

2024 - 2025 Certificate Map

Entrepreneurship and Innovation

School/College: [W. P. Carey School of Business](#)

Location: [Tempe](#)

Program Requirements

The entrepreneurship and innovation certificate requires 15 credit hours and is available to all majors. At least 12 credit hours must be upper division. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or better.

No more than six credit hours may be shared between the certificate and other degree programs, minors, and/or other certificates.

Required Core Courses -- 9 credit hours

[ENT 305: Principles of Entrepreneurship](#) (3)

[ENT 340: Creativity and Innovation \(L or HU\)](#) or [TEM 230: Creativity and Business Innovation](#) (3)

[ENT 360: Entrepreneurship and Value Creation](#) or [TEM 400: Technology Entrepreneurship](#) (3)

Focus Area Electives -- 6 credit hours

Focus Area Electives: Students will select two courses within the same focus area below. (6)

It is the student's responsibility to check the prerequisites required by courses in their discipline.

Focus area electives will be designated and approved by individual disciplinary colleges.

American Indian Studies Focus Area

[AIS 375: Innovation for American Indian Sustainability](#) (3)

[AIS 385: Entrepreneurship for American Indian Sustainability](#) (3)

Anticipating Futures Focus Area

[FIS 305: Ways of Knowing \(L\)](#) (3)

[FIS 307: Navigating Futures \(SOBE OR SB\)](#) (3)

[FIS 308: Politics, Markets and Innovation \(CIVI OR SB\)](#) (3)

Aviation Management Focus Area

AMT 491 is required in the aviation management concentration. Students will choose one other AMT course.

[AMT 308: Air Transportation \(GCSI OR G\)](#) (3)

[AMT 489: Airline Administration](#) (3)

AMT 491: Aviation Management Capstone (3)

Biomedical Engineering Focus Area

BME 300: Bioengineering Product Design (3)

BME 417: Biomedical Engineering Capstone Design I (L) (4)

Business/Start-up Focus Area

AGB 456: Food Product Innovation and Development (3)

ENT 445: Business Model Development (3)

ENT 446: Venture Capital Experience (3)

ENT 447: Lean Launch (3)

ENT 464: Collaborative Design Development I (L) (5)

ENT 465: Collaborative Design Development II (L) (5)

FIN 455: Entrepreneurial Finance (3)

MKT 442: Services Marketing Strategy (3)

Design and Arts Focus Area

ARA 396: Professional Practices for Design and the Arts (3)

ARA 460: Gallery Exhibitions (3)

DSC 394: Design Entrepreneurship & Society (3)

HDA 252: Foundations Arts and Design Entrepreneurship (3)

FMP 417: Business and Legal Practices in Entertainment (3)

MUP 438: The Enterprising Artist (3)

MUP 439: Performing Arts Product Creation and Development (3)

THP 351: Arts Management (3)

THP 450: Theatre Organization and Management (3)

Digital Media Entrepreneurship: Web Focus Area

AME 435: Mobile Development (3)

GIT 402: New Media Internet Technologies (3)

GIT 414: Web Site Design and Internet/Web Technologies (3)

GIT 417: Advanced Web Markup and Scripting (3)

GIT 435: Website and E-Commerce Strategies (3)

GIT 480: Senior Project (3)

Herberger, FSE, WPC: Innovation Space Focus Area

New product development. Students enroll in the courses associated with their major.

ENT 464: Collaborative Design Development I (L) AND ENT 465: Collaborative Design Development II (L) (10)

GRA 464: Collaborative Design Development I (L) AND GRA 465: Collaborative Design Development II (L) (10)

IND 464: Collaborative Design Development I (L) AND IND 465: Collaborative Design Development II (L) (10)

Ira A. Fulton Schools of Engineering: Alternative Energy Entrepreneurship Focus Area

[ALT 420: Electrochemical Energy Technologies](#) (3)

[ALT 435: Applied Photovoltaics](#) (3)

[ALT 445: Automotive and Stationary Fuel Cell Systems](#) (3)

Ira A. Fulton Schools of Engineering: Process Innovation Focus Area

[TMC 331: Quality Assurance](#) (3)

[TMC 430: Enterprise Strategy and Innovation](#) (3)

Ira A. Fulton Schools of Engineering: New Product Development Focus Area

[CSE 335: Principles of Mobile Application Development](#) (3)

[TEM 330: Systems Innovation](#) (3)

[TEM 400: Technology Entrepreneurship](#) (3)

Ira A. Fulton Schools of Engineering: Social Entrepreneurship Focus Area

[TEM 450: Design for the Developing World](#) (3)

[TEM 455: Global Impact Entrepreneurship](#) (3)

[TEM 482: Startup Workshop](#) (3)

Small Business Focus Area

[ENT 441: Entrepreneurial Management](#) (3)

[ENT 445: Business Model Development](#) (3)

[ENT 448: Corporate Entrepreneurship](#) (3)

[MKT 435: Entrepreneurial Marketing](#) (3)

[MKT 440: Creating Digital Experiences](#) (3)

The College of Liberal Arts and Sciences: Science Focus Area

[BIO 312: Bioethics \(HUAD OR HU\)](#) (3)

[BIO 416: Biomedical Research Ethics \(L\)](#) (3)

[NTR 344: Nutrition Management and Leadership \(L\)](#) (3)

[PHI 320: Bioethics \(HUAD OR HU\)](#) (3)

Walter Cronkite School of Journalism and Mass Communication Focus Area

[JMC 455: Digital Media Entrepreneurship](#) (3)

[JMC 473: The Business and Future of Journalism](#) (3)

[JMC 477: New Media Innovation and Entrepreneurship Lab](#) (3)

[MCO 335: Social Media Foundations](#) (3)

[MCO 425: Digital Media Literacy I](#) (3)

Watts College of Public Service and Community Solutions Focus Area

[NLM 410: Social Entrepreneurship](#) (3)

[NLM 430: Managing Nonprofit Organizations \(L\)](#) (3)

[NLM 435: Service Learning for Community Development](#) (3)

[PRM 402: Assessment and Evaluation of Community Services](#) (3)

[PRM 427: Where's the Money: Special Event Revenue Generation](#) (3)

[PRM 475: Entrepreneurial Recreation and Tourism](#) (3)

Depending on a student's undergraduate program of study, prerequisite courses may be needed in order to complete the requirements of this certificate.