## **BACHELOR OF SCIENCE IN ENGINEERING**

With a concentration in Industrial & Systems Engineering Student Name

Catalogue Year 2020 - 2021

GENERAL EDUCATION CORE	REQUIRED ENGINEERING (EGR) COURSES:
	EGR 1100 (3)       EGR 3200 (3)         EGR 1200 (3)       EGR 3310 (3)         EGR 2100 (3)       EGR 3320 (3)
INTERDISCIPLINARY STUDIES (1-5 SH)	EGR 1200 (3) EGR 3310 (3)
MUJ 1100 (2)	EGR 2100 (3) EGR 3320 (3)
MUJ 1100 (2) MUJ 2200 (1)	EGR 2300 (3) # EGR 4900 (3)
MUJ 3300 (1)	EGR 3100 (3) EGR 4910 (3)
IDS 2100 (1)	REQUIRED SCIENCE COURSES:
	CHE 1510 (4)
COMPUTER COMPETENCY (0-3 SH)	PHY 2510 (4)
CSC 1000 *** (0-3)	PHY 2520 (4)
(Must be satisfied before completing 60 s.h.)	REQUIRED MATHEMATICS COURSES:
	MAT 2310 (3) MAT 3090 (3) MAT 2320 (3) MAT 3100 (3)
COMMUNICATIONS (6-12 SH)*	
	REQUIRED ECONOMICS COURSE (select 1):
ENG 1000 (if required) (3)	ECO 2610 (3) ECO 2620 (3)
	OTHER MAJOR COURSE REQUIREMENTS:
ENG 1010 (3) ENG 1020 or 1040 (3)	ENG 3210 (3)
ENG 1020 or 1040 (3) ACL 1500,1510, 3540 or 3600*** (0-3)	INDUSTRIAL & SYSTEMS ENGINEERING (ISE) CONCENTRATION COURSES:
ACL 1500, 1510, 5540 01 5000 (0-5)	
	# ISE 3200 (3) ISE 4200 (3)
GLOBAL PERSPECTIVE ELECTIVE (3 SH)	ISE 3300 (3) ISE 4310 (3)
**Choose one approved course (3)	ISE 3500 (3) ISE 4320 (3)
(see page 2)	CONCENTRATION MATHEMATICS REQUIREMENT:
	MAT 3120 (3)
HUMANITIES (9 SH)	ENGINEERING ELECTIVE: Select a minimum of 3 sh from:
Literature (no ENG 1020, 3610 or 3620) (3)	EGR 4850 (3) ISE 4850 (3)
History (3)	EGR 4990 (1-4) ISE 4990 (1-4)
Religion (3)	ISE 4400 (3)
J ( , ,	MATHEMATICS/SCIENCE ELECTIVE: Select a minimum of 3 sh from
FINE ARTS APPRECIATION (3 SH)	BIO 1530 (4) MAT 2510 (3)
ARH 1510, 2530, 2540, MUS 1510, 1520, 1600, 1610, THE 1620	BIO1560 (4) MAT 3140 (3)
1630 or 3 s.h. applied MUS/THE ensemble (3)	BIO 3060 (4) MAT 4110 (3)
(0)	BIO 3080 (4) MAT 4140 (3)
MATHEMATICS (3-6 SH)	CHE 1520 (4) MAT 4150 (3)
MAT 1030 <i>(if required)</i> (3)	CHE 3210 (4) PXS 2850 (3)
MAT 1050/1100(or higher, except 1060 or 2060)	CHE 1520 (4)       MAT 4150 (3)         CHE 3210 (4)       PXS 2850 (3)         CHE 3220 (4)       PXS 3120 (3)         CHE 3220 (4)       PXS 120 (3)
	ENM 2010 (3) PXS 4040 (3)
(3)	ENM 2010 (3) PXS 4040 (3)
NATURAL SCIENCES (6-8 SH)Students will not receive	Or other mathematics/science courses approved by the Engineering Program
General Education Credit for both SCI1410 and GLY 1600;	# Writing enrichment course
SCI 1420 and BIO 1530; or either SCI 1430, CHE 1510, or PHY 1510	Additional Course Demainsments to Mast 404 ab (if wooded)
(3/4)	Additional Course Requirements to Meet 124 sh (if needed)
(3/4)	Electives ( )
SOCIAL SCIENCE (3 SH) - ECO, PSC, PSY or SOC	GRADUATION REQUIREMENTS
(3)	
	1. Minimum 124 semester hours to graduate.
WELLNESS (2-3 SH)	······································
WEL 1010 and (1)	2. 16 semester hours in residency for associate's degrees.
WEL 2010 or 2350 or (1)	31 semester hours in residency for bachelor's degrees.
WEL 2180 or PXS 2900 (3)	
	3. GPA of 2.000 or higher required overall and in the major.
LIBERAL ARTS ELECTIVE (3 SH)	5. GFA of 2.000 of higher required overall and in the major.
	4 Errors contained on this checksheat do not valence
Choose one approved course (see p. 2) (3)	<ol> <li>Errors contained on this checksheet do not release the student from meeting the meduation</li> </ol>
LIBRARY COMPETENCY COMPLETED	the student from meeting the graduation
(Must be satisfied before completing 60 s.h.)	requirements as stated in the Academic Catalogue.
TOTAL 39-54 SH	Page 1 of 2

Some General Education core requirements may be filled in the major. Consult Academic Catalogue and Advisor for specific options.

