

APPROVED COURSES FOR CERTIFICATE IN ENTREPRENEURSHIP AND INNOVATION - Page 1 of 3

PROGRAM REQUIREMENTS: Students must take the equivalent of five courses in the following categories:					
Two Required Core Courses (6 credits)					
ENTR 20000 Introduction to Entrepreneurship and Innovation					
ENTR 31000 Marketing and Management for New Ventures (pre-req. ENTR 20000) or ENTR 31500 Business Planning for Social Entrepreneurship (pre-req. ENTR 20000)					
Two Option Courses					
Option courses provide students with discipline or industry/market-specific depth in areas that are relevant to entrepreneurship and/or innovation.					
One Capstone Course					
Capstone courses provide students with hands-on, real-world entrepreneurial or innovation-related experiences that provide closure and coherence to the Certificate Program					
Students will be permitted to substitute an additional capstone for one of the required option courses.					
Courses designated "OPEN" on the approved list are available to all certificate program students, where space permits and pre-requisites have been met.					
"X" indicates courses are crosslisted					
The Process					
To enter the Program students should enroll in ENTR 20000. Those interested in receiving the Certificate will fill out a Completion Plan when enrolled in ENTR 31000/ENTR 31500.					
Grade of C- or higher must be obtained in all ENTR courses used toward Certificate Completion.					
REQUIRED ENTREPRENEURSHIP CORE COURSES					
		Type	Major	Pre-reqs & Notes	Semester
ENTR 20000	Introduction to Entrepreneurship and Innovation	Core	OPEN		F, Sp or SS
ENTR 31000 or ENTR 31500	Marketing and Management for New Ventures / Business Planning for Social Entrepreneurship	Core	OPEN	ENTR 20000; Either course fulfills second core requirement; ENTR 31000 (both residential and distance learning)	F, Sp or SS / Both
ENTREPRENEURSHIP OPTION COURSES					
		Type	Major	Pre-reqs & Notes	Semester
ENTR 46000	Internship and Career Preparation Seminar	Option	OPEN	Online course. For more information, contact Rita Baker at bakerr@purdue.edu	F/Sp or SS
ENTR 47000A X WGSS 39000	Specific Title Only Women and Leadership	Option	OPEN	Crosslist courses have same title	Spring
ENTREPRENEURSHIP CAPSTONE COURSES & EXPERIENTIAL PROGRAMS					
		Type	Major	Pre-reqs & Notes	Semester
ENTR 48000	Entrepreneurship Capstone	Capstone	OPEN	ENTR 20000, 31000/31500	Both
ENTR 48100	Entrepreneurship Capstone - Consulting for Emerging Enterprises	Capstone	OPEN	ENTR 20000, 31000/31500, instructor permission	Both
ENTR 48200	Venture Planning Capstone	Capstone	OPEN	ENTR 20000, 31000/31500	Both
ENTR 39699 - I0 Sections Only	Internship and Research Experiences - Interns for Indiana (IFI)	Capstone	OPEN	Formerly ENTR 46100. For more information, contact Tina Alsop at alsop@purdue.edu	Summer
ENTR 39699 - D0 Sections Only	Internship and Research Experiences - Discovery Park Undergraduate Research Internship (DURI)	Option	OPEN	For more information, contact duristudent@purdue.edu	F, Sp or SS
INTERNSHIPS, STUDY ABROAD & RESEARCH COURSES					
		Type	Major	Pre-reqs & Notes	Semester
	Cancer Prevention Internship Program	Option	OPEN	For more information, contact Dr. Dorothy Teegarden at teegarden@purdue.edu	F, Sp or SS
	CIMBA: Paderno del Grappa, Italy	Option	SA approval	Select course reqs. Contact Glenda at gcaudill@purdue.edu	F, Sp or SS
