics exist. These, and other faculty, will provide recommendations for curriculum modification or teaching improvement as necessary.</i></p>
5o	<p>What are the plans to evaluate students' post-graduate success? (150 word limit)</p> <p><i>Administrative assistants in the Bachelor of Science in Product Design program and the Student Services Office will collect, organize, and distribute the following metrics evaluating post-graduate student success: a) number and type (industry/office type) of job offers received, b) starting salary (compared to U.S. national averaged for Product Design/Industrial Design/User Experience (UX) graduates), c) duration of employment at each position, d) promotions received, e) patents, products or inventions pursued, f) publications, public lectures, or media citations of the graduate.</i></p>

6. Miscellaneous

6a	<p>Is there anything else about the proposed program that should be mentioned? (150 word limit)</p> <p><i>This is a completely new discipline to UK. There is a suite of offerings under the umbrella of Product Design. With this Bachelor of Science in Product Design we are looking forward to a Master of Science in Product Design, potential related minors, and several graduate certificates, in addition to a future dual or collaborative degree with Biomedical Engineering.</i></p>
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7. Specific Course Requirements. [S, R]

UK Core Requirements

All specific core courses listed below are suggestions for Bachelor of Science in Product Design students.	Course Prefix and Number	Number of Credit Hours
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7a	I. Intellectual Inquiry (one course in each area)		
	Arts and Creativity		3
	Humanities		3
	Social Sciences		3
	Natural/Physical/Mathematical		3
7b	II. Composition and Communication		
	Composition and Communication I	CIS or WRD 110	3
	Composition and Communication II	CIS or WRD 111	3
7c	III. Quantitative Reasoning (one course in each area)		
	Quantitative Foundations		3
	Statistical Inferential Reasoning		3
7d	IV. Citizenship (one course in each area)		
	Community, Culture and Citizenship in the USA		3
	Global Dynamics		3
7e	Total UK Core Hours:		30
7f	Graduation Composition and Communication Requirement (GCCR)		
7f.i	How will the GCCR be delivered in the proposed program? For each box checked, list the prefix and number for the relevant course(s), including any cross-listing(s).		
	<input checked="" type="checkbox"/> Single course within the program's home unit.		<i>PRD 370</i>
	<input type="checkbox"/> Multiple courses within the program's home unit.		
	<input type="checkbox"/> Single course from outside ¹² the program's home unit.		
	<input type="checkbox"/> Multiple courses from outside ¹¹ the program's home unit.		
	<input type="checkbox"/> Combination of course(s) from inside and outside ¹¹ the program's home unit.		
7f.ii	Course	Prefix & Number	Course Status ¹³
	Course #1	<i>PRD 370</i>	new
	Course #2 (<input type="checkbox"/> Not applicable.)		
	Course #3 (<input type="checkbox"/> Not applicable.)		
	Course #4 (<input type="checkbox"/> Not applicable.)		
7f.iii	Provide a narrative regarding this program's GCCR, for inclusion in the Bulletin.		
	PRD 370 Design Research requires successful completion of ethnographic research exercises, a written abstract, annotated bibliography, a written and visual research paper and multiple oral/visual presentations of research findings. This course satisfies the GCCR for the Bachelor of Science in Product Design program. Successful practice of Product Design requires a high level of		

¹² You must include a letter of support from the other unit. The letter must address delivery mechanisms and resources allocated for the specified GCCR course(s). Please convert the letter to a PDF and append to the end of this form.

¹³ Use the drop-down list to indicate the current status of the course, i.e. if the course is an existing course that will not be changed, if the course is an existing course that will be changed, or if the course is a new course.

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competency in oral, written and visual communications, intrinsic to every studio course, which is the largest component of every semester in the program.

7g College-level Requirements

How will college-level requirements be satisfied?

<input checked="" type="checkbox"/> Standard University college requirement	List course(s): <i>PRD 150-151;PRD 160;PRD 115-116;PRD 120-121;PRD 130;PRD/EGR 110;PRD/BME 170;PRD/EGR 250;PRD 200;PRD 210;PRD 260-261;PRD 220-221;PRD/BME 271-272</i>
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OR

<input type="checkbox"/> Specific course(s)	List course(s):
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*Use the grids below to list core courses, electives, courses for a track, etc.
Use the course title from the Bulletin or from the most recent new/change course form.*

7h* Program Major Core Courses. (Required for all students in the program and includes pre-major and pre-professional courses. Check the appropriate box to describe the course as either “program core” or “pre-major/pre-professional”.)

Prefix & Number	Course Title	Type of Course	Credit Hrs	Course Status ¹³
<i>PRD 130</i>	<i>History of Design Technology</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	<i>3</i>	New
<i>PRD 115</i>	<i>Form Workshop I</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	<i>1</i>	New
<i>PRD 116</i>	<i>Form Workshop II</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	<i>1</i>	New
<i>PRD 150</i>	<i>Computer-Aided Design I</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	<i>1</i>	New
<i>PRD 151</i>	<i>Computer-Aided Design II</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	<i>1</i>	New
<i>PRD 160</i>	<i>Design Visualization: Analog</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	<i>2</i>	New
<i>PRD/EGR 110</i>	<i>Colloquium: Topics in Product Design</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	<i>1</i>	New
<i>PRD/BME 170</i>	<i>Human Anatomy for Design</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	<i>3</i>	New
<i>PRD 120</i>	<i>Form Studio</i>	<input checked="" type="checkbox"/> Pgm Core	<i>5</i>	New

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		<input type="checkbox"/> Pre-major/prof		
<i>PRD 121</i>	<i>Product Design Studio I</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	5	New
<i>PRD/EGR 250</i>	<i>Computer-Aided Design: Solidworks</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	2	New
<i>PRD 200</i>	<i>History & Theory of Product Design I</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	3	New
<i>PRD 210</i>	<i>History & Theory of Product Design II</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	3	New
<i>PRD 260</i>	<i>Design Visualization: Digital</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	2	New
<i>PRD 261</i>	<i>Design Visualization: Photography & Portfolio</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	2	New
<i>PRD 220</i>	<i>Product Design Studio II</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	5	New
<i>PRD 221</i>	<i>Product Design Studio III</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	5	New
<i>PRD 271</i>	<i>Introduction to Ergonomics</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	2	New
<i>PRD 272</i>	<i>Introduction to UX for Product Design</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	2	New
<i>PRD 370</i>	<i>Design Research Methods</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	3	New
<i>PRD/BME 350</i>	<i>Materials & Processes</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	3	New
<i>PRD 450</i>	<i>Portfolio for Product Design</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	2	New
<i>PRD/BME 451</i>	<i>Integrated Entrepreneurship in Product Design</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	2	New
<i>PRD 320</i>	<i>Product Design Studio IV</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	5	New

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<i>PRD 321</i>	<i>Product Design Studio V</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	5	New
<i>PRD 420</i>	<i>Integrated Design Studio I</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	5	New
<i>PRD 421</i>	<i>Integrated Design Studio II</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	5	New
<i>PRD/ BME 371</i>	<i>Ergonomics</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	1	New
<i>PRD/ BME 372</i>	<i>UX + UI for Product Design</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	1	New
<i>PRD 471</i>	<i>Advanced Ergonomics</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	1	New
<i>PRD 410</i>	<i>Colloquium: Topics in Product Design II</i>	<input checked="" type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	1	New
<i>PRD 510</i>	<i>Design Competencies (Special Topics)</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	1	New
<i>PRD 520</i>	<i>Design Management (Special Topics)</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	1	New
<i>PRD 530</i>	<i>Social Impact & Innovation in Product Design (Special Topics)</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	1	New
<i>PRD 540</i>	<i>Advanced Materials & Processes (Special Topics)</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	1	New
<i>PRD 550</i>	<i>Professional Development in Product Design (Special Topics)</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	2	New
<i>PRD 560</i>	<i>Product Design in Healthcare (Special Topics)</i>	<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof	1	New
		<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof		Select one....
		<input type="checkbox"/> Pgm Core <input type="checkbox"/> Pre-major/prof		Select one....
		<input type="checkbox"/> Pgm Core		Select one....

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		<input type="checkbox"/> Pre-major/prof			
		<i>Total Core Courses Credit Hours:</i>	90		
7i	Is there any narrative about pre-major or pre-professional courses for the program that should be included in the Bulletin? If "Yes," note below. (150 word limit)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
7j	Is there any narrative about core courses for the program that should be included in the Bulletin? If "Yes," note below.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
<i>Core courses in the Bachelor of Science in Product Design program are designed to instill essential competencies in basic science and mathematics, ergonomics, and user experience. However, more fundamental is the skill of planning and making, from two-dimensional to three-dimensional using diverse technologies and a knowledge base of contemporary materials and processes, as these competencies are essential for success in advanced product design studios.</i>					
		Program Guided Electives¹⁴ (Guided electives for <u>all</u> students in the program.)	<input type="checkbox"/> Not Applicable		
7k*	Does the program include any guided electives? (If "No," indicate & proceed to 7n.)	Yes	No ¹⁵ <input checked="" type="checkbox"/>		
7l	Is there any narrative about guided electives courses that should be included in the Bulletin? If "Yes," note below. (150 word limit)	Yes	No <input checked="" type="checkbox"/>		
7m*	Using the grid provided, list the guided electives below.				
Prefix & Number	Course Title	Credit Hrs	Course Status		

¹⁴ Program guided electives are available to all students in the program and are organized as groups of elective courses, from which a student chooses one (or two, or three, etc.).

¹⁵ If "No," proceed to question 7n.

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7s	Total Credit Hours Required by Level. (below)				
	100-level: 41	200-level: 32	300-level: 24	400-level: 16	500-level: 7
7t	What is the total number of credit hours required for the degree? (e.g. 120, 126)				120
	If an explanation about the total credit hours is necessary, use the space below. (150 word limit)				

8. Degree Plan

8a	Create a degree plan for the proposed program by listing in the table below the courses that a typical student would take each semester. If multiple tracks are available, click HERE for a template for additional tracks. Append a PDF with each track's semester-by-semester program of study to the end of this form.				
	YEAR 1 - FALL:	<i>CIS 110, PRD 150, PRD 115-116, PRD 120, PRD/EGR 110, Core (Quantitative)</i>	YEAR 1 - SPRING:	<i>CIS 111, PRD 151, PRD 160, PRD 121, PRD/BME 170, Core (Natural Sciences)</i>	
	YEAR 2 - FALL :	<i>PRD/EGR 250, PRD 200, PRD 260, PRD 220, PRD 271</i>	YEAR 2 - SPRING:	<i>COM 101, PRD 210, PRD 261, PRD 221, PRD/BME 272</i>	
	YEAR 3 - FALL:	<i>PRD 130, PRD 370, PRD 510, PRD 320, PRD/BME 371, Core (Statistical Reasoning)</i>	YEAR 3 - SPRING:	<i>University Elective, PRD/BME 350, PRD 530, PRD 560, PRD 321, PRD/BME 372</i>	
	YEAR 4 - FALL:	<i>PRD 450, PRD 451, PRD 520, PRD 540, PRD 420, PRD/BME 471, Core (Global Dynamics)</i>	YEAR 4 - SPRING:	<i>University Elective, PRD 550, PRD 421, PRD 410, Core (Citizenship/Culture)</i>	
8b	With reference to the degree plan above, explain how there is progression in rigor and complexity in the courses that make up the program. (150 word limit)				

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The curriculum is driven by sequential studios, occurring every semester, (5 credit hours each term). Projects progress in both complexity and length each semester. Studio Support courses directly relate to respective studios and focus on specific skills (e.g., ergonomics, user experience, human anatomy, etc.). Each of these content areas are repeated as you move through the studio sequence but layers of content and complexity are added over time. Traditional PD (product design) Courses (e.g., analog drawing, computer modeling, materials and processes, professional practice, etc.) flank the central studio sequence and increase in rigor as students move from semester to semester. In the PD Module system (special topics courses), modules grow in depth and rigor as they accumulate.

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9. Approvals/Reviews

Information below about the review process does not supersede the requirement for individual letters of support from educational unit administrators and from educational subunit administrators.