\*\*\*Students who pass a competency test (administered on a pass/fail basis at no charge) for ACL 1510 and/or CSC 1000 will not be required to take the class for which a test is passed. Passing a competency test will not give a student a grade or the equivalent semester hours for taking the respective course(s), but will satisfy the respective General Education ACL and/or CSC requirement(s). Students are permitted one single attempt to pass a CSC 1000 and/or ACL 1510 competency test.

\*\*\*The Global Perspective Elective can be met by taking a minimum of 3 s.h. from:

Foreign Language Study Abroad (IDS 3550/4550) International Internship

ACC 4620 International Accounting (Study Abroad) ACL 3600 Exploring Cross-Cultural Communication ARH 2530 Survey of Art History I BUS 3310 Fundamentals of International Business BUS 3330 International Business Experience (Study Abroad) BUS/LAW 4850 Special Topics: International Law (Study Abroad) ECO 4200 Comparative Economic Systems ECO 4520 International Trade and Finance ECO 4650 Economic Growth and Development ENG 2110 English Literature I ENG 2120 English Literature II ENG 2310 World Literature I ENG 2320 World Literature II ENG 3420 Women's Literature ENG 3440 American Diversity ENG 3710 Chaucer ENG 3730 Literature of Medieval England ENG 3740 Shakespeare ENG 3920 19th Century British Literature ENG 4020 Modernist Literature ENG 4030 Contemporary Literature ENG 4850 Special Topics: Legal Dickens ENM/LAW 2510 Caribbean Natural Resources and Law (Study Abroad) ENP 3300 International Entrepreneurship GEO 2520 Regional Geography HIS 1030 World History I HIS 1040 World History II HIS 2150 Barbarian Invasions HIS 2170 Race, Ethnicity, and Global Perspective HIS 2200 World War II HIS 3010 Modern Asian History

HIS 3050 Islam and the Islamic World HIS 3250 Modern History HIS 3310 Topics in Latin American History HIS 3700 Contemporary World History HIS 3850 Special Topics: Medieval Britain HIS 4110 Modern Russia LAN 3200 Introduction to Linguistics LSS 2850 Special Topics in Leadership: Ultimate Journey MKT 4100 Global Marketing **PSC 2270 Comparative Politics** PSC 3510 International Relations PSC 4010 European Politics PSC 4020 Middle East Politics PSC 4040 Politics in East Asia (Study Abroad) PSC 4050 Latin American Politics (Study Abroad) PSC 4400 International Organizations PSC 4510 International Political Economy **REL 1030 Introduction to Religion REL 1040 Introduction to Biblical Literature\*** REL 1070 Religion and Film REL 1500 Religions of Asia **REL 1510 Monotheistic Religions** REL 2010 Survey of Hebrew Bible REL 2020 Survey of the New Testament **REL 3010 The Hebrew Prophets\*** REL 3020 Jesus and the Gospels **REL 3520 Modern Religious Thought** REL 4040 Myth and Culture **REL 4050 Early Christianity REL 4060 Reformation Europe** SOC 2530 Global Social Problems SOC 2560 Cultural Anthropology THE 3110 Theatre History and Literature I THE 3120 Theatre History and Literature II \*Course no longer offered

## Liberal Arts Electives:

 The Liberal Arts Elective includes courses in the following areas designated as Liberal Arts in the catalogue: Fine Arts, Humanities (ENG, HIS, GEO, PHI, REL, or WRI), Mathematics (MAT), Computer Science (CSC), Natural Science (BIO, CHE, GLY, PHY, or SCI), Foreign Language (FRE, GER, GRK, SPA, or LAN), Social Science (ECO, PSC, PSY, or SOC), and WST 2000. Only the following courses are Liberal Arts Electives for Fine Arts: ARH 1510, 2530, 2540, 3530, 3540; MUS 1510, 1520, 1600, 1610; THE 1620, 1630, 3620, 3650, or 3 hours in applied music/ensemble or theatre ensemble.

- 2. The Liberal Arts Elective may not be fulfilled by any course with a prefix within the department sponsoring a declared major, minor, or concentration of the student. For example, a computer science or computer information technology major must fulfill the Liberal Arts Elective requirement by taking a course with a prefix other than CSC, and an English major must fulfill the Liberal Arts Elective requirement by taking a course with a prefix other than ENG or WRI.
- 3 Courses in areas listed above that emphasize professional preparation and pedagogy cannot be used to fulfill the Liberal Arts Elective. The following courses are not Liberal Arts Electives: ENG 2600, ENG 3600, ENG 3620, LAN 2600, LAN 3300, MAT 1060, and MAT 2060.
- 4 Developmental courses cannot be used to fulfill the Liberal Arts Elective. The following courses are not Liberal Arts Electives: ENG 1000; ESL 0910, 0920, 0960, 0970, 1210, 1220; and MAT 1030.
- 5 Courses that fulfill the General Education curriculum outside the Liberal Arts Elective may not be used to fulfill the Liberal Arts Elective. The following courses are not Liberal Arts Electives: CSC 1000, ENG 1010, ENG 1020, and ENG 1040.
- 6 Special Topics courses may not be used to fulfill the Liberal Arts Elective.
- 7 Courses considered to be capstone courses by any program may not be used to fulfill the Liberal Arts Elective.

Errors contained on this checksheet do not release the student from meeting the graduation requirements as stated in the Academic Catalogue.