	DIS Copenhagen, Copenhagen, Denmark	Option/Capstone	SA approval	Select course reqs. Contact Glenda at gcaudill@purdue.edu	F, Sp or SS
	GEM Trailblazer Summer NTU Singapore, Tracks 2 and 4	Both possible	SA approval	Select course reqs. Contact April Robillos at robillos@purdue.edu	SS
	IES: Milan, Italy	Option	SA approval	Select course reqs. Contact Glenda at gcaudill@purdue.edu	Both
	Tec de Monterrey, campus Queretaro, Mexico	Option	SA approval	Select course reqs. Contact Glenda at gcaudill@purdue.edu	F, Sp or SS
	Universita Bocconi, Milan, Italy	Option	SA approval	Select course reqs. Contact Glenda at gcaudill@purdue.edu	Both
	University College Dublin's Quinn, Sch. of Business, Dublin, Ireland	Option	SA approval	Select course reqs. Contact Glenda at gcaudill@purdue.edu	F, Sp or SS
GS 39501 X ILS 38000 or GS 49501 X ILS 48000	Understanding UG Res Exp II / Beyond Undergraduate Research	Option	OPEN	GS 29501 or instructor permission / GS 39501 or instructor permission, Junior standing. Crosslist courses have same title	F, Sp or SS
ILS 59500 Specific Title Only	Information Strategies for Entrepreneurship and Innovation	Option	OPEN	8 week course	Variable
AGRICULTURE					
		Type	Major	Pre-reqs & Notes	Semester
AGEC 33000	Management Methods for Agricultural Business	Option	OPEN		Both
AGEC 33100	Principals of Selling in Agricultural Business	Option	OPEN	Second semester Freshman or higher	F, Sp or SS
AGEC 42700	Advanced Agribusiness Marketing	Capstone	OPEN	Formerly list as an option course. AGECE 33000 / MGMT 32300 or MGMT 32400, AGECE 32700	Fall
AGEC 42400	Financial Management of Agricultural Business	Option	OPEN	AGECE 31100/33000 or MGMT 20000/20010 or BUS A20100	Both
AGEC 42900	Agribusiness Marketing Strategies	Capstone	OPEN	AGECE 32700/MGMT 32300 and AGECE 42700	Spring
AGEC 43000	Agricultural and Food Business Strategy	Capstone	OPEN	AGECE 32700/MGMT 32300 and AGECE 42400	Both
ANSC 43500	Reproductive Management of Farm Animals	Option	ANSC		TBD
ANSC 44000	Horse Management	Option	AG	ANSC 22100	Variable
ANSC 44200	Sheep Management	Option	ANSC		TBD
ANSC 44300	Swine Management	Option	ANSC		TBD
ANSC 49400	Animals and Food Security Service Learning	Capstone	ANSC	See Department	SS
ANSC 49500 specific title only	Food Security and Environmental Challenges in Vietnam	Option	ANSC		TBD
ASEC 43110	International Engagement Methods	Capstone	OPEN	ASEC 43100, See Department	Both
ASM 49400 X ABE 48400	Project Planning & Management	Capstone	ASMI/ABE	ASM 22100 and Senior status or Instructor Permission. Crosslist courses have same title	Fall
ASM 49600	Project Planning And Capstone Project	Capstone	ASMI/ABE	ASM 22100 and Senior status or Instructor Permission.	Fall
FS 44300	Food Product Design (Capstone)	Capstone	FS	AGECE 32700 or MGMT 32300 or (FS 44200 and FS 24500 and FS 46700 and FS 53000 and FS 36100).	Spring
HORT 42700	Horticulture Capstone	Capstone	LACM, LADS, & LAEM/HOSC	HORT 31600; graduate candidate status	Both
HORT 43500	Developing An Agricultural Startup	Option	OPEN	AGECE 33000 or ENTR 20000 & AGECE 20300 or AGECE 21700	Fall
EDUCATION					
		Type	Major	Pre-reqs & Notes	Semester
EDPS 30000	Student Leadership Development	Option	OPEN		Both

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ENGINEERING		Type	Major	Pre-reqs & Notes	Semester
AAE 25100	Introduction To Aerospace Design	Option	OPEN	ENGR 132, CGT 163 (co-req), CS 159 (co-req)	Both
