SAINT LOUIS UNIVERSITY
BAGUIO CITY, PHILIPPINES

INDUSTRIAL ENGINEERING
PROGRAM CATALOG

SCHOOL OF ENGINEERING AND ARCHITECTURE

SLU VISION-MISSION

We envision Saint Louis University as an excellent missionary and transformative educational institution zealous in developing locally responsive, globally competitive, and empowered human resources who are creative, competent, socially involved, and imbued with Christian spirit.

SCHOOL VISION-MISSION

The School of Engineering and Architecture (SEA) envisions herself as an exemplary educational institution for engineering and architecture dedicated to elevating instruction, research, and extension to a higher level of competence and creativity committed to shaping the socio-technical environment founded on Christian values.

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

Three to five years after graduation, alumni of the Architecture and Engineering Programs are expected to:

1. demonstrate technical competence in the analysis of problems and design of systems, keeping in mind the technical, professional, societal, environmental, economic, and ethical dimensions of any solution;
2. apply their talents and full potentials in the practice of their profession guided by the Christian tenets of
3. honesty, service, dedication and a deep sense of moral responsibility;
4. pursue advanced education, research and development, and other creative efforts in science and technology; and;
5. participate actively to address social, technical and business challenges vital to national progress and development.

PROGRAM LEARNING OUTCOMES (PLO)

Graduates of the BS in Industrial Engineering program are expected to:

1. apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems;
2. conduct investigations of complex engineering problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions;
3. design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations;
4. function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings;
5. compose substantiated conclusions after the analysis of complex engineering problems using first principles of mathematics, natural sciences, and engineering sciences to identify, formulate, and research relevant literature;
6. apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice;
7. communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions;
8. evaluate the sustainability and impact of professional engineering work in the solution of complex engineering problems in societal and environmental context;
9. demonstrate the ability to engage in independent and life-long learning in the broadest context of technological change;
10. apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems;
11. create appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering problems with an understanding of the limitations;
12. apply knowledge and understanding of engineering management principles and economic decision-making to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments;
13. improve integrated systems include people, materials, information, equipment, and energy; and
14. practice Christian values in their personal and professional endeavors as Louisians in the service of the CICM mission.

CURRICULUM

FIRST YEAR

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
1st Semester			
EnggChem	Chemistry for Engineers (LEC)	3	
EnggChemL	Chemistry for Engineers (LAB)	1	with/after EnggChem
EnggMath 1	Pre-Calculus	4	
NSTP-CWTS 1	Foundations of Service	3	
GETHICS	Ethics	3	
CFE 101	God's Journey with His People	3	
FIT HW	Physical Activity Towards Health and Fitness (Health and Wellness)	2	
GRVA	Reading Visual Art	3	
	TOTAL UNITS	**22**	

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
2nd Semester			
IE 1201	Introduction to Industrial Engineering	2	
EnggMath 2	Differential Calculus	4	EnggMath 1
GMATH	Mathematics in the Modern World	3	
NSTP-CWTS 2	Social Awareness and Empowerment for Service	3	NSTP-CWTS 1
CFE 102	Christian Morality in Our Times	3	
FIT CS	Physical Activity Towards Health and Fitness (Combative Sports)	2	
GIT	Living in the IT Era	3	
	TOTAL UNITS	**20**	

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
Short Term			
EnggMath 4	Integral Calculus	4	EnggMath 2
EnggPhys	Physics for Engineers (LEC)	3	with/after EnggMath 4
EnggPhysL	Physics for Engineers (LAB)	1	with/ after EnggPhys
	TOTAL UNITS	**8**	

