

# DA VINCI CENTER FOR INNOVATION

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**Garret Westlake**  
 Executive director

A collaboration of VCU's schools of the Arts, Business, Engineering and College of Humanities and Sciences, the VCU da Vinci Center is a unique collegiate model that advances innovation and entrepreneurship through cross-disciplinary collaboration.

The academic and other program offerings of the da Vinci Center aim to create T-shaped individuals: individuals who are anchored in a discipline and have the capacity and openness to span across disciplines.

Students participating in the da Vinci Center view innovation and entrepreneurship from multiple disciplinary perspectives and, thus, are prepared for the 21st-century workforce by more robustly approaching the innovation/entrepreneurship endeavor.

- Product Innovation, Master of (M.P.I.) (<http://bulletin.vcu.edu/graduate/da-vinci-center-innovation/product-innovation-mpi/>)
- Health Care Innovation, Certificate in (Graduate certificate) (<http://bulletin.vcu.edu/graduate/da-vinci-center-innovation/health-care-innovation-cert/>)

## **INNO 501. Arts Principles for Product Innovation. 3 Hours.**

Semester course; 3 lecture hours. 3 credits. Enrollment is restricted to students in the Master of Product Innovation program or with approval of the instructor. Introduces studio-based arts instruction to individuals with a background in business, engineering or other non-arts discipline. Lectures and assignments expose students to a broad range of skills and vocabulary, enabling them to comprehend, analyze and communicate visually. Working individually and in teams, the core experience will be formed through iterative making, via direct, hands-on material experience.

## **INNO 502. Business Principles for Product Innovation. 3 Hours.**

Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Enrollment is restricted to students in the Master of Product Innovation program, the Graduate Certificate in Health Care Innovation and the Master of Science in Nursing with a concentration in nursing leadership and organizational science or with approval of the instructor. Introduces theoretical frameworks and practical applications of innovation strategy. This fast-paced class introduces business model innovation and explores the different areas of product innovation that improve the likelihood of success. Topics include customer segmentation, value proposition development, financial considerations, operations, internal innovation, emerging technology and change management.

## **INNO 503. Technology Principles for Product Innovation. 3 Hours.**

Semester course; 3 lecture hours. 3 credits. Enrollment is restricted to students in the Master of Product Innovation program or with approval of the instructor. Introduces technology and technological principles to students with non-engineering-related degrees. A particular focus is learning and applying a technology problem-solving process to different types of open-ended problems. The process includes the steps of needs identification, information gathering, idea generation, evaluation and selection.

## **INNO 590. da Vinci Project. 3 Hours.**

Semester course; 3 lecture hours. 3 credits. Enrollment is restricted to students enrolled in the Master of Product Innovation program, the Nursing, Master of Science (M.S.) with a concentration in nursing leadership and organizational science and the M.B.A. dual degree with the Master of Product Innovation or with approval of instructor. Students will engage in an interdisciplinary product innovation project with a corporate sponsor under faculty supervision. Topics and activities will hone product innovation skills, including project management, team building, concept generation and testing, market analysis, visualization, and prototyping.

## **INNO 591. Topics in Product Innovation. 1-3 Hours.**

Semester course; 1-3 lecture hours (delivered online, face-to-face or hybrid). 1-3 credits. May be repeated for a maximum of nine credits. Enrollment is open to seniors and graduate-level students or with departmental approval. Study of current and emerging topics in the field of product innovation. Topics may vary by semester. See the Schedule of Classes for offerings each semester.

## **INNO 600. Integrative Design Studio. 3 Hours.**

Semester course; 3 lecture hours. 3 credits. Enrollment is restricted to students in the Master of Product Innovation program, the graduate Certificate in Health Care Innovation and the M.B.A. dual degree with the Master of Product Innovation, or with approval of the instructor. Integrates the theory and practice of product innovation across the arts, business and engineering disciplines. Students are exposed to and apply a broad set of skills and tools to aid in understanding, envisioning and communicating product innovation. Working in interdisciplinary teams, students will hone teamworking skills and collectively address contemporary issues associated with product innovation, such as sustainability. Course requirements may be fulfilled with select study abroad opportunities.

## **INNO 610. Innovation, Design Thinking and Change Management. 3 Hours.**

Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Enrollment is restricted to graduate- or professional-level students or with departmental approval. Innovation, design thinking and change management are critical skills across disciplines and are part of a larger collection of 21st-century skills that benefit individuals and organizations. Students will learn to apply tools for innovation, find the right problems, identify solutions and develop a mindset ready to embrace and implement innovation and change. In addition to providing an introduction to these concepts, students will actively participate in real-world innovation projects and will earn certifications in design thinking and change management.

**INNO 651. Master's Project in Product Innovation I. 6 Hours.**

Semester course; 2 lecture and 4 laboratory hours (delivered online, face-to-face or hybrid). 6 credits. Prerequisites: INNO 501 and INNO 502, INNO 502 and INNO 503, or INNO 501 and INNO 503; and INNO 590 and INNO 600. Enrollment is restricted to students in the Master of Product Innovation program; students enrolled in the graduate Certificate in Health Care Innovation may be permitted to take this course with department approval. This capstone experience requires that an interdisciplinary team or individual engage in various facets of a real product development initiative. The project may be an approved company-sponsored or student-originated effort. Applying arts, business and engineering skill sets gained from previous course work, students will identify a potential opportunity and conceive viable product concepts to be pursued across the three project stages of concept generation, concept development and refinement, and concept finalization. The semester will culminate with each team or individual pitching a set of prototypes and business cases for preferable concepts, with at least one viable concept supported by a viable business case and expected class deliverable. Graded as S/U/F.

**INNO 652. Master's Project in Product Innovation II. 6 Hours.**

Semester course; 2 lecture and 4 laboratory hours (delivered online, face-to-face or hybrid). 6 credits. Prerequisite: INNO 651. This is the second course of the capstone experience that may culminate in one of three ways: 1) Viable projects from the prerequisite course will allow interdisciplinary teams or individuals to continue engaging in the facets of a company-sponsored or student-originated product development initiative, resulting in a proposal of at least one well-detailed, functional product prototype accompanied by a formal business plan, as well as writing requirements to document process, successes and pitfalls; 2) For projects unsuccessful in achieving viability or where industry experience is a serious interest, students may pursue a guided internship in product development, product management or a related field, culminating with deep written reflection on the experience as well as writing requirements to document process, successes and pitfalls; or 3) Students may propose to complete original research and compose a graduate thesis based on an approved topic of innovation. Thesis students may be asked to submit a writing sample prior to department approval of this option, and will be required to form a committee of three full-time faculty members or administrators, with one party external to the department. Graded as S/U/F.

**INNO 691. Topics in Product Innovation. 1-3 Hours.**

Semester course; 1-3 lecture hours (delivered online, face-to-face or hybrid). 1-3 credits. May be repeated for a maximum of six credits. Enrollment is restricted to students in the Master of Product Innovation program and the graduate Certificate in Health Care Innovation, or with approval of the instructor. Study of current and emerging topics in the field of product innovation. Topics may vary by semester. See the Schedule of Classes for offerings each semester.

**INNO 697. Guided Study in Product Innovation. 1-3 Hours.**

Semester course; 1-3 independent study hours. 1-3 credits. May be repeated for a maximum of six credits. Students in the M.P.I. program who wish to do research on problems in the area of product innovation will submit a detailed outline of their problem. They will structure a research study, undertake this study and prepare a written report on the problem. Approval of proposed work is required by the program director.