AAE 35103	Aerospace Systems Design	Option	AAE	AAE 25100	Fall
AAE 41800	Zero-Gravity Flight Experiment	Option	AAE	AAE 33300	Variable
AAE 45000	Spacecraft Design	Capstone	AAE	AAE 334, AAE 340, AAE 352, AAE 364, AAE 400 (co-req), AAE 339 OR AAE 438/AAE 439 (co-req)	Both
AAE 45100	Aircraft Design	Capstone	AAE	AAE 334, AAE 340, AAE 352, AAE 364, AAE 400 (co-req), AAE 339 OR AAE 438/AAE 439 (co-req)	Both
AAE 45400	Design Of Aerospace Structures	Option	AAE	AAE 35200	Variable
AAE 53500	Propulsion Design, Build, Test	Capstone	AAE	AAE 43900 or permission	Spring
AAE 55100	Design Theory and Methods for Aerospace Systems	Option	AAE		Variable
AAE 56000	System-of-Systems Modeling and Analysis	Option	AAE		Variable
AAE 58500	Air Transportation Systems	Option	AAE		Variable
ABE 22600	Biotechnology Lab I	Option	OPEN	Formerly IT 22600	Fall
ABE 48600 X ASM 49500	Agricultural Engr Design X Agricultural Systems Mgmt Capstone Project	Capstone	ABE/ASM	ASM 22100, ABE 48400 X ASM 49400 and Senior status or Instructor Permission	F / S
ABE 48500	Agricultural Engineering Project Management And Design	Capstone	ABE/ASM	See Departmental Prerequisites	Fall
ABE 55700	Tranp Op Food and Bio Sys II	Option	ABE/CHE	ABE 45700, Formerly ABE 55500	Fall
ABE 55800	Biological & Food Process Design	Capstone	ABE/CHE	ABE 55700	Spring
BME 39000	Professional Development & Design in Biomedical Engineering	Option	BME	BME 29000 and BME 25600	Spring
BME 48901	Senior Design Project	Capstone	BME	BME 39000 and BME 49000 (may be taken concurrently)	Fall
CE 35500 X EEE 35500	Engineering Environmental Sustainability	Option	OPEN	Sophomore standing or higher. Crosslisted courses have same titles	Both
CE 49700 X CE 59700 X CEM 49700 Specific Titles Only	Ldrshp & Adv Proj Mgmt	Option	OPEN	Crosslist courses have same title	Fall
CE 59601	Entrepreneurship and Business Strategy for Engineering - Entrprnshp Bus Strtgy In Eng	Option	OPEN		Variable
CHE 45000	Design of Chemical Process Systems	Capstone	CHE	Pre: CHE 30600, 34800, 37800, Co-req: CHE 43500	Both
ECE 20875	Python for Data Science	Option	ECE	CS 15900, Minor students (and others) can apply for an override	Both
ECE 36200	Microprocessor Systems and Interfacing	Option	ECE	CS 15900 or ECE 27000, Minor students (and others) can apply for an override	Both
ECE 47700	Digital Systems Senior Project	Capstone	ECE	Instructor permission	Both
ECE 49022	Senior Design Special Projects	Capstone	ECE	Senior standing or consent. Formerly ECE 40200	Both
ECE 49600	EE and CMPE Projects	Option	ECE	ECE 20007 and ECE 20008 and ECE 27000	Both
EEE 35500 X CE 35500	Engineering Environmental Sustainability	Option	OPEN	Sophomore standing or higher. Crosslisted courses have same titles	Both
EEE 48000	Environmental And Ecological Engineering Senior Design	Capstone	EEE	Senior standing	Both
EEE 49500 Specific Title Only	Urban Water Projects	Option	OPEN	Instructor permission	Spring
ENGR 30500	Fundamentals of Innovation Theory and Practice	Option	OPEN		Fall
ENGR 39697	Global Design Projects	Option	OPEN		Variable
ENGR 49001	Breakthrough Thinking for Complex Challenges	Capstone	OPEN		Variable
ENGR 49600 Specific Title Only	High Tech Entrepreneurship	Option	OPEN		Variable
EPCS 100000:399999	EPICS Participation	Option	OPEN	Total of 3 credits over 2 semesters.	Both
