TECHNOLOGICAL INSTITUTE OF THE PHILIPPINES
Manila

2018 CURRICULUM FOR BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING (BSIE)

IMPORTANT : REGISTRATION IN ANY COURSE WITHOUT ALL THE PREREQUISITES, CORRECT SEQUENCE AND AUTHORIZED LOAD SHALL NOT BE GIVEN ANY CREDIT REGARDLESS OF THE GRADE OBTAINED.

EVALUATION IS TENTATIVE AND MAY BE REVISED FOR SOME VALID CAUSES OR REASONS OR IF OMISSIONS AND/OR LACK OF UNITS CREDITED BE DISCOVERED LATER.

Student's Name and Signature

COURSE CODE		DESCRIPTIVE TITLE	Lecture Hours	Laboratory Hours	Credit Units	PREREQUISITE(S)
FIRST YEAR, FIRST SEMESTER (18 UNITS)						
MATH	018	Calculus 1	3	0	3	
CHM	001	Chemistry for Engineers	3	3	4	
GEC	001	Understanding the Self	3	0	3	
GEC	005	Purposive Communication	3	0	3	
MATH	025	Discrete Mathematics	3	0	3	
PE	101	Physical Education 1	2	0	2	
NSTP	001	National Service Training Program 1	(3)	0	(3)	
FIRST YEAR, SECOND SEMESTER (21 UNITS)						
MATH	019	Calculus 2	3	0	3	MATH 018
PHYS	111	Calculus-Based Physics	3	3	4	MATH 018, MATH 019 (C)
IE	021	Statistical Concepts, Theories and Analysis for Industrial Engineering 1	3	0	3	
GEC	004	Mathematics in the Modern World	3	0	3	
GEE	001B	GE Elective 1 - Gender and Society	3	0	3	
GEA	001	Principles of Economics	3	0	3	
PE	102	Physical Education 2	2	0	2	PE 101
NSTP	002	National Service Training Program 2	(3)	0	(3)	NSTP 001
SECOND YEAR, FIRST SEMESTER (25 UNITS)						
IE	201	Industrial Materials and Processes	2	3	3	PHYS 111
CPE	102B	Computer Fundamentals and Programming	0	6	2	
CE	201B	Engineering Mechanics	3	0	3	PHYS 111
GEM	001	Life and Works of Rizal	3	0	3	
IE	202	Statistical Concepts, Theories and Analysis for Industrial Engineering 2	2	3	3	IE 021
IE	203	Strategic and Industrial Organization Management	3	0	3	2nd Year Standing
MATH	021	Differential Equations	3	0	3	MATH 019
GEE	002B	GE Elective 2 - Living in the IT Era	3	0	3	GEE 001B
PE	201	Physical Education 3	2	0	2	PE 102
SECOND YEAR, SECOND SEMESTER (25 UNITS)						
AC	101	Financial Accounting	3	0	3	GEA 001
CPE	104	Computer-Aided Drafting	0	3	1	
GEE	003B	GE Elective 3 - People and the Earth's Ecosystem	3	0	3	GEE 002B
IE	204	Industrial and Organizational Psychology	3	0	3	2nd Year Standing
IE	205	Work Study and Measurement/Productivity Analysis	3	3	4	IE 201, IE 202, IE 203
IE	014	Advanced Mathematics for Industrial Engineering	3	0	3	MATH 021
MATH	022B	Linear Algebra with MATLAB	2	3	3	MATH 019, MATH 025
TECH	101	Introduction to Engineering Entrepreneurship	3	0	3	2nd Year Standing
PE	202	Physical Education 4	2	0	2	PE 201
THIRD YEAR, FIRST SEMESTER (24 UNITS)						
GEC	002	Readings in Philippine History	3	0	3	
AC	102	Managerial Accounting	3	0	3	AC 101
IE	312	Ergonomics 1: Physical & Cognitive Ergonomics	2	3	3	IE 204, IE 205
IE	305	Operations Research 1: Deterministic Approach	2	3	3	MATH 022B, IE 014
IE	306	Quality Management Systems	3	0	3	IE 202, IE 205
ME	201A	Thermodynamics	3	0	3	MATH 019, PHYS 111
ME	304	Engineering Economics	3	0	3	3rd Year Standing
Elective	1		3	0	3	See track for pre-requisite(s)
THIRD YEAR, SECOND SEMESTER (25 UNITS)						
GEC	003	The Contemporary World	3	0	3	
GEC	006	Art Appreciation	3	0	3	
EE	200C	Basic Electrical Engineering	2	3	3	PHYS 111
IE	307	Ergonomics 2: Work Design	2	3	3	IE 312
IE	308	Operations Research 2: Stochastic Approach with Simulation	2	3	3	IE 305, MATH 025
IE	309	Project Feasibility	2	3	3	AC 102, ME 304
IE	310	Production and Operations Management with Industry Software Applications	3	3	4	IE 305, IE 306, IE 308 (C)
Elective	2		3	0	3	See track for pre-requisite(s)