	Reviewing Group Name	Date Approved	Contact Person Name/Phone/Email
9a	<i>(Within College)</i>		
	<i>Dean</i>		<i>Mitzi R Vernon /7-7619/ vernon@uky.edu</i>
	<i>Director Design Technology</i>		<i>William Massie / 7-7617/ William.Massie1@uky.edu</i>
	<i>Associate Dean for Students</i>		<i>Bruce Swetnam / 7-7617 / bruce.swetnam@uky.edu</i>
	<i>Chair, Dept of Historic Preservation</i>		<i>Daniel Vivian / /</i>

9b	<i>(Collaborating and/or Affected Units)</i>		
	<i>Chair, Biomedical Engineering</i>		<i>Guigen Zhang / 3-7217 / guigen.bme@uky.edu</i>
	<i>Associate Professor, Biomedical Engineering</i>		<i>David Pienkowski / 8-1667 / pienkow@uky.edu</i>
			<i>/ /</i>
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9c	(Senate Academic Council)	Date Approved	Contact Person Name
	Undergraduate Council		
	Health Care Colleges Council (if applicable)		

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INFORMATION REQUIRED BY CPE AND SACS

10. Program Overview – Program Quality and Student Success

10a	<p>Highlight any distinctive qualities of the proposed program. Are any faculty nationally or internationally recognized for expertise in this field? Does this program build on the expertise of an existing locally, nationally, or internationally recognized program at UK? (300 word limit)</p>
	<p><i>The proposed program is unique in three ways: it is unique to the Commonwealth of Kentucky; it is unique to most undergraduate and graduate programs in industrial/product design in the United States because of its nimble modular system of classes as a subset of the curriculum; and it is unique in the United States because of its intention to actively collaborate with Biomedical Engineering and other healthcare colleges on the campus. The proposed Bachelor of Science in Product Design will confer graduates with a distinct competitive edge in the employment marketplace.</i></p> <p><i>Students in the proposed program will benefit from unique learning experiences jointly contributed by internationally recognized faculty from the Colleges of Engineering, Design, Medicine, etc. These faculty will collaborate to provide mutually agreed assignments, joint lectures, design-project mentoring, as well as research-project mentoring. Students will receive from these faculty an extraordinarily rich exposure to a wide variety of classroom lectures, laboratory sessions, studio experiences, and immersion in actual industrial related healthcare challenges.</i></p> <p><i>Industry representatives will contribute real-world product development challenges to senior project design students in this program, and thereby provide access to industrial technologies and learning experiences that rival those of traditional internship and co-operative arrangements.</i></p>
10b	<p>Clearly state the student admission, retention, and completion standards designed to encourage high quality. (300 words)</p> <p><i>Admission criteria for the proposed program include: a) completion of high school with coursework GPA of 3.0 or greater, b) ACT score of 22 or greater, c) demonstrated innovation/invention interest or capabilities. Programs within the College of Design require selective admission. Product Design will follow this tradition. The admissions committee will evaluate applications, which will include a portfolio or essay component to address prior high school or other relate coursework or skillset.</i></p> <p><i>Student retention begins with an annual (conclusion of the spring semester) evaluation of student progress. Bachelor of Science in Product Design faculty will evaluate student progress and if needed, recommend remedial counseling for performance improvement. The Bachelor of Science in Product Design Director will provide individualized counseling to students as needed.</i></p> <p><i>Graduation requirements include: a) completion of all required coursework, b) attainment of a within-major GPA of 3.0 or greater, and c) successful defense of their senior studio project.</i></p>
10c	<p>Describe how the proposed program will articulate with related programs in the state. Include the extent to which student transfer has been explored and coordinated with other institutions. Note: Convert all draft articulation agreements related to this proposed program to PDF and append to the end of this form. (300 word limit)</p> <p><i>There is no planned articulation of the proposed Bachelor of Science in Product Design with other programs in the state; there are no other programs of this nature in the Commonwealth. There are plans for articulation of this program with the concurrently proposed dual Bachelors Degrees in Biomedical Engineering and Product Design, and the proposed BS BME. Information regarding</i></p>

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	<i>the BS BME, dual degree, certificates and graduate PD program are contained in separate documents.</i>
10d	<p>Identify the applicant pool and how applicants will be reached. (300 word limit)</p> <p><i>The applicant pool for the proposed Bachelor of Science in Product Design includes all students seeking a career in product design or user experience, and especially those interested in a focus in healthcare.</i></p> <p><i>Specifically identified potential applicants include:</i></p> <ol style="list-style-type: none"> <i>1) high school STEM (science, technology, engineering, math) majors considering careers in healthcare related fields, transportation, athletic apparel or gear, communication systems or devices, tools, housewares, et al.</i> <i>2) high-school students contemplating a career in engineering or art,</i> <i>3) existing UK students who may want to consider transferring using our pending summer accelerated studio option,</i> <i>4) existing UK students who seek greater depth of understanding of basic product design to augment their major degrees.</i> <p><i>Potential applicants will be reached through a multi-modal marketing plan organized by a new advisory council formed the year before the official launch of the Bachelor of Science in Product Design. The College Recruitment Director, Communications Director and Associate Dean for Students will be actively involved with the council and the launch of the new program.</i></p>
11. Mission: Centrality to the Institution’s Mission and Consistency with State’s Goals	
11a*	<p>(related to 2b) Explain how the program objectives support at least two aspects of UK’s institutional mission and academic strategic plan? (150 word limit)</p> <p><i>The proposed program supports the mission of the university by educating the next generation of leaders in product design, to address global challenges that include healthcare, economic inequity, food security, communication, transportation and climate phenomena, with innovative and sustainable solutions.</i></p> <p><i>Transformational education is one of the outcomes of the novel curriculum of the proposed program. It offers prospective students a unique opportunity to combine technical and design educational experiences that lead to unique, career-transforming opportunities.</i></p> <p><i>The proposed program also contributes to regional economic development. Coalescence of College of Design faculty, biomedical engineering, students and faculty from the healthcare campus and Kentucky industry representatives, will provide a new hub for industry leading product innovation, and in turn, motivate establishment of industrial manufacturing facilities in the area.</i></p>
11b*	<p>(related to 2b) How do the program objectives support at least two aspects of the Council on Postsecondary Education’s (CPE) Strategic Agenda and the statewide implementation plan? (300 word limit)</p> <p><i>The proposed Bachelor of Science in Product Design provides educational opportunities that currently do not exist for Kentucky residents. It offers a creative new opportunity for obtaining a higher post-secondary education in multiple product fields including healthcare, transportation, housewares, agriculture, communication and computer technologies. This will promote attainment of the goal of 60% of the Kentucky population with a post-secondary degree.</i></p>

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	<i>The proposed program offers a unique new opportunity for creating new Kentucky based product design companies in addition to manufacturing companies that both employ product designers and also manufacture goods from new product development. Ensuring economic benefits from newly established companies partially satisfies one of the goals of the CPE Strategic Agenda.</i>
11c*	If an approval letter from an Education Professional Standards Board (EPSB) is required, check the box below and append a PDF version of the letter to this form. <input type="checkbox"/> (E.g. any program leading to teacher, principal, or superintendent certification, rank change, etc.)
12. Resources	
12a*	How will the program support or be supported by other programs within the institution? For example, shared faculty, shared courses, collaborative research, etc. (300 word limit) <i>The proposed Bachelor of Science in Product Design will have a symbiotic relationship with other studio-based programs in the College of Design (CoD) and the concurrently proposed BS BME and dual degree in BME and PD.</i> <i>Specifically, faculty from the CoD will work collaboratively with faculty from BME to teach product design basics and supervise student work in studio exercises. Faculty from BME will work collaboratively with faculty from the CoD to teach students regarding the technical constraints implicit in healthcare technology. Faculty from both units will co-mentor students during the proposed 2-semester long senior design project. Classroom, studio spaces and equipment will be shared between programs in the College of Design and between the CoE and CoD to provide a rich learning environment. Faculty from both PD and BME will pool their collective industrial contacts to create relevant and impactful senior design projects for program students, as well as to develop industrial contacts conducive to robust employment of program graduates.</i>
12b	What will be the projected “faculty-to-student in major” ratio? (150 word limit) <i>The Bachelor of Science in Product Design curriculum is driven by sequential studios, occurring every semester (5 credit hours each term). This is where the most critical faculty-to-student ratio occurs, and we anticipate that to be no greater than 1 to 18, with a projection of 70 majors by year 4 of the program. Should the level of enrollment grow as anticipated given the potential in Kentucky and beyond, we would move to two studios per year in Year 5, retaining the ratio but doubling the majors. In other core courses that are more lecture-based, the ratio will begin at 1 to 18 and is projected to grow to 1 to 36 at the end of four years. These ratios mirror the current faculty to student ratios in the College of Design.</i>
12c	Describe the library resources available ¹⁸ to support this program. Access to the qualitative and quantitative library resources must be appropriate for the proposed program and should meet recognized standards for study at a particular level or in a particular field where such standards are available. Adequacy of electronic access, library facilities, and human resources to service the proposed program in terms of students and faculty will be considered. (300 word limit) <i>The University of Kentucky, the flagship public university for the Commonwealth of Kentucky, maintains the premier research library in the state. This library is composed of 11 major facilities: William T. Young Library, Agricultural Information Center, Education Library, Shaver Engineering Library, John A. Morris Equine Library, Lucille Caudill Little Fine Arts Library, Medical Center Library, Science Library, Special Collections, the Kentucky Transportation Center Library, and the Hunter M. Adams College of Design Library, which resides in the current main administration building for the College of Design, Pence Hall. The Design Library has an</i>

¹⁸ Please contact OSPIE (OSPIE@L.uky.edu) for more information.

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	<p><i>extensive collection of books and journals relating to product design via its intrinsic connection to both architecture and interior design, and a rich archive of rare books and manuscripts that concern design at multiple scales.</i></p> <p><i>Between the twelve facilities comprising the library network, the university has access to 4,023,142 printed volumes, 588,428 electronic volumes, more than 400 commercial databases and archival manuscripts, and a broad collection of computer files, microforms, maps, film/video, audio and graphics. Annual collections expenditures total more than \$11.1 million. In FY12, 6.6 million searches were conducted in licensed databases and 2.8 million full-text articles were downloaded.</i></p> <p><i>UK Libraries collections support teaching, learning, and research in agricultural sciences, life sciences, chemistry, geological sciences, mathematics, physics, humanities, history, social sciences, economics, communications, information studies, business, fine arts, medicine, nursing, dentistry, health sciences, engineering, computer science, and veterinary science.</i></p>
12d	<p>Describe the physical facilities and instructional equipment available to support this program. Physical facilities and instructional equipment must be adequate to support a high-quality program. Address the availability of classroom, laboratory, and office space, as well as any equipment needs. (300 word limit)</p>
	<p><i>Currently the College of Design occupies four buildings in the core of campus. Pence Hall houses staff, administration, library, printing and plotting, computer lab, fabrication lab, lecture hall, faculty offices, design studios, review space, and classrooms. Miller Hall contains faculty offices, design studios, and review space. Bowman Hall has faculty offices, design studios, review space, and classrooms, and the Funkhouser Building holds faculty offices, design studios, review space, classrooms, and a materials library.</i></p> <p><i>The Workshop and Digital Fabrication Lab is a critical component to all design degrees. Currently this resides in the lower level of Pence Hall. The current space provides a safe, well-maintained environment in which both students and faculty can explore three-dimensional construction in natural (wood, metal) and synthetic media, 2- and 3-dimensional. Shop facilities provide standard material shaping tools, e.g. lathe, grinder, milling machine, welding, etc. and hand tools, in addition to digital fabrication equipment.</i></p> <p><i>The College of Design will be moving into a renovated adaptive reuse building in Fall of 2022, which will house all existing College programs with enhanced facilities, including library, studios, offices, classrooms and fabrication labs.</i></p>
<p>13. Demand and Unnecessary Duplication</p>	
13a*	<p>Provide justification and evidence to support the need and demand for this proposed program. Include any data on student demand, career opportunities at any level, or any recent trends in the discipline that necessitate a new program. (300 word limit)</p> <ul style="list-style-type: none"> • This evidence is typically in the form of surveys of potential students and enrollments in related programs at the institution. • Anecdotal evidence is insufficient. Demonstrate a systematic collection of data, thorough study of the data, and a reasonably estimated student demand for the program. • Provide evidence of student demand at state and national levels.

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In preparation for the Bachelor of Science in Product Design proposal, the College contracted with STAMATS, a higher education marketing firm to compile/assess data on the regional/national opportunity for this degree at the University of Kentucky. All projections in this proposal stem from that report and the formation of an internal and external roundtable of experts in 2017.

In the U.S., there is currently 12% growth in product design degrees and 20% growth in programs. There are no schools in Kentucky offering a degree in Industrial or Product Design.

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	<p><i>Our competitive opportunity lies in the growing demand for specialized product designers (e.g., user experience (UX) designers), the absence of any graduates in Kentucky, and the juxtaposition of the engineering and healthcare colleges at UK –collaboration will make us unique in the U.S. Within the data collected, job titles associated with product design indicate a very high demand for UX designers, which is particularly noteworthy regarding implications for collaboration with engineering and healthcare. The most robust programs in the U.S. are integrated programs of design, engineering, and communications.</i></p> <p><i>The manufacturing industry accounts for 18.3% of Kentucky’s annual economic output; the Bachelor of Science in Product Design could deliver graduates into a lucrative employment market. In 2016, there were 14,161 jobs posted for product design positions in the U.S. The data indicates that the labor market for such professionals is large and growing at approximately the same rate as the broader U.S. economy.</i></p> <p><i>This Bachelor of Science in Product Design will increase enrollment and program opportunities for the College of Design, offering a progressive program with lower enrollment fees, a copious job market, and salary earning potential of 21% higher than the national average. Professionals in the product design field can expect higher salaries than 59% of all positions offering \$75K or more. With an emphasis on healthcare design, we can focus on a current trend in U.S expenditure: 17.1% of the GNP was on healthcare in 2014 (19.9% by 2025).</i></p>		
13b	<p>Clearly state the degree completion requirements for the proposed program. (150 word limit)</p> <p><i>Requirements for successful program completion include: a) successfully earning credit for all required and elective (including UK Core) courses in the Bachelor of Science in Product Design, b) successful oral and written defense of the required senior design project, c) successful team performance in pursuit of the required senior design project, d) overall GPA of 2.5 or greater, and e) within major GPA of 3.0 or greater.</i></p>		
13c*	<p>Will this program replace or enhance any existing program(s) or tracks (or concentrations or specializations) within an existing program? (300 word limit)</p>	<p>Yes <input checked="" type="checkbox"/></p>	<p>No <input type="checkbox"/></p>
	<p>If “Yes,” explain: <i>This program will enhance the School of Architecture, School of Interiors, and Department of Historic Preservation existing programs by creating synergy between undergraduate students in cross-listed courses, as well as providing dual-degree and minor options within the College of Design. The program will also enhance the opportunities for undergraduates in the Department of Landscape Architecture and Biomedical Engineering.</i></p>		
13d	<p>Identify the primary feeders for the program. (150 word limit)</p> <p><i>The primary feeders include, but are not limited to:</i></p> <ol style="list-style-type: none"> <i>1)high school STEM (science, technology, engineering, math) majors considering careers in healthcare related fields, transportation, athletic apparel or gear, communication systems or devices, tools, housewares, packaging, et al.</i> <i>2)high-school students contemplating a career in engineering or art,</i> <i>3)existing UK students who may want to consider transferring using our pending summer accelerated studio option,</i> <i>4) existing UK students who seek greater depth of understanding of basic product design to augment their major degrees.</i> 		
13e	<p>Describe the student recruitment and selection process. (300 word limit)</p>		

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Recruitment efforts by the College of Design will promote the Bachelor of Science in Product Design program among the primary feeders and target audiences with marketing materials that are part of a growing collateral in the College referred to as the “card series.” Each academic unit and ancillary program such as international study and our developing “field school” have launched a series of digital and analog recruitment cards used by our Office of Recruitment and Student Services. Additionally, faculty and administrators will use conferences and professional networks to further promote the program and will personally communicate with interested students to encourage their application. A dedicated admissions committee with the Recruitment Office will be responsible for admissions. The application requires a statement of interest and GPA and relevant test scores.