EPCS 400000:499999	Senior Participation in EPICS	Capstone	OPEN	Total of 3 credit hours of 40000 level over 2 semesters	Both
IE 34300	Engineering Economics	Option	OPEN	Pre: ENGR 12600, Co-req, CGT 16300	Both
IE 54500	Engineering Economics Analysis	Option	OPEN	IE 33500, Junior/Senior status	Both
IE 54600	Economic Decisions in Engineering	Option	OPEN	A course in probability, Junior/Senior status	Spring
IE 56600	Production Management Control	Option	OPEN	Junior standing or higher, Co-req IE 38300	Both
IDE 48500	Multidisciplinary Design	Capstone	MDE	Pre: IE 343 or equiv, ENE approved design course, MA 262 or MA 265 & 266, dept permission. Pre-or Co-req IDE 301	Spring
THTR 59700	Production & Design Seminar	Capstone	MDE	THTR 59700, must be taken twice	Spring
ME 26300	Introduction to Mechanical Engineering Design	Option	ME	Pre:CGT 16300, ME 20000, 27000, Co-req: ME 29000, MA 2620	Both
ME 44400	Computer-aided Design and Prototyping	Option	ME	Senior standing	Both
ME 46300	Engineering Design	Capstone	ME/SCI	ME 31500, 35200, 37500, MSE 23000	F, Sp or SS
ME 55300	Product and Process Design	Option	ME	Senior standing	Spring
ME 55400	Intellectual Property for Engineers	Option	OPEN	Junior standing & Phys 17200	Fall
NUCL 47000	Fuel Cell Engineering	Option	Sci/E/Tech	Junior standing or higher	Fall
NUCL 45000	Design in Nuclear Engineering	Capstone	NUCL	See Departmental Prerequisites	Variable
VIP 17920	First Year Participation in Vertically Integrated Projects (VIP)	Option	OPEN	Formerly ENGR 17920	Both
VIP 27920	Sophomore Participation in Vertically Integrated Projects (VIP)	Option	OPEN	Formerly ENGR 27920	Both
VIP 37920	Junior Participation in Vertically Integrated Projects (VIP)	Option	OPEN	Formerly ENGR 37920	Both
VIP 47920	Senior Participation in Vertically Integrated Projects (VIP)	Capstone	OPEN	Formerly ENGR 47920	Both
VIP 47922	Senior Design Participation in Vertically Integrated Projects (VIP II)	Capstone	ENGR/OPEN	Formerly ENGR 47922 Pre: ENGR/VIP 47921, Must be approved for Senior design in major and must be eligible for senior design in major	Both
HEALTH AND HUMAN SCIENCES					
CSR 30900	Leadership	Option	CSR	College restriction until Open Registration	Both
CSR 34400	Fundamentals of Negotiation	Option	CSR	AGEC 33100 and (CSR 315, 209, or 342 or consent of instructor)	Both
CSR 40600	E-Retailing	Option	CSR	Must be enrolled in one of the following majors: Financial Counseling& Planning, Retail Management, Selling & Sales Management (Major restriction will be removed at open enrollment) Classifications Restrictions too.	Fall
HDFS 34800	Admin. Of Social Service for Not-For-Profit Organizations	Option	OPEN	HDFS 20100 and HDFS 21000 (both minimum grade C-)	Fall
HK 42400	Health and Fitness Program Management	Option	Some HK/NUTR	HK 26600	Spring
HTM 31200	Human Resources Mgmt. for the Service Industries	Option	HTM	Second semester Freshman or higher, Major restriction (HTMT) until open registration.	F, Sp or SS
HTM 44100	Financial Management for the Hospitality Industry	Option	HTM	Pre-req: HTM 24100 or TCEM 24100; Co-req: Major restriction (HTMT) until open registration.	Both
HTM 49901	Business Development In Hospitality And Tourism	Capstone	HTM	Formerly HTM 49900, Upper Division, formerly an "Option" course Pre-reqs: HTM 21200, HTM 23100, HTM 32200, HTM 34100 Major restriction (HTMT, Accounting, Economics, Finance, General Management, Industrial Management, Marketing, Supply Chain Info & Analytics) until open registration. Classifications restrictions too.	Both