NO STUDENT SHALL BE ALLOWED TO TAKE FOURTH YEAR PROFESSIONAL COURSES UNLESS HE HAS COMPLETED THE BASIC AND THE THIRD YEAR COURSES INCLUDING PE AND NSTP.

COURSE CODE		DESCRIPTIVE TITLE	Lecture Hours	Laboratory Hours	Credit Units	PREREQUISITE(S)
FOURTH YEAR, FIRST SEMESTER (24 UNITS)						
CHM	008A	Environmental Science	3	0	3	
GEC	008	Ethics	3	0	3	
IE	409	Systems Engineering	3	0	3	IE 310
IE	410	Multi-Criteria Decision Making	3	0	3	IE 308
IE	411	IE Design Project 1	2	3	3	4th Year Standing, IE 410 (C)
Elective	3		3	0	3	See track for pre-requisite(s)
IE	412	Undergraduate Research for Industrial Engineering	1	6	3	IE 202, IE 310
GEC	007	Science, Technology and Society	3	0	3	
FOURTH YEAR, SECOND SEMESTER (18 UNITS)						
BOSH	101	Basic Occupational Safety and Health	3	0	3	4th Year Standing
IE	400	On-the-Job Training for Industrial Engineering	0	240	2	4th Year Standing
IE	413	Industrial Engineering Values and Ethics	3	0	3	Graduating
IE	417	IE Design Project 2	1	6	3	Graduating, IE 411
IE	415	Supply Chain Management	3	0	3	4th Year Standing, IE 310
IE	416	Seminars/ Colloquia for Industrial Engineering	0	3	1	IE 412
IS	001	Information Systems	3	0	3	IE 415 (C)

TOTAL NO. OF UNITS 180

ELECTIVE COURSES

NOTE: A STUDENT MAY CHOOSE ANY OF THE TRACK ELECTIVES BELOW AND ONCE A TRACK ELECTIVE IS CHOSEN, ALL COURSES IN THE TRACK MUST BE TAKEN.

Track Elective 1: Organization and Decision Systems						
IE-E1	101	Project Management	3	0	3	IE 305 (C), TECH 101
IE-E2	102	Risk Management	3	0	3	IE 306
IE-E3	103	Special Topics and Problems in Industrial Engineering	3	0	3	IE 310
Track Elective 2: Technopreneurship						
TECH	102A	Technopreneurship 2	3	0	3	TECH 101
TECH	103A	Technopreneurship 3	3	0	3	TECH 102A
TECH	104A	Technopreneurship 4	3	0	3	TECH 103A
Track Elective 3: Railway Engineering						
RWE	001	Introduction to Railway Systems and Engineering	3	0	3	
RWE	002A	Railway Management and Governance and Operations	3	0	3	RWE 001
RWE	003A	Advanced Topic on Railway Engineering	3	0	3	RWE 002A
Track Elective 4: Data Science						
DS	001	Computational and Inferential Thinking with Python	3	0	3	IE 202, MATH 002B
DS	002	Predictive Analytics and Machine Learning	3	0	3	DS 001
DS	003	Advanced Machine Learning and Deep Learning	3	0	3	DS 002