13f* Specify any distinctive qualities of the proposed program. (300 word limit)

The proposed program is unique in three ways: it is unique to the Commonwealth of Kentucky; it is unique to most undergraduate and graduate programs in industrial/product design in the United States because of its nimble modular system of classes as a subset of the curriculum; and it is unique in the United States because of its intention to actively collaborate with Biomedical Engineering and other healthcare colleges on the campus. The proposed Bachelor of Science in Product Design will confer graduates with a distinct competitive edge in the employment marketplace.

Students in the proposed program will benefit from unique learning experiences jointly contributed by internationally recognized faculty from the Colleges of Engineering, Design, Medicine, etc. These faculty will collaborate to provide mutually agreed assignments, joint lectures, design-project mentoring, as well as research-project mentoring. Students will receive from these faculty an extraordinarily rich exposure to a wide variety of classroom lectures, laboratory sessions, studio experiences, and immersion in actual industrial-related healthcare challenges.

Industry representatives will contribute real-world product development challenges to senior project design students in this program, and thereby provide access to industrial technologies and learning experiences that rival those of co-ops.

13g Provide any evidence of a projected net increase in total student enrollments to the campus as a result of the proposed program. (300 word limit)

By the end of the 5th year of the program, and after the first graduating class, the total new enrollment to the campus is anticipated to be 93 from the Bachelor of Science in Product Design program. This forecast is a conservative estimate based on the STAMATS analysis of current demand and growth for product design graduates and programs across the U.S. It is also based on regional benchmark institutions, such as Virginia Tech, which grew from 2 to 60 majors within its first two program years (no other programs exist in Virginia), and based on other programs, such as Auburn, that limit enrollment, turning away applicants.

13h Use table below to estimate student demand for the first five years following implementation.

Academic Year	# Degrees Conferred	Majors (headcount) Fall Semester
2020 - 2021	0	18
2021 - 2022	0	37
2022 - 2023	0	48
2023 - 2024	16	71
2024 - 2025	19	93

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13i	Clearly describe all evidence justifying a new program based on changes in the academic discipline or other academic reasons. (300 word limit)		
	<p><i>There are no schools in Kentucky offering a degree in Industrial or Product Design. In the U.S., there is currently 12% growth in product design degrees and 20% growth in programs. In 2016, there were 14,161 jobs posted for product design positions in the U.S. The data indicates that the labor market for such professionals is large and growing at approximately the same rate as the broader U.S. economy. The data suggest that a Bachelor's degree is essentially required for employment in the field of product design, with a Master's degree preferred for nearly one in every four positions. This suggests that demand for a Master's degree in Product Design would very likely come from both career-changers and industry professionals seeking advanced training/education within the field.</i></p> <p><i>This Bachelor of Science in Product Design will increase enrollment and program opportunities for the College of Design, offering a progressive program with lower enrollment fees, a copious job market, and salary earning potential of 21% higher than the national average.</i></p> <p><i>Our competitive opportunity lies in the growing demand for specialized product designers (e.g., user experience (UX) designers), the absence of any graduates in Kentucky, and the juxtaposition of the engineering and healthcare colleges at UK –collaboration will make us unique in the U.S. Within the data collected, job titles associated with product design indicate a very high demand for UX designers, which is particularly noteworthy regarding implications for collaboration with engineering and healthcare. The most robust programs in the U.S. are integrated programs of design, engineering, and communications. These types of programs do not yet fully exist at UK.</i></p>		
13j	Has the Council on Postsecondary Education identified similar programs?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>(Please contact OSPIE (OSPIE@L.uky.edu) for help with this question.)</i>		
	If “Yes,” the following questions (5h1 – 5h5) must be answered.		
(1)	Does the program differ from existing programs in terms of curriculum, focus, objectives, etc.? (150 word limit)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	If “Yes,” explain:		
(2)	Does the proposed program serve a different student population (e.g., students in a different geographic area or nontraditional students) from existing programs? (150 word limit)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	If “Yes,” explain:		
(3)	Is access to existing programs limited? (150 word limit)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	If “Yes,” explain:		
(4)	Is there excess demand for existing programs? (150 word limit)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	If “Yes,” explain:		
(5)	Will there be collaboration between the proposed program and existing programs? (150 word limit)	Yes <input type="checkbox"/>	No <input type="checkbox"/>

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	If "yes," explain the collaborative arrangements with existing programs. If "no," explain why there is no collaboration with existing programs.		
13k*	Are there similar programs in other Southern Regional Education Board (SREB) states in the nation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	If "Yes," please answer the questions below to demonstrate why this proposed program is needed in addition to the one(s) currently in existence.		
13k. i*	Identify similar programs in other SREC states and in the nation.		
	<p>SREB</p> <ul style="list-style-type: none"> University of Houston University of Louisiana-Lafayette Auburn University Georgia Institute of Technology Savannah College of Art and Design (SCAD) Art Institute of Fort Lauderdale Appalachian State University North Carolina State University James Madison University Virginia Tech Maryland Institute College of Art (MICA) <p>NATIONAL</p> <ul style="list-style-type: none"> Academy of Art University Lawrence Technological University Arizona State University Massachusetts College of Art and Design Art Institute of Colorado Metropolitan State University of Denver Art Institute of Fort Lauderdale Michael Graves College, Kean University Art Institute of Orange County Milwaukee Institute of Art & Design (MIAD) Art Institute of Seattle Montclair State University Art Center College of Design New Jersey Institute of Technology Brigham Young University Northern Michigan University California College of the Arts Ohio State University California State University - Long Beach Carleton University Otis College of Art and Design Carnegie Mellon University Parsons School of Design at The New School Cleveland Institute of Art 		

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	Pennsylvania College of Technology College for Creative Studies Pratt Institute Columbus College of Art & Design Purdue University Drexel University Rhode Island School of Design Emily Carr University of Art & Design Rochester Institute of Technology (RIT) San Francisco State University Iowa State University San Jose State University Kansas State University Kendall College of Art & Design School of the Art Institute of Chicago Southern Illinois University		
13k.ii*	Does the program differ from existing programs in terms of curriculum, focus, objectives, etc.? If "Yes," explain. (300 word limit)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	The proposed program is unique to most undergraduate and graduate programs in industrial/product design in the United States because of its nimble modular system of classes as a subset of the curriculum; and it is unique in the United States because of its intention to actively collaborate with Biomedical Engineering and other healthcare colleges on the campus. The proposed Bachelor of Science in Product Design will confer graduates with a distinct competitive edge in the employment marketplace. Virginia Tech has a modular system, but it is a smaller subset of the undergraduate degree and not organized to help form minors or certificates. Further, the incorporation of a minor in User Experience (UX) will set the whole program apart from most schools in the U.S. There are some UX Minor programs in the U.S., but they are not normally associated with product design degrees.		
	Students in the proposed program will benefit from unique learning experiences jointly contributed by internationally recognized faculty from the Colleges of Engineering, Design, Medicine, etc. These faculty will collaborate to provide mutually agreed assignments, joint lectures, design-project mentoring, as well as research-project mentoring. Students will receive from these faculty an extraordinarily rich exposure to a wide variety of classroom lectures, laboratory sessions, studio experiences, and immersion in actual industrial-related healthcare challenges.		
13k.iii*	Does the proposed program serve a different student population (e.g., students in a different geographic area and non-traditional students) from existing programs? If "Yes," explain. (300 word limit)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
13k.iv*	Is access to existing programs limited? If "Yes," explain. (300 word limit)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

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13k.v*	Is there excess demand for existing similar programs? If "Yes," explain. (300 word limit)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
13k.vi*	Will there be collaboration between the proposed program and existing programs? If "No," explain. (300 word limit)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
13l	Would your institution like to make this program available through the Academic Common Market ¹⁹ ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
13m	<p>Clearly describe evidence of employer demand or discipline needs. Such evidence may include employer surveys, current labor market analyses, and future human resources projections. Where appropriate, evidence should demonstrate employers' preferences for graduates of the proposed program over persons having alternative existing credentials and employers' willingness to pay higher salaries to graduates of the proposed program. (300 word limit)</p> <p><i>In preparation for the Bachelor of Science in Product Design proposal, the College contracted with STAMATS, a higher education marketing firm to compile/assess data on the regional/national opportunity for this degree at the University of Kentucky. In the U.S., there is currently 12% growth in product design degrees and 20% growth in programs.</i></p> <p><i>The manufacturing industry accounts for 18.3% of Kentucky's annual economic output; the Bachelor of Science in Product Design could deliver graduates into a lucrative employment market. In 2016, there were 14,161 jobs posted for product design positions in the U.S. The data indicates that the labor market for such professionals is large and growing at approximately the same rate as the broader U.S. economy.</i></p> <p><i>This Bachelor of Science in Product Design will increase enrollment and program opportunities for the College of Design, offering a progressive program with lower enrollment fees, a copious job market, and salary earning potential of 21% higher than the national average. Professionals in the product design field can expect higher salaries than 59% of all positions offering \$75K or more. With an emphasis on healthcare design, we can focus on a current trend in U.S expenditure: 17.1% of the GNP was on healthcare in 2014 (19.9% by 2025).</i></p>		
13n*	<p>Describe the types of jobs available for graduates, average wages for these jobs, and the number of anticipated openings for each type of jobs at the regional, state, and national levels.</p> <p><i>See text above in 13m. Based on STAMATS data and recent reports at the Industrial Designers Society of America (IDSA), entry level product designers can expect to make \$60 - \$70K, while entry level UX designers can expect \$100K with significant demand over the next decade. Across the U.S. in 2016, 14,161 jobs related to product design were posted and that number has been growing steadily since 2011 but more rapidly since 2014. Nearly 1 in 5 jobs related to product design posted in 2016 were located in the Detroit area, suggesting the demand for designers for automotive design. San Francisco and New York were the next two locations with the highest number of job postings, followed by Los Angeles, San Jose, Chicago, Boston, Seattle, Minneapolis,</i></p>		

¹⁹ Please contact OSPIE (OSPIE@L.uky.edu) for more information.

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Phoenix, Atlanta, Washington, DC, Dallas, Portland, OR, Philadelphia, Cleveland, Milwaukee, Charlotte, in that order.

Below are statistics from the Bureau of Labor Statistics, including Commercial and Industrial Design and other related fields.

	Regional	State	National
Type of Job	Commercial & Industrial Design	Commercial & Industrial Design	Commercial & Industrial Design
Wage	\$64,980	\$67,426	\$65,970
Number of Openings (5 years)	15	49	41,400
Type of Job	Design, Other	Design, Other	Design, Other
Wage	\$36,389	\$35,584	\$55,930
Number of Openings (5 year)	8	26	5,800
Type of Job	Exhibit Designers	Exhibit Designers	Exhibit Designers
Wage	\$49,260	\$47,185	\$53,090
Number of Openings (5 year)	8	16	1,600
Type of Job	Art Director	Art Director	Art Director
Wage	\$75,547	\$74,538	\$92,500
Number of Openings (5 year)	42	73	5,400

14. Assessment and Oversight

14a	Describe <i>program</i> evaluation procedures for the proposed program. These procedures may include evaluation of courses and faculty by students, administrators, and departmental personnel as appropriate. Program review procedures shall include standards and guidelines for the assessment of student outcomes implied by the program objectives and consistent with the institutional mission. (300 word limit)
	<i>Program assessment will be based on student evaluations, retention rates, financial sustainability, graduate employment, and semi-annual reviews.</i>
14b*	Describe how each program-level student learning outcome will be assessed and how assessment results will be used to improve the program. (300 word limit)

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Assessment of student learning will occur continually in all courses, punctuated by the following events:

- *examination results in relevant courses*
- *end of the academic year (program-year GPA and College End-of-Year Show (EOYS) exhibition) faculty evaluations conducted at the end of each spring semester for each student in the proposed program*

Data will be gathered annually for all outcomes. These data will be collected, analyzed, summarized, and stored by Director of the Bachelor of Science in Product Design Program. These data will be submitted to department faculty for review and comment after conclusion of each spring semester.

