PRODUCT INNOVATION, CERTIFICATE IN (UNDERGRADUATE CERTIFICATE)

The Certificate in Product Innovation allows undergraduate students to develop competency in the area of product innovation.

Employing a cross-disciplinary perspective that embodies concepts from arts, design, business, engineering, and humanities and sciences, students receive a robust learning experience that leads to an understanding of the challenges associated with and means for managing product design, product development and new-product introduction endeavors.

The Certificate in Product Innovation program runs concurrently with a student's major and is not a stand-alone program. In order to participate in the program, students must have a declared major in the schools of the Arts, Business, Engineering, the College of Humanities and Sciences, or another VCU unit that is an official partner of the da Vinci Center.

Students participating in this program will learn how to:

• Collaborate successfully: Students will demonstrate successful collaborative skills by learning how to work in teams, manage team conflict and organization and apply these learnings in real teaming situations.
• Develop product concepts: Students will demonstrate the ability to develop and test effective product concepts and prototypes.
• Think across disciplines: Students will demonstrate the ability to think across disciplines through taking courses outside their main area of study and working on teams with students from various backgrounds.
• Use effective verbal and oral communication: Students will be prepared to effectively express product innovation ideas and views in both verbal and written forms. Students will also be able to effectively communicate using verbal presentations and written executive reports.

Students should apply to the program during or after taking the introductory course, INNO 200. Interested students should submit their application to the VCU da Vinci Center which administers the certificate program. Upon acceptance to the certificate program, a Change of Major form will be signed by the student and submitted to Records and Registration by the VCU da Vinci Center.

Certificate requirements

Students with majors in the School of the Arts, School of Business and College of Engineering take the two non-discipline electives outside their major and two discipline-specific electives from within their major. Students from outside the schools of the Arts, Business and College of Engineering must take all three non-discipline electives and one discipline-specific elective. Note INNO 223 is usually offered only in the spring semester.

A minimum grade of C is required in each course that applies to the certificate.

The certificate requires a minimum of 16 credit hours of approved course work as follows:

Course	Title	Hours
INNO 200	Introduction to Innovation and Venture Creation	1
Select two courses from the following non-discipline electives: [1]		6-9
INNO 221	Introduction to Arts and Design Principles	
INNO 223	Introduction to Business Principles	
or ECON 205	The Economics of Product Development and Markets	
or MKTG 301	Marketing Principles	
INNO 225	Introduction to Engineering and Technology Principles	
Select two discipline-specific electives (approved 300- or 400-level courses in the major) [2]		3-6
INNO 460	Product Innovation: da Vinci Project [2]	3
Total Hours		**16**

[1]

Choose the courses offered on the subjects outside the major; students from outside the Schools of the Arts, Business, and Engineering must take all three non-discipline electives.

[2]

Students may take only one discipline-specific elective course while enrolled in INNO 460. Students from outside the Schools of the Arts, Business and Engineering are required to take only one discipline-specific elective, since they take nine credits of non-discipline electives.

The minimum total of credit hours required for this certificate is 16.

Electives

Note that elective choices are discipline-specific by major.

Course	Title	Hours
Core discipline electives		
School of the Arts		
COAR 311	Type and Image	
COAR 321	Sequential Imaging	
COAR 332	Digital Drawing	
COAR 433	Game Design, Theory and Practice	
COAR 450	Business of Communication Arts	
CREA 300	Idea Accelerator	
CREA 350	Piloting the Enterprise	
CREA 393	Design Ops Internship	
CRAF 320	Furniture Design	
CRAF 351	Intermediate Glass Fabrication/Hot	
CRAF 362	Intermediate Textiles: Pattern Weaving	
FASH 341	Merchandise Planning and Control	
FASH 343	Fashion Forecasting	
FASH 401 & FASH 402	Focused Design Applications and Cultural Issues in Studio Practice	
FASH 493	Fashion Internship	
GDES 308	Web Design	
GDES 321	Core Studio III	