SECOND YEAR

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
1st Semester			
IE 2101	Statistical Analysis for Industrial Engineering 1	3	Engg Math 4
IE 2111	Industrial Materials and Processes (LEC)	2	EnggPhys(Lec & Lab) EnggChem (Lec & Lab)
IE 2111L	Industrial Materials and Processes (LAB)	1	with/after IE 2111
IE 2121	Industrial Organization and Management	3	IE 1201
IE 2131	Elementary Electrical Engineering	3	EnggPhys(Lec & Lab)
ComProg	Computer Fundamentals and Programming (LAB)	2	
GART	Art Appreciation	3	
GHIST	Readings in Philippine History	3	
EnggMath 5	Differential Equations	3	EnggMath4
CFE 103	Catholic Foundation of Mission	3	
FIT AQ	Physical Activity Towards Health and Fitness (Aquatics)	2	
	TOTAL UNITS	**28**	

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
Short Term			
GENTREP	The Entrepreneurial Mind	3	
IE 2251	Organizational Behavior	3	GETHICS
	TOTAL UNITS	**6**	

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
2nd Semester			
IE 2201	Statistical Analysis for Industrial Engineering 2	3	IE 2101
IE 2211	Accounting Systems 1	3	GMATH
IE 2221	Basic Occupational Safety and Health	3	IE 2111(Lec & Lab)
IE 2231	Advanced Mathematics for IE	3	EnggMath 5
IE 2241	Work Study and Measurement(LEC)	3	IE 2101, IE 2111(Lec & Lab), IE 2121
IE 2241L	Work Study and Measurement(LAB)	1	with/after IE 2241
GPCOM	Purposive Communication	3	
GCWORLD	The Contemporary World	3	
CFE 104	CICM Missionary Identity	3	CFE 103
FIT OA	Physical Activity Towards Health and Fitness (Outdoor and Adventure Activities)	2	
	TOTAL UNITS	**27**	

CURRICULUM

THIRD YEAR

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
1st Semester			
IE 3101	Operations Research 1	3	IE 2231
IE 3111	Ergonomics 1 (LEC)	2	IE 2221, IE 2241(Lec & Lab)
IE 3111L	Ergonomics 1 (LAB)	1	with/after IE 3111
IE 3121	Financial Accounting	3	IE 2211
IE 3131	Industrial Quality Control	3	IE 2201
IE 3141	Method of Research (LEC)	2	GPCOM, IE 2201
IE 3141L	Method of Research (LAB)	1	with/after IE 3141
IE 3151	Principle of Economics	3	GMATH
IE 3161	Computer-Aided Drafting (LAB)	1	ComProg
IE 3171	Engineering Mechanics	3	EnggPhys(Lec & Lab)
CFE 105A	CICM in Action: Justice, Peace, and Integrity of Creation; Indigenous Peoples; and Interreligious Dialogue	1.5	CFE 103, 104
GSTS	Science, Technology, and Society	3	
	TOTAL UNITS	**26.5**	

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
Short Term			
IE 3261	IE Industry Immersion (240 Hours)	3	IE 3201, IE 3211(Lec & Lab)
	TOTAL UNITS	**3**	

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
2nd Semester			
IE 3201	Operations Research2	3	IE 3101
IE 3211	Ergonomics 2 (LEC)	2	IE 3111(Lec & Lab)
IE 3211L	Ergonomics 2 (LAB)	1	with/after IE 3211
IE 3221	Managerial Accounting	3	IE 3121
IE 3231	Quality Management Systems	3	IE 3131, IE 2241(Lec & Lab)
IE 3241	Engineering Economics	3	IE 3151
IE 3251	Thermodynamics	3	EnggMath 4
Techno 101	Technopreneurship	2	GENTREP
Techno 101L	Technopreneurship (LAB)	1	with Techno 101
GSELF	Understanding the Self	3	
CFE 105B	CICM in Action: Environmental Planning and Management; and Disaster Risk Reduction Management	1.5	CFE 105A
GRIZAL	The Life and Works of Rizal	3	
	TOTAL UNITS	**28.5**	