College and University level reporting of summarized program data will occur triennially after the first full year of proposed program operation.

A report for the College of Design will be prepared by the Director and submitted for review by October 1st of the review year. Following suggestions from this review, the Director will revise the program report and submit a final version to the University's assessment office by October 31st of the review year.

Assessment Methods specifically mapped to Student Learning Outcomes:

1. *performance on standardized examinations employing detailed subject analysis directly relating to SLO #3 and SLO #5 in all of the following courses: PRD/BME 170 Human Anatomy for Design, PRD/BME 271 Introduction to Ergonomics, PRD/BME 371 Ergonomics, PRD 130 History of Design Technology, PRD 200 History & Theory of Product Design I (sequence), PRD 210 History & Theory of Product Design II, PRD 370 Design Research Methods, PRD 150 Computer Aided Design I, PRD 151 Computer Aided Design II, and PRD/BME 350 Materials & Processes.*
2. *written assignment performance in: CIS 110 & 111 (relating to UK Core Communication Requirement); PRD 370 Design Research Methods; and PRD 130 History of Design Technology, PRD 200 History & Theory of Product Design I, PRD 210 History & Theory of Product Design II (relating to SLO #3, SLO #4, SLO #6).*
3. *studio performance, exhibition and project analysis in PRD/BME 272 Intro to UX for Product Design, PRD/BME 372 UX + UI for Product Design, PRD 120 Form Studio, PRD 121 Product Design Studio I, PRD 220-221 Product Design Studio II, PRD 320-321 Product Design Studio III, PRD/BME 420-421 Integrated Design Studio I & II (relating to SLO #1, SLO #2, SLO #4, SLO #5, SLO #6).*

15. Cost and Funding of the Proposed Program²⁰

15a	Will this program require additional resources?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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If "Yes," please provide a brief summary of additional resources that will be needed to implement this program over the next five years. (300 word limit)

New faculty will be phased in during the first five years of the program. In 2019-20, an advisory council will be formed with internal and external members and a senior consultant to help develop the marketing plan for the first students for Fall 2020 and the first tenure-track, junior faculty hire for Fall 2020, in addition to two visiting instructors. In total four new faculty hires will be needed during the first five years of the Bachelor of Science in Product Design program, with assistance of 1-2 visiting faculty each of those years. During that initial five-year period, the Bachelor of Science

²⁰ For questions about cost and funding of the program, please contact your department chair, business officer, or associate dean for academic affairs.

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in Product Design will share an administrative staff position with another academic unit. The program will require classroom and studio space, workshop and technology access, and library facilities. The scale of these requirements will grow with increased enrollment; however, the anticipated new building for the College will more than accommodate this growth, and the timing more than adequate. Resources for all new faculty will be obtained from revenues derived from undergraduate tuition per new program policy.

15b	Will this program impact existing programs and/or organizational units within your institution? (300 word limit)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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If "Yes, briefly describe.

The Bachelor of Science in Product Design in the College of Design (CoD) will have a symbiotic relationship with the concurrently proposed BS BME in biomedical engineering in the College of Engineering (CoE).

Specifically, faculty from PD will work collaboratively with faculty from BME to teach students product design basics and supervise their work in studio exercises. Faculty from BME will work with faculty from the CoD to teach students regarding the technical constraints of engineering which are further compounded by the unique aspects of human healthcare. Faculty from BME and the CoD will co-mentor students in their senior design projects.

15c	Provide adequate documentation to demonstrate sufficient return on investment to the state to offset new costs and justify approval for the proposed program. Note whether the program is predicted to: increase retention rates; increase revenue; attract a new pool of students; meet employment needs in the state; feed into fields that have been shown to be beneficial to the economic needs of the state, etc. (300 word limit)
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The Bachelor of Science in Product Design is a new program of study for the Commonwealth of Kentucky in a field that has been steadily growing at the national level since 2011 and rapidly since 2014. The program will generate sufficient funding through student tuition and allocated resources.

In preparation for this proposal the working proforma for student and tuition revenue projections and other income and expenditures were based on the following: a roundtable event in fall of 2017 with external and internal experts in the field; the STAMATS analysis and report; the Provost's Business Office (PBO), two campus business officers; and the Office of Strategic Planning & Institutional Effectiveness (OSPIE). While Year 1 and 2 are expectedly lean and perhaps needing scaffolding from the College, by Year 5 in the program, revenue of \$1.4M is projected.

16.* Budget Funding Sources, by Year of Program (Please answer in terms of dollar amounts.)

(Please note – all the fields in number 16 are required for the CPE's pre-proposal form.)

Total Resources Available from Federal Sources	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative/Explanation:	N/A				
Total Resources Available from Other Non-State Sources:	\$40,000				
	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New	0	0	0	\$20,000	\$20,000

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Existing	0	0	0	0	0
Narrative/Explanation:	<i>We conservatively project industry sponsored senior projects by Year 4 in conjunction with the new Bachelor of Science in Biomedical Engineering.</i>				
State Resources	1st Year	2nd Year	3rd Year	4th Year	5th Year
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative/Explanation:	N/A				
Internal	1st Year	2nd Year	3rd Year	4th Year	5th Year
(New) Allocated Resources	\$27,000	\$62,900	\$82,250	\$126,000	\$165,006
(Existing) Reallocated Resources	0	0	0	0	0
Narrative/Explanation:	<i>Every student in the College of Design pays a technology fee, which helps us cover software, computer lab and shop maintenance, workshop and printing materials, and salaries for those staff dedicated fully to student shop and IT support. The College of Design students provides an intensive maker education.</i>				
Student Tuition	1st Year	2nd Year	3rd Year	4th Year	5th Year
New	\$204,736	\$498,665	\$642,428	\$1,008,634	\$1,309,393
Existing	0	0	0	0	0
Narrative/Explanation:	<i>Assuming new program tuition sharing model: 60% return to college, with 3% increase each year. These figures also include both in-state and out-of-state tuition.</i>				
Total Funding Sources	1st Year	2nd Year	3rd Year	4th Year	5th Year
<u>Total</u> New	\$231,736	\$561,565	\$724,678	\$1,134,634	\$1,474,399
<u>Total</u> Existing	0	0	0	0	0
17. Breakdown of Program Expenses/Requirements⁴					
(Please note – all the fields in number 17 are required for the CPE’s pre-proposal form.)					
Staff: Executive, Administrative & Managerial	1st Year	2nd Year	3rd Year	4th Year	5th Year
New	0	0	0	0	\$64,000
Existing	\$32,000	\$32,640	\$33,280	\$33,920	0
Narrative/Explanation:	<i>We will use 50% of an existing Administrative Assistant each of first 4 years, and hire full time beginning Year 5. Assume 2% salary increase each year.</i>				
Faculty	1st Year	2nd Year	3rd Year	4th Year	5th Year
New	\$144,000	\$167,000	\$88,000	\$112,000	0
Existing	0	\$146,880	\$319,657	\$380,883	\$501,741
Narrative/Explanation:	<i>In Year 1, we will use a consultant, one junior faculty hire, one lecturer and the Dean of the College to handle teaching. One senior faculty hire will take place to begin in Year 2 - this hire will likely be the inaugural director. We will also hire adjunct support in Year 2. We will hire a second junior faculty in Year 3. We will use 50% of an existing Administrative Assistant each of</i>				

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	<i>the first 4 years, and hire full time beginning Year 5. Assume 2% salary increase each year.</i>				
Student Employees	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New	0	0	0	\$10,530	\$10,530
Existing	0	0	0	0	\$10,530
Narrative Explanation/Justification:	<i>We anticipate allocating our first graduate teaching assistant in Year 4 and adding a second in Year 5.</i>				
Equipment and Instructional Materials	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative Explanation/Justification:	N/A				
Library	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Existing	0	0	0	0	0
Narrative Explanation/Justification:	<i>We anticipate \$2,000 annually, of new support, for the Design Library, provided by the central university library.</i>				
Contractual Services	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New	\$25,000	0	0	0	0
Existing	0	0	0	0	0
Narrative Explanation/Justification:	<i>For Year 1 and the prior year, we will contract with a senior academic administrative consultant to help lead the launch of the program.</i>				
Academic and/or Student Services	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative Explanation/Justification:	N/A				
Other Support Services	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative Explanation/Justification:	N/A				
Faculty Development	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative Explanation/Justification:	<i>Funds for faculty conference and research travel are including in program operating support, which is listed below in the "Other" category. Computer</i>				

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		<i>and IT support will be included in our College IT budget and part of a package computer lease agreement.</i>				
Assessment		1st Year	2nd Year	3rd Year	4th Year	5th Year
	New	0	0	0	0	0
	Existing	0	0	0	0	0
Narrative Explanation/Justification:						
Other		1st Year	2nd Year	3rd Year	4th Year	5th Year
	New	\$10,000	\$10,000	\$15,000	\$25,000	\$30,000
	Existing	0	0	0	0	0
Narrative Explanation/Justification:		<i>This budget includes general operational support: faculty travel, special student project funds, guest speakers, CNS fees, etc.</i>				
Total Program Budgeted Expenses/Requirements		1st Year	2nd Year	3rd Year	4th Year	5th Year
	New	\$211,000	\$356,520	\$455,938	\$562,333	\$629,301
	Existing	0	0	0	0	0
TOTAL Program Budgeted Expenses/Requirements:		\$2,215,091				
GRAND TOTAL		1st Year	2nd Year	3rd Year	4th Year	5th Year
	TOTAL NET COST:	\$20,736	\$205,045	\$268,740	\$572,301	\$845,098

18. Course Descriptions

18a	Program Core Courses (includes pre-major and pre-professional courses)
Prefix & Number	Course Description (from the Bulletin or the most recent new/change course form)
PRD 150	<i>An introduction to computer-aided, 2D and 3D design and modeling as applied in the product design process using both solid and surface software modeling techniques.</i>
PRD 151	<i>A continuation of PRD 150 adding a broader spectrum of computer-aided design (CAD) software options to the product design student palette. At the end of the PRD 150-151 sequence students will be conversant in: 2D tools, solid modeling tools, surface modeling tools, measured drawings, computer-aided rendering, and 3D output. Prereq: PRD 150</i>
PRD 160	<i>An introduction of 2D modes of representation. Emphasis is placed on the development of drawing skills to facilitate documentation, analysis and presentation in the design process. This class will prepare students to think about, analyze, and then to describe 3D form and space using analog tools. Students will practice describing and conceptualizing various forms and spaces through</i>

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	<i>two-dimensional representation. The course will employ methods such as freehand sketching and rendering using traditional media such as marker, pen, and watercolor.</i>
<i>PRD 115</i>	<i>This is one of two required short courses (with PRD 116) of five weeks each, focusing on wood, metal and plastic work. These short courses are intended to introduce students to the College of Design workshop and the primary machines for each material through exercises that are directly related to safety and to PRD 120 Form Studio, running parallel in the fall semester. Instruction includes shop safety, types of materials, power equipment and hand tool usage, fabrication skills, mold making, casting, detailing and finishing, all emphasizing hand skills, proper and safe process and accuracy.</i>
<i>PRD 116</i>	<i>This is the second of two required short courses, following PRD 115, of five weeks each, focusing on wood, metal and plastic work. These short courses are intended to introduce students to the College of Design workshop and the primary machines for each material through exercises that are directly related to safety and to PRD 120 Form Studio, running parallel in the fall semester. Instruction includes shop safety, types of materials, power equipment and hand tool usage, fabrication skills, mold making, casting, detailing and finishing, all emphasizing hand skills, proper and safe process and accuracy.</i>
<i>PRD 120</i>	<i>The Form Studio is an introduction to the studio discipline of design where students develop a broad understanding of all design disciplines through overarching elements and principles that connect them. We will address basic elements of design visually, conceptually, and haptically. We will focus on the process of design, discover through experimentation, develop aesthetic judgment, and find means of self-evaluation. Expect a focus on intellectual discipline, dialogue, assertion of interest, and a self-motivated search for critical issues. Studies will include 2D and 3D exercises, emphasizing materials, fabrication processes, prototype iteration, storyboarding, written documentation of design process, and verbal presentation.</i>
<i>PRD 121</i>	<i>This is the first fully dedicated studio to product design, and it provides a transition from an emphasis on abstract form to primitive and utilitarian form in tools, housewares and healthcare. PRD 170 is taught in conjunction with this course to support a focus on human anatomy and physical interface with products. Prereq: PRD 120, PRD 115, PRD 116.</i>
<i>PRD/EGR 110</i>	<i>Colloquium of speakers addressing a broad array of topics in the humanities and the sciences that set up design problems for discussion. Emphasis is on the role and opportunity of design in society. Student response expected within the respective studio work.</i>
<i>PRD/BME 170</i>	<i>Explores the structure and function of the human body to facilitate understanding of the body's interface with product design. Bone, muscle, neural, circulatory, and digestive systems will be studied and considered with respect to product design-oriented tasks such as mobility, seating, physical tasks, digital and electronic interactions, etc. The course will delve into physiological themes, such as how structure and function are closely related and the need for product designers to consider the two-way flow of information/interactions from body to product and product to body, and the effects of each on product and human function. This course is part of a sequence of courses that advances in complexity over 5 semesters, and it establishes the foundation for - advanced coursework in ergonomics, materials, user interface, and user experience design.</i>
<i>PRD/EGR 250</i>	<i>This course focuses on the fundamental tools of Solidworks (the industry standard CAD software for product design). Students will learn and practice using all methods of rapid representation available in the College of Design (fused deposition modeling (FDM), Objet, starch and CNC) and methods of prototype creation with vendors outside the College. Exercises and projects focus on workflow, basic rendering and drawings to make simple multi-part objects. Prereq: PRD 150-151.</i>
<i>PRD 200</i>	<i>A basic understanding of the history of product design, significant design movements, designers, manufacturers, innovations in technology and material use, and intellectual property (IP) development. This is the first half of a two-part history sequence in the program. The lectures present a chronological overview of the profession of Product Design and its antecedents.</i>