NUR 41701	Leadership in Nursing	Option	NUR	NUR 31401, 31501, 31601, 31701 & 31901	Both
PUBH 32500	Methods of Health Promotion and Education	Option	PUBH	Formerly HK 38500, PUBH 205 or HK 215	Both

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LIBERAL ARTS		Type	Major	Pre-reqs & Notes	Semester
AMST 31000	Invention, Innovation and Design	Option	OPEN		Both
AMST 32500	Sports, Technology and Innovation	Option	OPEN		Both
COM 21700	Science Writing and Presentations	Option	OPEN		F, Sp or SS
COM 31400	Advanced Presentational Speaking	Option	OPEN	Second semester Sophomore, COM 11400 or COM R1100	F, Sp or SS
COM 43500	Communication and Emerging Technologies	Option	OPEN	Junior standing or higher	Both
COM 44400	Introduction to Communication and Social Entrepreneurship	Option	OPEN		Variable
COM 49503	Public Relations for Social Change	Option	OPEN	not pre-req, but helpful COM 25300 or COM 25700	Both
CHNS 22400	Chinese Level IV: Business Chinese	Option	OPEN	CHNS 20100	Spring
ENGL 42000*E0_ Sections Only	Business Writing *(for Entrepreneurship Certificate Students)*	Option	OPEN	Special Sections For ENTR Students only , ENGL 106 or 108	F, Sp or SS
FR 22400	Professional French I	Option	OPEN		Variable
FR 32400	Professional French II	Option	OPEN	See Departmental Prerequisites	Variable
FR 42400	Professional French III	Option	OPEN	See Departmental Prerequisites	Variable
FVS 26100	Foundations of Cinema Production	Option	Intrdisc Film/Vid		Both
FVS 44600	Producing Non-Fiction Video	Option	Intrdisc Film/Vid	FVS 33400 & FVS 33700	Both
FVS 49900	Capstone in Film/Video/Media Production	Capstone	Intrdisc Film/Vid	Instructor permission	Both
GER 22300	German Level IV: Scientific	Option	OPEN	See Departmental Prerequisites	Variable
GER 22400	German Level IV: Business German	Option	OPEN	See Departmental Prerequisites	Variable
GER 32300	German Level VI: Science and Engineering	Option	OPEN	See Departmental Prerequisites	Variable
GER 42400	Business German	Option	OPEN	GER 30200	Fall
GER 52400	German for International Trade	Option	OPEN	GER 42400 or Instructor permission	Spring
IDIS 49000 - Specific titles only	Internation Internship (Lima, Peru or Seoul, South Korea)	Option	OPEN		Summer
RUS 42400	Business Russian	Option	OPEN	See Departmental Prerequisites	Variable
SPAN 22400	Spanish Level IV: Business Spanish	Option	OPEN	See Departmental Prerequisites	Variable
SPAN 32100	Introduction to Spanish for the Professions	Option	OPEN	See Departmental Prerequisites	Variable
SPAN 32200	Spanish for the Health Professions	Option	OPEN	See Departmental Prerequisites	Variable
SPAN 32500	Spanish for Engineering and Technology	Option	OPEN	See Departmental Prerequisites	Variable
SPAN 42400	Business Spanish	Option	OPEN	SPAN 30200	Both
WGSS 39000 Specific Title Only X ENTR 47000	Women and Leadership	Option	OPEN	Crosslist courses have same titles	Spring
MANAGEMENT		Type	Major	Pre-reqs & Notes	Semester
MGMT 11000	Intro to MGMT & Info Strat	Option	MGMT		Both
MGMT 30400	Introduction to Financial Management	Option	Non-MGMT	Previously listed as MGMT 39000	F, Sp or SS
MGMT 41350	Venture Capital and Entrepreneurial Finance	Option	OPEN	Priority to MGMT and Instructor permission, MGMT 31000	Variable
MGMT 42000	Consumer Behavior and Analytics	Option	MGMT	MGMT 32400	Both
