

TO: The Faculty of the College of Engineering

FROM: Global Engineering Programs and Partnerships

RE: Curriculum Additions – Global Engineering Studies Minor

Global Engineering Programs and Partnerships (GEP²) is requesting a change to the course offerings for the [Global Engineering Studies Minor](#). This change will provide additional course options for first and second year students pursuing the minor. The goal is to start a pipeline of students who will continue to pursue global engineering experiences throughout their Purdue careers and meet the demand for more courses that can be offered at a regular basis to fulfill the minor's core requirements. In addition, we are requesting the addition of two language courses designed exclusively for engineering and the technical fields as options for the optional *Cultural Knowledge Courses*.

Summary of Changes:

Add the courses below as an option to fulfill the core requirement (in lieu of ENGR 310). The students will take any two (2) courses to fulfill the 3-credit core requirement.

1. ENGR 10300: Innovations for the Global Grand Engineering Challenges (1 credit)
2. GEP 20000: Research and Design for the Global Grand Engineering Challenges (2 credits)
3. ENGR 29600: Cross-Cultural Leadership Skills for Engineers (2 credits)*
4. ENGR 297000/49700 and COM 30301: Sentio Global Competence Certificate (total 2 credits)

*This course will be added to Global Engineering Studies Minor, University Catalog once it becomes a permanent course (ENGR 297)

Add the courses below as part of the approved "Cultural Knowledge Courses":

1. SPAN 398: Spanish for Engineering and Technology (3 credits)
2. GER 323: German for Science and Engineering (3 credits)

Rational:

As administrators of the Global Engineering Studies Minor, GEP² recognizes an increased demand for course options that count toward the core requirement. There have been concerns in the past were ENGR 310 and/or ENGR 554 were not offered and students pursuing the minor were not able to fulfill the criteria. The proposed courses were intentionally selected to target a larger number of first and second year students, with the aim of building a pipeline of future *global engineers* in our college. Ideally, students should be introduced to the minor as early as possible in their careers so that they can plan their international experiences and begin working on their global competence. These crucial skills are acquired as part of a developmental process that happens over time. The proposed courses were re-designed or designed with global and intercultural learning outcomes in mind and they are part of the college's *Global Competence Initiative* (GCI). Preliminary data collected in all of the proposed courses have shown significant intercultural learning gains. Regarding the optional *Cultural Knowledge* coursework, the School of Languages and Cultures created a new Spanish course especially designed for engineering and technology. This course was a result of increased relationships between GEP² and the Spanish Department. In addition, GEP²'s Latin American/Spain Programs Assistant Director and GEARE's Global Internship Coordinator served as consultants as the course was being designed to make sure it aligns with our learning outcomes. In previous years, the German department also created a course to better serve our student population; however, this course is not currently being offered as one of the choices that can count towards fulfilling the Global Engineering Studies Minor.

Global Engineering Studies Minor: Current and Proposed courses

CURRENT		PROPOSED	
Core Requirements	Credit hours	Updated Core Requirements	Credit hours
ENGR 310: Engineering in Global Context	3	ENGR 310: Engineering in Global Context	3
May be substitute with:		May be substitute with:	
ENE 554: Globalization and Engineering	3	ENE 554: Globalization and Engineering	3
ENGR/ME 297: Global Engineering Orientation	1	ENGR 297/497 and COM 30301: Sentio Global Competence Certificate	2-3
		ENGR 103: Innovations for the Global Grand Engineering Challenges (+ additional 2 credits)	1
		GEP 200: Research and Design for the Global Grand Engineering Challenges (+ additional 1 credit)	2
		ENGR 296: Cross-Cultural Leadership Skills for Engineers (+ additional 1 credit)	2

CURRENT		PROPOSED	
Cultural Knowledge Courses – Spanish	Credit hours	Updated Cultural Knowledge Courses – Spanish	Credit hours
SPAN 23100 - Cervantes' Don Quixote	3	SPAN 23100 - Cervantes' Don Quixote	3
SPAN 23500 - Spanish American Literature In Translation	3	SPAN 23500 - Spanish American Literature In Translation	3
SPAN 33000 - Spanish And Latin American Cinema	3	SPAN 33000 - Spanish And Latin American Cinema	3
HIST 42700 - History Of Spain And Portugal	3	HIST 42700 - History Of Spain And Portugal	3
HIST 47200 - History Of Mexico	3	HIST 47200 - History Of Mexico	3
		SPAN 398: Spanish for Engineering and Technology	3
Cultural Knowledge Courses – German	Credit hours	Updated Cultural Knowledge Courses – German	Credit hours
GER 28000 - German Special Topics	3	GER 28000 - German Special Topics	3
HIST 32300 - German History	3	HIST 32300 - German History	3
HIST 42300 - Advanced Topics In Modern Germany	3	HIST 42300 - Advanced Topics In Modern Germany	3
		GER 323: German for Science and Engineering	3



George Chiu

Assistant Dean of Global Programs and Partnerships
and Professor of Mechanical Engineering

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