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	<i>Coursework includes extensive reading, in-class presentations based on independent research and writing.</i>
PRD 210	<i>A basic understanding of the history of product design, significant design movements, designers, manufacturers, innovations in technology and material use, and intellectual property (IP) development. This is the second half of a two-part history sequence in the program. The lectures present a chronological overview of the profession of Product Design and its antecedents. Coursework includes extensive reading, in-class presentations based on independent research and writing.</i>
PRD 260	<i>Introductory to advanced use of the Adobe Creative Suite (Photoshop, Illustrator, InDesign). Students will be taught how to use basic brushes, layer effects, sketching in Photoshop, and shortcuts. Assignments will include how to sketch products, render materials, lighting, and graphics. The course will further focus on blending analog and digital methods through tablet tools and will introduce Keynote/Powerpoint and cloud-based services. Prereq: PRD 160.</i>
PRD 261	<i>A presentation and storytelling class. It focuses on how to visually communicate your projects and process succinctly through techniques that include graphic design, photography, videography, and 3D rendering in order to convey a work narrative through multiple conduits (websites, social media, presentation decks and print media). This class will also cover basic camera optics and lighting techniques for high quality digital images for print or digital portfolio applications. Discussion will include manual controls on the digital camera to obtain desired effects for representing 2D and 3D objects and manipulation of natural and artificial lighting. Further, the course will serve as an introduction to connecting with peers and professionals in preparation for internships and full-time employment. Prereq: PRD 260.</i>
PRD 220	<i>Introduction to systematic processes in design. Introduction to ergonomics and systematic planning methods in the development of industrial products in the areas of work, education and health. Development of professional presentation skills and methods. Prereq: PRD 121.</i>
PRD 221	<i>Continuation of PRD 220 in systematic processes in design. Introduction to user experience (UX) design in the development of industrial products in the areas of work, education and health. Fully intensive use of 2D and 3D digital production. Development of professional presentation skills and methods. Prereq: PRD 220.</i>
PRD/BME 271	<i>This course is supplemental to PRD 220 Product Design Studio II, serving as an introduction to ergonomics. It creates a foundation in human factors that informs the design process in general and specifically for projects in PRD 220. The course presents ergonomics as a tool to maximize the physical and psychological aspects of design toward the establishment of human-centered design. Frameworks of product design philosophy, research methods, standards and data, human issues, cultural context, and design outcomes. The course is part of a sequence of courses that advance in complexity over 5 semesters, stemming from PRD/BME 170, Human Anatomy for Designers and introduces the concept of ergonomics. It is second in a sequence of courses on ergonomics, materials, user interface, and user experience design.</i>
PRD/BME 272	<i>This course is supplemental to PRD 221 Product Design Studio II, serving as an introduction to basic concepts of user experience (UX) design. Students will learn how to create engaging interactions between users and products/services through a holistic user-centered approach to design. Students will examine the history and evolution of user experience design and define key terms associated with the field. Students will explore a range of design research methods and discuss how these practices, along with theories regarding human behavior and perception, inform the user experience design process. Projects from PRD 221 and other studio courses within the College of Design will serve as case studies for analysis and application of course content. This course is part of a sequence of courses that advances in complexity over 5 semesters, and it establishes the foundation for advanced coursework in user interface and user experience design.</i>
PRD 370	<i>Discusses procedures and methods in the collection, analysis and evaluation of data to inform the design process. The course involves exercises in developing a research question and usability</i>

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	<p><i>research strategies for investigating problems in user/product and user/environment relationships. Most of the strategies employ ethnographic methods. The course examines the definitions of knowledge, information, and data and how they are used in research. The course comprises a sequence of research exercises that require written, oral and visual delivery and a major research paper documenting a semester-long design research investigation. This course provides credit for the full Graduate Composition and Communication Requirement (GCCCR) – written, oral and visual – for the Bachelor of Science in Product Design and hence is not likely to be eligible for automatic transfer credit to UK. Prerequisites: CIS/WRD 110, CIS/WRD 111, and permission of instructor.</i></p>
PRD/BME 350	<p><i>A survey of current materials, processes, techniques and equipment used in the design of products for mass production. A significant portion of the design process is devoted to manufacturing questions - how materials are selected, shaped, and then assembled. This course will include field visits to manufacturing facilities.</i></p>
PRD 320	<p><i>The first of four advanced product design studios introducing students to the complete design process from concept to production. Focus on advanced ergonomics and an introduction to design research methods within the design process. Students will learn about the advances in 3-D printing, bio-grown materials, wearable tech, digital printed imagery. Prereq: PRD 221.</i></p>
PRD 321	<p><i>Continuation of PRD 320 as the second of four advanced product design studios introducing students to the complete design process from concept to production. Focus on advanced user experience (UX) design with an introduction to design for social impact. This studio investigates, develops and executes a specific design objective that provides innovative solutions for social impact and sustainability. Prereq: PRD 320.</i></p>
PRD/BME 371	<p><i>This course is supplemental to PRD 320 Product Design Studio III and discusses advanced concepts of ergonomics with respect to product design. Students will create 2D and 3D studies of situations requiring a diagrammatic understanding of human factors and ergonomic issues. Students will learn how to conduct a range of usability tests to evaluate and improve ergonomic conditions. Projects from PRD 321 and other studio courses within the College of Design will serve as case studies for analysis and application of course content. The course is part of a sequence of courses that advance in complexity over 5 semesters, stemming from PRD/BME 271, Intro to Ergonomics, and takes the concept of ergonomics a step further into dynamic product components. It is third in a sequence of courses specifically focused on ergonomics.</i></p>
PRD/BME 372	<p><i>This course is supplemental to PRD 321 Product Design Studio III and introduces principles and methodologies of user interface and interaction design as critical elements of user experience design. Students will create interaction diagrams and develop prototypes for products and/or services. Students will learn and apply principles of visual communication, typography and motion design to create visually appealing, intuitive and feedback-based user interfaces. Students will learn how to conduct a range of usability tests to evaluate and improve interface designs. Projects from PRD 321 and other studio courses within the College of Design will serve as case studies for analysis and application of course content. This course is part of a sequence of courses that advances in complexity over 5 semesters, and it is the second of two parts focusing on user interface and user experience design.</i></p>
PRD 450	<p><i>Portfolio is an advanced version of PRD 261 with extended focus on resumes, biographies, cover letters, short and comprehensive portfolios on various platforms, and other graphic collateral concepts. The primary focus is the advanced design of a grid system or template and establishing and organizing the important content for the portfolio collateral. Prereq: PRD 261 or instructor permission.</i></p>
PRD/BME 451	<p><i>This course focuses on the relationship between design and entrepreneurship: exploring basic business vocabulary and how design vocabulary and design processes overlap, complement and enhance business operations and opportunities. The organization of the course focuses on assembling multidisciplinary teams to engage in the process of bringing a product to market, building a business concept around a core competency in design, the structure of a design office,</i></p>

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	<i>and the development and protections of intellectual property. The course works in parallel to PRD/BME 420 Integrated Design Studio I, using projects from this studio as case studies. Intrinsic points of discussion include: design project management, project organization and leadership and start-up protocol. Prereq: Senior standing or permission of instructor.</i>
<i>PRD/BME 420</i>	<i>Introduces transdisciplinary team-based work focusing on problem identification, detailed analysis, research and application of ergonomics and user-centered research methods for new product development. Design and construction of full scale, interactive models and spaces. Emphasis on the needs, the production and marketing factors of niche populations, such as older adults and those with disabilities. Prereq: PRD 321 or consent of instructor.</i>
<i>PRD/BME 421</i>	<i>Terminal design studio for Product Design majors requiring a senior thesis with/or alongside multidisciplinary students, incorporating a short multimedia final presentation in addition to 2D and 3D deliverables. Emphasis on entrepreneurship, concept to production. Prereq: PRD/BME 420.</i>
<i>PRD/BME 471</i>	<i>This course is supplemental to PRD 420 Integrated Studio and discusses advanced concepts of ergonomics with respect to interdisciplinary and sponsored projects. Students will create 2D and 3D studies of situations requiring a diagrammatic understanding of human factors and ergonomic issues. Students will apply a range of usability tests to evaluate and improve ergonomic conditions in the Integrated Studio projects. The course is part of a sequence of courses that advance in complexity over 5 semesters, stemming from PRD/BME 371, Ergonomics, and takes the concept of ergonomics a step further into the construction of full-scale interactive models. It is the final course in a sequence of courses specifically focused on ergonomics. Co-requisite with PRD 420.</i>
<i>PRD/BME 410</i>	<i>Colloquium of speakers addressing a broad array of advanced topics in product design for regional, global, and niche audience design problems for discussion. Emphasis is on the role and opportunity of design in society. Student response expected within the respective studio work.</i>
<i>PRD 130</i>	<i>With some reference to primitive cultures of making and production, this course covers primarily the industrialization of 19th and 20th century Western society. Special reference will be given to the designed artifact and pivotal moments of influence in invention and production. The origin of the concept of technology and the use of the term post World War I will figure into the discourse. The emphasis of the course is understanding the progression of technology through time.</i>
18b	Program Guided Electives Courses (for the major)
Prefix & Number	Course Description (from the Bulletin or the most recent new/change course form)
<i>PRD 510</i>	<i>This course is one of several special topics courses in the Product Design program in the College of Design. Within these topic categories are multiple options for courses of smaller, more flexible units of credit, providing opportunities for deeper exploration of specialized areas of product design. Design Competencies includes the following specializations that focus on design-related media: Printmaking; Book Making; Branding; Packaging; Typography; Videography; Animation; 3D Media; 2D Media; Data Visualization. May be repeated unlimited under different subtitles.</i>
<i>PRD 520</i>	<i>This course is one of several special topics courses in the Product Design program in the College of Design. Within these topic categories are multiple options for courses of smaller, more flexible units of credit, providing opportunities for deeper exploration of specialized areas of product design. Design Management includes the following specializations that focus on project management and all design process: Project Budget; Team Organization; Project Leadership; Communications; Design for Manufacturing; Collaboration. May be repeated unlimited under different subtitles.</i>

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PRD 530	<i>This course is one of several special topics courses in the Product Design program in the College of Design. Within these topic categories are multiple options for courses of smaller, more flexible units of credit, providing opportunities for deeper exploration of specialized areas of product design. Social Impact & Innovation focuses on any of the following: Product Design for the Developing World; Service Learning; Humanitarian & Sustainable Design; Systems Theory; Advanced History; Social Anthropology; Community Health; Food Security. May be repeated unlimited under different subtitles.</i>
PRD 540	<i>This course is one of several special topics courses in the Product Design program in the College of Design. Within these topic categories are multiple options for courses of smaller, more flexible units of credit, providing opportunities for deeper exploration of specialized areas of product design. Advanced Materials & Processes includes the following specializations that focus on contemporary materials, information technology and modern fabrication: Mobile App Development; Sensors; Arduino; Raspberry Pi; Coding for Designers; Robotics; Advanced Materials; Advanced Manufacturing; Smart Textiles; VR/AR Interfaces. May be repeated unlimited under different subtitles.</i>
PRD 550	<i>This course is one of several special topics courses in the Product Design program in the College of Design. Within these topic categories are multiple options for courses of smaller, more flexible units of credit, providing opportunities for deeper exploration of specialized areas of product design. Professional Development includes the following specializations that focus on preparation for entry into the professional world: Public Speaking; Portfolio Web Development; Career Strategy; Professional & Technical Writing; Resume & Biography. May be repeated unlimited under different subtitles.</i>
PRD 560	<i>This course is one of several special topics courses in the Product Design program in the College of Design. Within these topic categories are multiple options for courses of smaller, more flexible units of credit, providing opportunities for deeper exploration of specialized areas of product design. Healthcare encompasses a wide range of specializations connecting product design to the healthcare service and product industry: History of Medical Devices; Healthcare Management; Regulatory Barriers; Assistive Devices; Design Research Methods; Clinical Observation; Medical Device Trials; Point-of-Care Instruments. May be repeated unlimited under different subtitles.</i>
18c	Program Free Electives Courses
Prefix & Number	Course Description (from the Bulletin or the most recent new/change course form)
	<i>Students pursuing the Bachelor of Science in Product Design have 6 credit hours of free university electives. They may take these credit hours from CORE course offerings or other open courses in the university. Further, 7 of the required credit hours are to be taken in the PRD module (special topics) offerings, which include 6 areas of product design related study. There are several course options within each area, and students can choose among these options in each area. The underpinning idea of modules is the opportunity for students to broaden their understanding of the spectrum of product design topics.</i>

College of Design

Product Design Program (Admissions Criteria)

Admission to the University does not guarantee admission to the Product Design Program. All applicants seeking admission to the Program must make application to the Product Design Program Admissions Committee. Admission is dependent upon the availability of resources for the implementation of adequate instruction; the number of applicants admitted will be limited by this consideration. Applicants will be examined on a comparative and competitive basis.