MGMT 42300	New Product Development	Option	MGMT	MGMT 32300 or MGMT 32400	Both
MGMT 42910	Experiential Marketing	Option	MGMT	MGMT 42110 or MGMT 42500 or MGMT 42710. Consult Instructor, formerly known as Entrepreneurial Marketing	Both
MGMT 44433	Leading and Working in Teams	Option	OPEN	Priority to MGMT and Instructor permission, OBHR 33000 and MGMT 44428 or MGMT 44301	Both
MGMT 44710	Competitive Strategy	Option	MGMT	Co-or Pre-Req: MGMT 45100 or MGMT 35200	Fall
MGMT 44810	Technology Strategy	Option	MGMT	MGMT 35200 or MGMT 45100	Spring
MGMT 45200	Manufacturing Strategy And Process Innovation	Option	MGMT	MGMT 45100 Min Gr of C- or UG level MGMT 35200 Min Gr of C-) and (UG level MGMT 46000 Min Gr of C- or UG level MGMT 36100 Min Gr of C-)	Both
MGMT 48400	Management of Entrepreneurial Ventures	Capstone	OPEN		Fall
MGMT 48800	Data-Driven Decisions in Digital Marketing	Option	MGMT		Spring
MGMT 59000 Specific Title Only	Student Managed Venture Fund	Option	OPEN	Instructor permission	Variable
PHARMACY		Type	Major	Pre-reqs & Notes	Semester
PHRM 83100	Health Care Systems	Option	PHARM	P-1 Standing	Spring
PHRM 84900	Population Health Management	Option	PHARM	P-2 Standing	Spring
PHRM 86900	Practice Management & Marketing of Professional Services	Capstone	PHARM	P-3 Standing	Spring
PHRM 87000	Health Policy Applications	Option	PHARM	P-3 Standing	Fall
POLYTECHNIC		Type	Major	Pre-reqs & Notes	Semester
AT 41200	Aviation Finance	Option	AT	MGMT 20100	Fall
AT 49800	Aviation Technology Capstone	Option	AT	Senior standing	Both
CGT 41201 and CGT 45001	Contemporary Problems In Applied Computer Graphics II & Computer Graphics Professional Practices II	Option	CGT	CGT 25001 / CGT 41101, Sophomores and Seniors, formerly CGT 41100 and CGT 45000	Variable
CM 40000	Construction Capstone I	Capstone	CM	CM 30000 and CM 35000 and MGMT 20010 all C- or higher	Both
CM 45000	Construction Capstone II	Option	CM	CM 40000	Both
CNIT 48000	Managing IT Projects	Option	C&IT	Second semester Junior, CNIT 28000 with minimum grade of C-	F, Sp or SS
ENGT 48100	Capstone II	Capstone	PTI	ENGT 48000, formerly MET, MFET, ECET, IT capstones	Fall and Spring
IET 21400	Industrial Supply Chain Management	Option	OPEN	Formerly TLI 21400	TBD
IET 33400	Economic Analysis For Technology Systems	Option	OPEN	MA 15800 or higher: Formerly TLI 33400 and Formerly IET 45100/IT 45000	F, Sp or SS
IET 34300	Technical and Service Selling	Option	OPEN	None, formerly IT 33000	Variable, typically F
IET 44275	Global Transportation and Logistics Management	Option	OPEN	IET 21400 & IET 34200 (may be taken concurrently), formerly IT 43400	Fall
TLI 31400	Leading Innovation in Organizations	Option	TLI		Both
TLI 31500	New Product Development	Option	TLI		Fall
SCIENCE		Type	Major	Pre-reqs & Notes	Semester
COM 21700	Science Writing and Presentations	Option	OPEN		F, Sp or SS
CS 40700	Software Engineering Senior Project	Capstone	CS	Senior Status, formerly listed as an Option course	F, Sp or SS
CS 49000 Specific Title Only	Data Science Capstone	Capstone	CS	Senior Status	Variable
Great Issues	All Great Issues in Science Courses-view link for specific offerings	Option	OPEN	https://www.purdue.edu/science/Current_Students/curriculum_and_degree_requirements/Great%20Issues%20Course%20NEW.html	Variable
SCI 49000 Specific Title Only	Dean's Executive Forum	Option	Jrs & Srs CoS	Junior standing or higher CoS	Fall