GDES 330	The Business of Design	
GDES 343		
GDES 347		
GDES 356	Studio Management	
GDES 380	Multi Studio I	
GDES 418	Design Center	
GDES 492		
IDES 301	Interior Design Studio I	
IDES 312	Advanced Interior Graphics II	
IDES 324	Furniture Design	
IDES 431	ID Business Practices	
IDES 491	Topics in Interior Design	
KINE 308		
PAPR 421	Drawing, Advanced	
SCPT 322	Flexible Molds	
School of Business		
BUSN 323	Legal Environment of Business	
ECON 305	Public Finance	
INFO 361	Systems Analysis and Design	
MGMT 319	Leadership	
MGMT 321	Survey of Entrepreneurship	
MKTG 310	Marketing Research	
MKTG 330	Integrated Marketing Communications	
MKTG 430	Experiential Marketing	
MKTG 450	Product Development and Management	
SCMA 350	Introduction to Project Management	
College of Engineering		
CMSC 355	Fundamentals of Software Engineering	
CMSC 401	Algorithm Analysis with Advanced Data Structures	
EGRB 301	Biomedical Engineering Design Practicum	
EGRB 307	Biomedical Instrumentation	
EGRB 401	Biomedical Engineering Senior Design Studio	
EGRB 402	Biomedical Engineering Senior Design Studio	
EGRB 421	Human Factors Engineering	
EGMN 300	Mechanical Systems Design	
EGMN 309	Material Science for Engineers	
EGMN 420	CAE Design	
EGMN 402 & EGMN 403	Senior Design Studio (Laboratory/Project Time) and Senior Design Studio (Laboratory/Project Time)	
College of Humanities and Sciences		
BIOL 496	Biology Preceptorship: ____	
CHEM 310	Medicinal Chemistry and Drug Design	
ENGL 310	Professional Writing	
ENGL 388	Professional, Scientific and Technical Writing	
INTL 320	International Marketing	
INTL 327	Introduction to Intercultural Communication	
INTL 418	International Management	
INTL 446	International Human Resource Management	
MASC 300	Technical Prowess	
MASC 301	Graphics for Journalism	
MASC 334	Visual Communication and Design for Public Relations	
MASC 367	Beginning Media Production	
MASC 415	Advanced Media Production	
MASC 425	Public Relations Research Methods	
MASC 451	Invention	
MASC 485	Web Site Design	
PHYS 307	The Physics of Sound and Music	
POLI 331	Public Administration	
POLI 374	Financial Management for Nonprofits	
PSYC 308	Stress and its Management	
PSYC 310	Industrial Psychology	
PSYC 317	Experimental Methods	
UNIV 301		
UNIV 499		

The program director for product innovation will approve all course work intended to satisfy any elective requirements for the undergraduate Certificate in Product Innovation.

Sample plan of study

Note that classes are taken in conjunction with major course work; see curriculum outline for discipline-specific electives. Students should work with their da Vinci adviser to set a plan of study that best aligns with their major course work.

Year one		
Fall semester		**Hours**
INNO 200	Introduction to Innovation and Venture Creation	1
	Term Hours:	**1**
Spring semester		
INNO 221 or INNO 223	Introduction to Arts and Design Principles [1] or Introduction to Business Principles [1]	3
Discipline-specific elective (approved 300- to 400-level course in the major) [2]		3
	Term Hours:	**6**
Year two		
Fall semester		
INNO 221 or INNO 225	Introduction to Arts and Design Principles [1,3] or Introduction to Engineering and Technology Principles [1,3]	3
Discipline-specific elective (approved 300- to 400-level course in the major) [2]		3
	Term Hours:	**6**
Spring semester		
INNO 460	Product Innovation: da Vinci Project [4]	3

Discipline-specific elective (approved 300- to 400-level course in the major) or third non-discipline elective [2]	3
Term Hours:	**3**
Total Hours:	**16**

[1]

Arts, business and engineering majors choose the non-discipline electives appropriate to their major area as described in curriculum outline. H&S and other majors take all non-discipline electives. Note INNO 223 is usually offered only in the spring semester.

[2]

Students from outside the Schools of the Arts, Business and Engineering are required to take only one discipline-specific elective, since they take nine credits of non-discipline electives.

[3]

Engineering majors choose INNO 221; all others select INNO 225.

[4]

Students may take only one discipline-specific elective course while enrolled in INNO 460.

The minimum total of credit hours required for this certificate is 16.

Students who complete the requirements for this program will receive a Certificate in Product Innovation.

For more information, contact the student services coordinator for the VCU da Vinci Center at (804) 827-3764 or davincicenter@vcu.edu.