Freshman candidates will be admitted in order of priority on the basis of the following criteria, employed together in combination:

1. Their potential for general academic achievement indicated by their high school grade point average and freshman entrance examination scores (ACT/SAT). As a rule, the minimum academic standards acceptable to the Product Design Program Admissions Committee will be the same as those determined by the Senate Council to apply to the admission to the University of freshmen students. In the event, however, that the Product Design Program Admissions Committee finds clear indications of probable success in the Product Design Program from its review of the other evidence pertaining to a candidate who would generally be denied admission through failure to meet these minimum criteria, an exception may be made to this rule.
2. Apply for admission to the Product Design Program using the *Major Admission Application Form*. Requirements are available on the college website. Comparative measures of their aptitude and motivation derived by the Product Design Program Admissions Committee from an essay as required by the *Program Admission Application Form*. The essay will require applicants to express in both written and visual format the rationale for their interest in Product Design and what steps they have taken to make an informed decision regarding their choice for a major. In certain cases of indecision and circumstances permitting, personal interviews will also be considered as criteria.

Freshman candidates must submit a formal application to the Product Design Program Admissions Committee not later than March 1 for admission to the Program in the following Fall Semester.

Transfer candidates from educational programs other than product design will be required to observe the same application process and deadlines as outlined for freshmen. **Please note that the deadline is earlier than that for general admission of transfer students to the University.**

UNIVERSITY OF KENTUCKY

Assessment Plan for Proposed Bachelor of Science in Product Design

College of Design

1. Introduction

Unit Mission Statement

The Bachelor of Science in Product Design in the College of Design at the University of Kentucky is committed to excellence in the education of product designers, enabling them to address global challenges that include healthcare, economic inequity, food security, communication, transportation and climate phenomena, with innovative and sustainable solutions.

Assessment Approach

A variety of objective metrics will be used to evaluate the effectiveness of the proposed academic program. The metrics are defined in Section 3 (below).

Assessment Timetable

Assessment of the proposed program will be conducted after three full calendar years of operation. Program reassessment will occur triennially thereafter.

2. Assessment Oversight and Resources

The program director will act as assessment coordinator, meet annually with faculty and other college leaders to discuss and prepare a written assessment report for the university on or before the end of October of each review period.

3. Program Level Learning Outcomes

Graduates from the Product Design program will be able to:

- 1: Successfully employ the design process to investigate, conceptualize and generate relevant solutions for design problems, both independently and within teams.
- 2: Strategically apply technical skill, knowledge and craft through two- and three-dimensional, analog and digital, prototypes to prove feasibility of design concepts.
- 3: Clearly reference design history, trends in contemporary design, and current global issues in developing design strategies.
- 4: Convey project ideas in a clear and concise manner, through oral, written and visual formats.

5: Apply knowledge of user experience, ergonomics, contextual inquiry, user research methods and usability assessments in the design development process.

6: Perform as a professional designer as expressed through ethics, collaboration and leadership.

3.2 Accreditation Standards

Accreditation is not essential for employment and placement of students in the profession of product/industrial design and will not be pursued for this program.

4. Curriculum Map

Proposed BSPD Course Map

I = introduce E = explain, R = reinforce, A = apply

Course	SLO 1	SLO 2	SLO 3	SLO 4	SLO 5	SLO 6
STUDIO SEQUENCE						
PRD 120	I&E	I		I&E		I
PRD 121	I&E	I		I&E		I
PRD 220-221	I&E	I&E	I&E	I&E	I	I&E
PRD 320-321	R&A	R&A	R&A	R&A	I&E	R&A
PRD 420-421	A	A	A	A	A	A
STUDIO SUPPORT						
PRD/EGR 110			I	I	I	I
PRD/BME 170		I&E			I&E	
PRD/BME 271-272	I&E	I&E	I&E		I&E	
PRD/BME 371-372	R&A	R&A	R&A		R&A	
PRD/BME 471	R&A	R&A	A		A	A
PRD/BME 410	A	A	A	A	A	A
PD TRADITIONAL						
PRD 150-151		I&E		I		I
PRD 115-116		I&E		I		I
PRD 130			I&E	I,E,R		

PRD 160		I,E,R		I		I
PRD/EGR 250		E,R,A		I&E		I&E
PRD 200 PRD 210			I&E	I,E,R		
PRD 260-261		I&E		I,E,R		I&E
PRD 350	A	I&E	R&A			I,E,R
PRD 370	A			E,R,A	I,E,R	I,E,R
PRD 450	A	I&E		A		R&A
PRD 451	A	A	A	A	A	R&A
PRD MODULES*						
PRD 510*	A	E,R,A		E,R,A		
PRD 520*	A			E,R,A		R & A
PRD 530*	A			A	E,R,A	R & A
PRD 540*	A	E,R,A	E,R,A			
PRD 550*	A			E,R,A		R & A
PRD 560*	A	E,R,A	E,R,A		E,R,A	

Notes for Curriculum Map:

*These are special topics courses (6 different areas), which have variable credit and multiple titled courses within each area. Students are required to have at least 1 CH per area.

All courses with dual prefixes are cross-listed courses with/for Biomedical Engineering.

5. Assessment Methods and Metrics

Methods

1. performance on standardized examinations employing detailed subject analysis directly relating to SLO #3 and SLO #5 in all of the following courses: PRD/BME 170 Human Anatomy for Design, PRD/BME 271 Introduction to Ergonomics, PRD/BME 371 Ergonomics, PRD 130 History of Design Technology, PRD 200 History & Theory of Product Design I (sequence), PRD 210 History & Theory of Product Design II, PRD 370 Design Research Methods, PRD 150 Computer Aided Design I, PRD 151 Computer Aided Design II, and PRD/BME 350 Materials & Processes.
2. written assignment performance in: CIS 110 & 111 (relating to UK Core Communication Requirement); PRD 370 Design Research Methods; and PRD 130 History of Design Technology, PRD 200 History & Theory of Product Design I, PRD 210 History & Theory of Product Design II (relating to SLO #3, SLO #4, SLO #6).
3. studio performance, exhibition and project analysis in PRD/BME 272 Intro to UX for Product Design, PRD/BME 372 UX + UI for Product Design, PRD 120 Form Studio, PRD 121 Product Design Studio I, PRD 220-221 Product Design Studio II, PRD 320-321 Product Design Studio III, PRD 420-421 Integrated Studio I and II (relating to SLO #1, SLO #2, SLO #4, SLO #5, SLO #6).

Program Goals (each computed per program year)

1. program applicant/seats available ratio
2. admission/matriculation ratio
3. mean Grade Point Average (GPA)
4. retention rate
5. faculty assessments of student performance/technical proclivity during annual review sessions
6. graduation rate
7. job offers per graduate
8. exit survey of graduating seniors

6. Data Collection and Review

Year	Outcome	Assessment Method(s)	Course(s)	Reviewers	When
1	#1 Design Process #2 Prototyping & Skill	Project Reviews; Exhibition	PRD 120-121 PRD 115-116 PRD 150-151 PRD 160	Faculty, Invited guest reviewers, student team members	End of Spring Term

2	#1 Design Process #2 Prototyping & Skill #3 Referencing History & Current Issues	Project Reviews; Exams	PRD 110 PRD 130 PRD 170 PRD 220-221 PRD 200-212 PRD 250 PRD 260-261 PRD 510	For Projects: Faculty, Invited guest reviewers, student team members For Exams: Faculty, TAs	End of Spring Term
3	#5 User Research & Ergonomics #4 Communication #6 Professionalism	Project Reviews; Exhibition; Exams	PRD 320-321 PRD 271-272 PRD 371-372 PRD 350 PRD 370	For Projects: Faculty, Invited guest reviewers, student team members For Exams: Faculty, TAs	End of Spring Term

7. Assessment Cycle and Data Analysis

Assessment of student learning will occur continually in all courses, punctuated by the following events:

- examination results in relevant courses (scores)
- end of the academic year (College End-of-Year Show (EOYS) exhibition) faculty and guest critics' reviews conducted at the end of fall and spring semesters for each student (project juries) in the proposed program)

Program faculty will be asked to maintain records of student review comments and course progress.

Data will be gathered annually for all outcomes. These data will be collected, analyzed, summarized, and stored by Director of the BSPD Program. These data will be submitted to department faculty for review and comment after conclusion of each spring semester.

College and University level reporting of summarized program data will occur triennially after the first full year of proposed program operation.

A report for the College of Design will be prepared by the Director and submitted for review by October 1st of the review year. Following suggestions from this review, the Director will revise the program report and submit a final version to the University's assessment office by October 31st of the review year.

8. Teaching Effectiveness

All Instructors of Record teaching courses in the BSPD program will be required to use the on-line Teacher Course Evaluation (TCE) process to obtain teaching effectiveness data from each student. The Director will require TCE data from each instructor each semester he or she teaches a program-relevant course.

For the first three years of the proposed program, because of the ongoing collaborative work with Biomedical Engineering, each product design course in

the curriculum will be evaluated by a combination of design, product design, and biomedical engineering faculty at the end of the spring semester of that academic year. Course evaluations will focus on student grades and all metrics obtained from course TCEs. Each instructor will be asked to provide a self-generated SWOT (strengths, weaknesses, opportunities, threats) assessment of this course and their teaching effectiveness.

The Director will review the summarized TCE data and reflective statements and provide necessary feedback to the faculty annually.

9. Evaluation of Post-Graduate Student Success

Graduates of the BSPD program will be evaluated using the following metrics:

- a) Number & type (industry/office type) of job offers/student
- b) starting salary (compared to U.S. national averaged for Product Design/Industrial Design/User Experience (UX) graduates)
- c) duration of employment at each position
- d) promotions received
- e) patents, products or inventions pursued
- f) publications, public lectures, or media citations of the graduate

These data will be acquired by administrative assistants and the Student Services Office in the College of Design using email and telephone surveys administered to program graduates. Collected data will be analyzed and communicated to the faculty. These data will be reported triennially as a component of each formal program report to the UK College of Design and University of Kentucky program assessment offices.

10. Appendix

Rubric for Student Learning Outcomes assessment:

SLO #1: assessed through project presentations and juries, faculty supervisors, guest critics, and fellow teammates of design projects (see rubric below)

SLO #1: Successfully employ the design process to investigate, conceptualize and generate relevant solutions for design problems, both independently and within teams.

SLO #2: assessed through project presentations and juries, faculty supervisors, guest critics, and fellow teammates of design projects (see rubric below)

SLO #2: Strategically apply technical skill, knowledge and craft through two- and three-dimensional, analog and digital, prototypes to prove feasibility of design concepts.

SLO #3: assessed through project presentations and juries, faculty supervisors, guest critics, and fellow teammates of design projects and through traditional quizzes and examinations in lecture and seminar courses.

SLO #3: Clearly reference design history, trends in contemporary design, and current global issues in developing design strategies.

SLO #4: assessed by rubric evaluating depth and breadth of effort during studio projects, oral, written/printed delivery (see attached rubric)

SLO #4: Convey project ideas in a clear and concise manner, through oral, written and visual formats.

SLO #5: assessed through project presentations and juries, faculty supervisors, guest critics, and fellow teammates of design projects and through traditional quizzes and examinations in lecture and seminar courses.

SLO #5: Apply knowledge of user experience, ergonomics, contextual inquiry, user research methods and usability assessments in the design development process.

SLO #6: assessed through project presentations and juries, faculty supervisors, guest critics, and fellow teammates of design projects (see rubric below)

SLO #6: Perform as a professional designer as expressed through ethics, collaboration and leadership.

Rubric for Evaluation of Student Learning Outcomes
Pertaining to Individual Student Studio Performance

Evaluators should assign a numeric score (1-4) based on the following guidelines. Evaluators should assign a score of zero to student performance that does not meet benchmark standards.

SLO	Capstone 4	Milestones		Benchmark 1
		3	2	
Employ the design process to investigate, conceptualize and generate relevant solutions for design problems.	Displays advanced understanding of the complete design process: fluency of ideas (multiple iterations), historic, technical and user research, effective and creative storyboarding, technical expertise in thorough details and the most deliberated, final solution.	Displays intermediate understanding of the complete design process: fluency of ideas (multiple iterations), historic, technical and user research, effective and creative storyboarding, technical expertise in thorough details and a deliberated, final solution.	Displays basic understanding of the complete design process: adequate fluency of ideas, historic, technical and user research, effective storyboarding, technical expertise in some details and a reasonable, final solution.	Displays minimal understanding of the complete design process: limited number of ideas, historic, technical and user research, storyboarding, technical details and a restrained final solution.
Apply technical skill, knowledge and craft through two- and three-dimensional, analog and digital, prototypes to prove feasibility of design concepts.	Clearly has a broad knowledge base of prototyping methods and media; finely honed skills in crafting models and print media; can convey a transformational process narrative through prototypes.	Has a reasonable knowledge base of prototyping methods and media; solid skills in crafting models and print media; can convey a solid process narrative through prototypes.	Has a basic knowledge base of prototyping methods and media; reasonable skills in crafting models and print media; can convey a process narrative through prototypes.	Has minimal knowledge of prototyping methods and media; limited skills in crafting models and print media; conveys an unwieldy process narrative through prototypes.
Reference design history, trends in contemporary design, and current global issues in developing design strategies.	Displays advanced understanding of design and technology history and contemporary and global issues as part of complex studio projects.	Displays intermediate understanding of design and technology history and contemporary and global issues as part of complex studio projects.	Displays basic understanding of design and technology history and contemporary and global issues as part of complex studio projects.	Displays minimal understanding of design and technology history and contemporary and global issues as part of complex studio projects.
Convey project ideas orally in a clear and concise manner.	Demonstrates a creative and compelling oral narrative in conveying design projects; demonstrates a clear understanding of audience, appropriate language and approach; consistently clear and concise.	Demonstrates a solid oral narrative in conveying design projects; demonstrates a clear understanding of audience, appropriate language and approach; generally clear and concise.	Demonstrates an adequate oral narrative in conveying design projects; demonstrates a reasonable understanding of audience, appropriate language and approach; often clear and concise.	Demonstrates a minimal and unwieldy oral narrative in conveying design projects; demonstrates little understanding of audience, inconsistent use of appropriate language and often not clear and concise.
Convey project or intellectual ideas in a clear and concise written format.	Demonstrates a creative and compelling written narrative in conveying design projects with clear command of writing skills; Demonstrates a clear understanding of audience, appropriate language and approach; consistently clear and concise.	Demonstrates a solid written narrative in conveying design projects with solid command of writing skills; demonstrates a clear understanding of audience, appropriate language and approach; generally clear and concise.	Demonstrates an adequate written narrative in conveying design projects with adequate command of writing skills; demonstrates a reasonable understanding of audience, appropriate language and approach; often clear and concise.	Demonstrates a minimal and unwieldy written narrative in conveying design projects; demonstrates little understanding of audience, inconsistent use of appropriate language and often not clear and concise.
Convey project ideas in a clear and concise manner, through visual formats.	Demonstrates a complete portfolio of mixed media presentation, and uses these tools in unexpected and creative ways; Demonstrates a clear understanding of audience, appropriate approach.	Demonstrates an adequate portfolio of mixed media presentation, and uses these tools in creative ways; Demonstrates a clear understanding of audience, appropriate approach.	Demonstrates a basic portfolio of mixed media presentation, and uses these tools in basic ways; Demonstrates a reasonable understanding of audience, an acceptable approach.	Demonstrates minimal attention to presentation methods, with little consideration for diversity of approach; Demonstrates little understanding of audience and approach.

<p>Apply knowledge of user experience, ergonomics, contextual inquiry, user research methods and usability assessments in the design development process.</p>	<p>Shows advanced technical understanding of ergonomic standards, user experience protocol, and qualitative and quantitative methods of research.</p>	<p>Shows intermediate level of technical understanding of ergonomic standards, user experience protocol, and qualitative and quantitative methods of research.</p>	<p>Shows basic technical understanding of ergonomic standards, user experience protocol, and qualitative and quantitative methods of research.</p>	<p>Shows minimal technical understanding of ergonomic standards, user experience protocol, and qualitative and quantitative methods of research.</p>
<p>Perform as a professional designer as expressed through ethics, collaboration, teamwork and leadership.</p>	<p>Displays advanced understanding of studio work and ethics needed for professional design practice; Outstanding team engagement, natural leadership abilities shown during entire effort, takes responsibility, solves major team problems, highly valued by team.</p>	<p>Displays intermediate understanding of studio work and ethics needed for professional design practice; Good team engagement, exhibits leadership abilities, takes some responsibility, respected & valued by team, solves minor problems within team.</p>	<p>Displays basic understanding of studio work and ethics needed for professional design practice; Adequate team engagement, shows leadership abilities over limited durations and project scopes, causes no discord within team.</p>	<p>Displays minimal understanding of studio work and ethics needed for professional design practice; Minimal team engagement, no leadership abilities evident, associated with minor levels of team discord.</p>

01 September 2019

Joanie Ett-Mims, Coordinator
Undergraduate Council
Senate Council

Council Members:

Now in my fifth year as Dean of the College of Design, I have been working consistently to expand the program offerings of the College. As one of the smaller colleges at UK, program expansion is essential to ensure our College remains relevant, in tandem with student growth within our current program offerings. The current programs in the College are all examining new avenues of growth through either the addition of graduate or online options. With the creation of Product Design, our College will be given an opportunity for continued expansion while supporting student success at the university.

Design as a profession is becoming a much broader spectrum as many new job titles are not only emerging but changing rapidly. Jobs that did not exist even 10 years ago include: Mobile App Developer, Driverless Car Engineer, Data Scientist, Drone Operator, AI Engineer, Social Media Manager, Content Moderator, and Cloud Computing Specialist to name a few. At some level, all of these cross over into product design and related design fields such as biomedical engineering, computer science, graphic design, user experience (UX) and user interface (UI) design and all scales of environmental design.

Product (also known as Industrial Design) does not currently exist as a program offering at any higher education institution in the Commonwealth of Kentucky. That circumstance, alongside the campus potential for collaborative courses and degrees, makes this a natural opportunity for not only Kentucky residents but an option for students in neighboring states. Additionally, our proposed Bachelor of Science in Product Design (BSPD) will allow students within the College of Design and other colleges to augment their primary degrees with crossover courses and eventually with undergraduate certificates and a UX Minor.

The BSPD will also serve as an interdisciplinary driver to create synergy between existing degrees on campus. With so many potential departments already primed for collaboration – including UK's extensive network of healthcare-related fields – the Product Design program can incorporate the multiple opportunities for cross-disciplinary engagement, allowing the university to promote diversity of thought and deed.

Based on the vast amount of research undertaken to develop the new program, I can say with assurance that UK will be providing students with a degree that ensures a promising future thanks to the robust job market in product design. Further, I hope and plan that the program will provide other design students within the College an opportunity to enhance their current degree trajectories, through professional elective credit at minimum to eventual undergraduate certificates and a Minor.

The College is committed to providing the necessary resources, which will include faculty and staff hires, for the new Product Design program.

The current Faculty of Record for the program while we prepare for dedicated hires, include a number faculty who are prepared to teach within the proposed curriculum:

Angus Eade (Angus.Eade@uky.edu)

Daniel Livingston (daniel.livingston@uky.edu)

Bill Massie (William.Massie1@uky.edu)

Wallis Miller ([wmiller@uky.edu](mailto:wmilller@uky.edu))

David Pienkowski (pienkow@uky.edu)

Mitzi Vernon (vernon@uky.edu)

In this capacity I serve not as dean, but as a seasoned faculty in product design.

A number of letters of support for the new program join this one. Further, we held two votes regarding the proposal. In April of this year, the Office of Strategic Planning & Institutional Effectiveness (OSPIE) conducted a simple survey sent to all faculty in the College, yielding a 74% affirmative response, and once the proposal was complete and shared with the faculty, we conducted an anonymous paper vote earlier this month for the eligible voters of our Faculty Assembly, yielding a 96% affirmative response.

With the expertise, interest and job market already aligned, the new Product Design program comes at an auspicious moment.


Sincerely,

A handwritten signature in black ink that reads "Mitzi". The signature is written in a cursive, slightly stylized font. Above the first few letters, there are two small dots. A horizontal line is drawn through the signature, extending to the left and right.

Mitzi R. Vernon, Dean

DATE: September 12, 2019

TO: Mitzi Vernon, Dean, College of Design

FROM: Guigen Zhang, PhD, 
Chair of the F. Joseph Halcomb III, M.D. Department of Biomedical Engineering

RE: Permission to Cross List Courses

The F. Joseph Halcomb III, M.D. Department of Biomedical Engineering hereby extends approval to the College of Design to cross list the following Product Development courses with our department:

PRD/BME 170 ("Human Anatomy for Design")

PRD/EGR 250 ("Computer-Aided Design: Solidworks")

PRD/BME 350 ("Materials and Processes")

PRD/BME 371 ("Ergonomics")

PRD/BME 372 ("UX + UI for Product Design")

PRD/BME 451 ("Integrated Entrepreneurship")



University of Kentucky
College of Engineering
Office of the Dean

351 Ralph G. Anderson Bldg.
Lexington, KY 40506-0503
P: 859-257-1687
F: 859-257-5727
www.engr.uky.edu

February 22, 2019

To Whom It May Concern:

The College of Engineering approves the cross listing for EGR 110 with PRD 110 and EGR 250 with PRD 250.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kimberly Anderson', followed by a horizontal line.

Kimberly Anderson, Ph.D.
Associate Dean for Administration
and Academic Affairs

see blue.

An Equal Opportunity University

Ett-Mims, Joanie

From: Vernon, Mitzi
Sent: Wednesday, January 16, 2019 9:47 PM
To: Spriggs, Amy; Ett-Mims, Joanie
Cc: Leedy, Charlotte
Subject: Fwd: Product Design

Amy and Joanie—here is the letter from OSPIE. Let me know if you need anything further regarding this document. More responses coming.

Thank you-
Sent from my iPhone

Begin forwarded message:

From: "Pearson, RaeAnne" <raeanne.pearson@uky.edu>
Date: January 16, 2019 at 12:52:01 PM EST
To: "Vernon, Mitzi" <vernon@uky.edu>
Subject: Fw: Product Design

Sorry Mitzi,
I didnt change the title of the program. I apologize for that oversight. Thanks Annie for bringing that to my attention! This is what you need for the Senate.
If you have any questions let me know.

Best,
RaeAnne

From: Pearson, RaeAnne
Sent: Wednesday, January 16, 2019 12:21 PM
To: Vernon, Mitzi
Cc: Weber, Annie
Subject: Product Design

Dear Mitzi Vernon,

Thank you for submitting a Notification of intent for **Product Design, Bachelor of Science (50.0404)**.

My email will serve 2 purposes: 1.) Next steps for SACSCOC, and 2.) Verification and notification that you have contacted OSPIE—a Senate requirement for proposal approval.

1. **Next steps for SACSCOC:** This program represents a significant departure from the University's current programs as defined by SACSCOC's substantive change policy. Following approval from the State, a prospectus will need to be submitted to SACSCOC for review.

2. **Verification that OSPIE has reviewed the proposal:** Based on the documentation presented the proposed program does constitute a substantive change as defined by the University or SACSCOC, the university's regional accreditor. Please consult with the Office of Strategic Planning and Institutional Effectiveness regarding next steps. The proposed program change(s) may move forward in accordance with college and university-level approval processes.

***IMPORTANT:** Certificates (undergraduate and graduate) will be added to the CPE Inventory once they have been approved by the University Senate. For degree programs, an NOI will be submitted by the Office of Strategic Planning and Institutional Effectiveness to CPE and you will need to work closely with our office to ensure that your proposal meets all external CPE requirements and deadlines.*

Should you have any questions or concerns about UK's substantive change policy and its procedures, please do not hesitate to contact our office.

Office of Strategic Planning & Institutional Effectiveness
University of Kentucky
[Visit the Office of Strategic Planning and Institutional Effectiveness Website](#)



RaeAnne Pearson , Ph.D.
Planning and Accreditation Coordinator
University of Kentucky
Office of Planning and Institutional
Effectiveness
Patterson Office Tower #555
Lexington, KY 40506
859-218-4009

**Minutes
College of Design
Curriculum Committee Meeting
30 October, 2018**

Present:

Julie Riesenweber (voting member)
Andrew Manson (voting member)
Patrick Lucas (voting member)
Lindsey Fay (voting member)
Bruce Swetnam (ex officio)
Azhar Swanson (ex officio)

Absent:

Brent Sturlaugson (voting member)

The meeting was called to order at 12:30 pm.

With discussion of the proposal for a BS program in Product Design the only business item on the agenda, the committee chair first updated the committee on developments relative to the proposal since the last committee meeting.

She also briefed the committee on her (email) conversations with Brent Sturlaugson, who was unable to attend the meeting.

After some discussion of issues that had been raised in the college units' comments on the proposal, the committee agreed that the proposal fits the College of Design's mission of design education and broadens our offerings in that respect. Moreover, the faculty vote on the proposal was overwhelmingly in favor of offering the Product Design degree. Andrew Manson moved that we approve the proposal on these bases; Lindsey Fay seconded the motion.

The committee voted that the proposal was ready to move beyond the college with 4 in favor (Sturlaugson had provided a vote in an email message) and 1 abstention.

The committee went on to discuss a few suggestions it wanted to make to Dean Vernon about the Product Design program, especially with regard to NASAD accreditation.

The chair then raised the subject of the recent university request for proposals relative to the development and delivery of new online programs, since any proposal from the College of Design would need to come through both the appropriate unit and the college curriculum committees, and the schedule the university had attached to proposal submission was extremely tight. The chair mentioned that the Historic Preservation Department was developing a proposal and asked the representatives of other units to touch base with the faculty involved to be sure that both unit and college curriculum committee were able to review proposals within the university's timetable. She pointed out that the university expected all proposals approved after this RFP to be at the University Senate by January 15, which means that there will likely need to be a college curriculum committee meeting very soon after our return from holiday break.

The next meeting is to be November 30 at 12:30 pm.

The meeting adjourned at 1:25 pm.

October 5, 2018

To Whom It May Concern:

It is my pleasure to write a complete and passionate endorsement for the proposed Bachelor of Science in Product Design program by the College of Design. As the Director of Design Technology in the College of Design, I am entirely confident that the Product Design program has the ability to effectively change our college from a high-quality regional series of programs to a nationally recognized academic leader in the world of design. As I begin my second year at the University of Kentucky, the position that I have is not only new for me, but is also new for the college itself. I am the first person to hold the newly created leadership position of Director of Design Technology, focused exclusively on the integration of technology within all design processes. The College of Design established this position based on the clear need for leadership in an environment of day-to-day shifting of our technological landscape as it relates to all aspects of design.


With the advent and progression of technology, digital processes, i.e. computing, internet, and automated processes in manufacturing and information technology, have fundamentally changed all of the ways that we conceive, develop, and analyze the design process and initiatives. In the past, many disciplines and professions developed specific technologies that were used to construct creative solutions and systematic methods to solve problems, but unfortunately these systems were not fundamentally fluid between disciplines. They were, in fact, “disciplinary”. Quite recently, a more interdisciplinary, technological approach has been adopted. Almost all of our creative disciplines have shifted and been filtered by digital information. The fundamental communication in all disciplines is now filtered by ones and zeros through the use of computing. This new filter has ultimately changed the way we work. The design tools that are used in product design are some of the same design tools that are being used in all of the other disciplines within our college: 3-D printing, robotics, computer-numerically-controlled machining, laser-cutting, virtual and augmented reality automation. They are, in fact, also the same design tools that are being used by many colleges within our university. With the addition of the Product Design program we would be developing more robust research and use of these design tools by virtue of the fact that we would have a larger critical mass engaged in the experimental use of these technologies functioning at vastly different scales. It will be radically significant in terms of education for expanding minds and career paths for a student to see something developed from idea to prototype, for instance, a toothbrush or medical

device at the scale of something that one can hold in their hand with the same design technologies that the other units within our college are simultaneously utilizing to shape our physical world at the scale of buildings and cities. This would have an enormous effect on the intellectual growth of all of our students.

The world of product design has recently exploded because of our ability now to visualize and rapid prototype in real time. There are new products being placed on the market that have gone through design, prototyping, engineering and marketing faster than ever before in history. This is also due to the fact that the internet has allowed us to reach a larger consumer market for products. The discipline of product design is broadening at the same pace as the fundamental advance of design technology itself. In my estimation, Product Design is the largest design growth discipline and its boundaries are being expanded daily. Many students in our college have chosen interior design, historic preservation, or architecture because intuitively they understand themselves as being designers. Product Design would offer another avenue for UK students to pursue design. It would also act as a bridge between medical and engineering disciplines, potentially agriculture and building science, as well as landscape design. In short, the Product Design program will be effectively a game-changing catalyst for the entire College of Design and hopefully for the University of Kentucky and the Commonwealth at large.

If you have any further questions, please do not hesitate to contact me.

Best Regards,

A handwritten signature in black ink, appearing to read 'W. E. Massie', with a long horizontal flourish extending to the right.

William E. Massie
Director of Design Technology
Associate Professor of Architecture

9 October 2018

Dear Dean Vernon:

I am excited to write this letter offering my whole-hearted support for your college's proposed Product Design program.

My enthusiasm stems from the multiple benefits this proposed program offers to students, the Department of Biomedical Engineering, the College of Engineering, the University and the Commonwealth.

Students from a large geographical region will be attracted to the proposed Product Design program because it offers a novel field of study that allows them to develop their creative interests in an academically rigorous manner. These students understand that industry needs a source for talented product designers to meet rising yet changing demands from many consumer sectors. I expect that students seeing such careers will be attracted to this program because of the robust job market. In time, distinguished graduates from the proposed program offer the potential for handsome return to the college and the university. This is precisely what happened two years ago to the Biomedical Engineering department from a distinguished graduate of our program – we are the first department in the history of the University of Kentucky to obtain a department named endowment.

The Department of Biomedical Engineering will reap substantial benefits from the proposed Product Design program because courses included in this program have an important role in our concurrently proposed Bachelor of Science in Design-Thinking Biomedical Engineering program. This program will instill creative right-brain skills simultaneously with technical left-brain skills characteristic of the engineering curriculum. The department of biomedical engineering depends upon selected proposed new product design courses to provide our biomedical engineering students with the skills needed to create innovative cost-effective solutions to contemporary healthcare challenges.

The ongoing collaboration between the College of Design and the Department of Biomedical Engineering will serve as a pilot for expanded collaboration between the College of Design and other engineering departments at the University. This is especially true for Mechanical Engineering, Civil Engineering, and the proposed new department of Aerospace Engineering. We began our collaboration over a year ago talking about dual degree opportunities, and these concepts are part of a broader suite of programs that are designed to follow both the current BME and Product Design proposals.

Data clearly shows that undergraduate enrollments are on the downswing across all universities in the United States. As a result, the University projects a shortfall in new students and tuition-based revenues over the next 5 years. The proposed Product Design program offers a timely strategic response to this development because the attractiveness of the proposed program will attract out of state students who would otherwise attend elsewhere. University revenues will increase, not just from tuition, but also potentially from industry-sponsored collaborative projects. The international renown of the University will be elevated due to the faculty attracted to the proposed Product Design program and the prominence of their academic and teaching successes.

8 October 2019

Page Two

Kentucky has met with limited success in efforts to attract new industry to the state. The proposed Product Design program offers a new vehicle for Kentucky-based commercial development. Specifically, graduates of the proposed program may elect to remain in the greater Lexington area and launch design-based consulting firms. Indeed, we expect that the first Lexington-based design-consulting firms will focus on healthcare product design. In time, the successfulness of such design firms may offer another means for attracting new manufacturing in the area.

I am confident that the proposed program in Product Development will be a resounding success. This confidence derives from the academic content of the proposed program, the societal need for its graduates, and the leadership of the College of Design. Analogous to evaluating common stocks for potential future returns, such evaluations are based on technical product-market fundamentals and organizational leadership. It is important to note that the champion of the proposed program, Dean Vernon, has prior managerial and academic experience championing Product Design programs. Her exceptional blend of seasoned academic experience combined with her youthful drive and energy offers exactly the right skill set to make the proposed program a resounding success.

Thank you for supporting the proposed Product Design program.

Sincerely,



David Pienkowski, PhD, MBA



University of Kentucky

College of Engineering

*F. Joseph Halcomb III, M.D. Department
of Biomedical Engineering*

522 Robotics and Manufacturing Building

143 Graham Avenue

Lexington, KY 40506-0108

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P: 859-323-7217

F: 859-257-1856

guigen.bme@uky.edu

September 24, 2018

To Whom It May Concern:

I am writing with great enthusiasm to provide my support whole-heartily for the proposed Bachelor of Science in Product Design program by the College of Design. As the Chair of the Department of Biomedical Engineering (BME), I see numerous new opportunities this Product Design program could help create on campus to position the University of Kentucky in a leading position to meet the demands of our time in advancing higher education, in enriching quality of life, and in improving healthcare treatments, to name just a few.

In a conventional sense, the field of Engineering is often regarded as “design under constraints.” Both the Engineering and Design fields talk about *design*, so what is the difference between a design by engineers and a design by designers? In my own search for an answer, I would argue that the design by engineers is, to the most part, still trapped within a rationalistic loop from defining technically a need, ideation, prototyping, to testing the prototype, while the design by designers goes beyond this loop to first interpret a human need in terms of necessity, desire and acceptance. It is an integrated journey of sentimentalism and rationalism. Why does this matter? It matters because we live in an era of human-centered economy that calls for human-centered innovations.

Speaking of the mission of the BME, in my personal view, this integrated journey is exactly what we need to equip our future graduates with the right *design-thinking* skills and technical competencies to change the landscape and ecosystem of healthcare through human-centered innovations in healthcare treatments and enabling technologies. This Product Design program is crucial to our own upcoming proposed *Design-thinking* Bachelor of Science in Biomedical Engineering.

The creation of these two BS degree programs at UK will provide unique cross-disciplinary opportunities between the Colleges of Engineering and Design and other sister colleges for us to take advantage of the existing strengths on campus to maximize the outcomes with the least expenses. This in turn will pave ways for more societal relevant programs, such as a dual-degree Product Design and Biomedical Engineering program in the near future to attract and retain more students, including women and underrepresented minorities, to learn, work and earn to their full potential, and to place Lexington as a national hub for Biomedical Design.

Thank you for your consideration and please feel free to contact me should you have any questions.

Sincerely,

Guigen Zhang, Ph.D., FAIMBE

Professor and Chair

F. Joseph Halcomb III, M.D. Endowed Chair

seeblue.

An Equal Opportunity University

October 5, 2018

Members of the University of Kentucky Community

Over the past year I have had the opportunity to observe the development of a proposed Bachelor of Science in Product Design. During that period our resident expert in the field, Dean Mitzi Vernon, assembled and consulted with a group of nationally known design faculty and practitioners. They collaborated in the construction of an innovative curriculum. Additionally, the University process for the development of new programs including the development of syllabi for specific courses has been completed. I am confident that the program will meet or exceed accreditation standards as specified by the National Association of Schools of Art and Design (NASAD). After reviewing the resulting program proposal, I enthusiastically support its adoption into the University of Kentucky College of Design.

The Bachelor of Science in Product Design, also known as Industrial Design, will align perfectly with the mission of the College of Design. Once approved the program will provide a multitude of cross disciplinary opportunities inside the college and across campus. I am aware of proposed relationships with UK Biomedical and Engineering departments. It will also grow the student body of the college.

The College of Design is one of the smallest, in number of students, colleges on campus, but through outreach and engagement it delivers a wealth of new knowledge to the University of Kentucky, community, region and world. The Product Design program will enable the College of Design to expand its reach into new fields and provide collaborative opportunities for students and faculty.

Design occurs at multiple scales. Currently, we have Urban Design approved. Historic Preservation addresses the built environment over time. Architecture is a mainstay of the college at the building scale and Interiors is about one's experience in space. This new offering would bring design to the college at the most intimate and utilitarian scale.

Product Design has untapped potential for research and innovation. No other programs of this kind exist in the Commonwealth of Kentucky. I understand that product designers are in high demand. Graduates will be equipped with creativity, critical thinking and a state-of-the-art skill set.

In conclusion, the addition of a Bachelor of Product Design will prepare graduates for a fruitful career, provide cross disciplinary research opportunities at the University and meet a critical need in industry in the Commonwealth.

Sincerely,



Bruce Swetnam, Associate Dean for Students

see blue.

October 11, 2018

Dean Mitzi Vernon
College of Design
University of Kentucky
Lexington, KY 40506

Dear Dean Vernon:

The Department of Historic Preservation is pleased to express its unanimous and enthusiastic support for the proposed Bachelor of Science in Product Design. The faculty believe the proposed curriculum will be an important addition to the college offerings and a crucial step toward training students for an increasingly important, highly attractive set of career opportunities. We also believe the program will create opportunities for collaboration with other units across campus. We appreciate the work that has gone into developing the proposal and look forward to its approval by the University Senate.

Thank you for involving us in the review of the proposal.

Sincerely,



Daniel Vivian
Associate Professor and Chair

seeblue.

30 October 2018

Dean Mitzi Vernon
College of Design
University of Kentucky
Lexington, KY 40506

Dear Dean Vernon,

Without hesitation, I express my enthusiastic support for the Product Design program. After ongoing discussions with the Interiors faculty, it is broadly felt that the proposed curriculum will offer lucrative interdisciplinary synergies for the College of Design.

Apart from internal enhancements, the new Product Design program will encourage currently untapped potential for collaboration with units across the University of Kentucky campus and design industry. I personally believe that the Product Design program will help us to pursue lucrative opportunities in research, technology, and grants that would otherwise not be possible. Furthermore, the Product Design program will positively contribute to college-wide recruitment strategies, curriculum development, and scholarship initiatives in the College of Design.

Sincerely,



Gregory Marinic

*Associate Professor & Interim Director, School of Interiors
Director of Graduate Studies, School of Interiors*

30 October 2018

Dean Mitzi Vernon
College of Design
University of Kentucky
Lexington, KY 40506

Dear Dean Vernon,

It is without hesitation that I offer my enthusiastic support for the proposed Product Design program. The overwhelmingly affirmative faculty vote at the College level accurately reflects the overall position of the School of Architecture faculty that has been shared during our meetings and discussions.

It is my strong belief that the proposed program will add a disciplinary unit that will assist us in our mission to not only grow the College, both in students and program offerings, but also in creating valuable interdisciplinary collaboration opportunities for all of the academic units. It will provide opportunities to attract a more diverse student population as well as faculty. Additionally, the proposed program will, in my opinion, provide benefits beyond just those internal to the College. It will enable us to broaden our partnerships and collaborations across the University. It will also provide new opportunities for partnerships with regional, national, and international industries increasing our ability to fund faculty research and apply for patents, which would reinforce the University's reputation as a leading research institution.

Sincerely,



Jeffrey Johnson, Director, School of Architecture