CURRICULUM

FOURTH YEAR

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
1st Semester			
IE 4101	Informations Systems	3	ComProg, IE 3201
IE 4111	Facilities Layout and Design (LEC)	3	IE 3211(Lec & Lab)
IE 4111L	Facilities Layout and Design (LAB)	1	with/after IE 4111
IE 4121	Operations Management (LEC)	3	IE 3101, IE 3231
IE 4121L	Operations Management (LAB)	1	with/after IE 4121
IE 4131	Industrial Engineering Values and Ethics	2	IE 2251
IE 4141L	Computer Application for IE (LAB)	2	IE 3201, IE3231
IE 4151	Environmental Science and Engineering	3	GSTS
IE Elec 1	IE Elective 1	3	
IE Elec 2	IE Elective 2	3	
CFE 106A	Embracing the CICM Mission	1.5	CFE 105B
	TOTAL UNITS	**25.5**	
	TOTAL PROGRAM UNITS		**216**

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
2nd Semester			
IE 4201	Project Feasibility (LEC)	2	Techno 101, IE 3221, with/after IE 4121 (Lec & Lab)
IE 4201L	Project Feasibility (LAB)	1	with IE 4201
IE 4211	Systems Engineering	3	IE 4101, IE 4111(Lec & Lab)
IE 4221	Supply Chain Management	3	IE 4121(Lec & Lab)
IE 4241	IE Capstone Project (LEC)	1	IE 4121(Lec & Lab), IE 3141(Lec & Lab)
IE 4241L	IE Capstone Project (LAB)	2	with/after IE 4241
IE 4251	Plant Visits and Seminars	2	IE 3251
IE Elec 3	IE Elective 3	3	
IE Elec 4	IE Elective 4	3	
CFE 106B	Embracing the CICM Mission	1.5	CFE 106A
	TOTAL UNITS	**21.5**	

ELECTIVES

	Elective 1		Prerequisite
IE 4161	Product Design, Development, and Marketing	3	Techno 101 (Lec & Lab), IE 3221
IE 4171	Project Management	3	Techno 101 (Lec & Lab), IE 3221
	Elective 2		
IE 4181	Lean Six Sigma	3	IE 3231
IE 4191	Risk Management	3	IE 3231

	Elective 3		Prerequisite
IE 4261	Job Evaluation and Salary and Wage Administration	3	IE 4121 (Lec & Lab)
IE 4271	Personnel Management	3	IE 4121 (Lec & Lab)
	Elective 4		
IE 4281	Cycle Time Management	3	IE 4111(Lec & Lab)
IE 4291	Total Productive Maintenance and Reliability	3	IE 4121(Lec & Lab)

NOTE 1. The maximum load a graduating student allowed to enroll is regular load plus 6 units (Regular Semester); regular load plus 3 units (Short term)

2. The year level is based on the 70% of the subjects enrolled in the current term
3. Regular students are those with no advanced and back subjects based on the checklist
4. Required units:216

ADMISSION POLICIES

Saint Louis University welcomes local and foreign students alike, subject to University admission Policies, requirements, and academic standards and pertinent laws of the Republic of the Philippines

Undergraduate Freshman Students

- All undergraduate freshman applicants must pass the SLU College Entrance Examination (SLU-CEE) and must qualify within the slots duly determined for their chosen course. The regular SLU-CEE is conducted during weekends from the middle of October up to the middle of December. Admission for the first semester starts at the middle of April.

Transfer Students

- SLU admits transferees in all courses except Bachelor in Medical Laboratory Science subject to their compliance with pertinent requirements and guidelines. They must undergo a Qualifying Examination (QE) and if qualified, will take the Personality Test and Interview. Foreign students applying as transferee are subject to the English Proficiency Test (EPT) rule.

Graduate Program Students

- The applicant must have finished the prerequisite degree/s prior to acceptance to the Graduate Program;
- For a Master's degree, the applicant must have a Baccalaureate degree from an institution of recognized standing
- For a Doctorate degree, the applicant must have a Master's degree in related fields from an institution of recognized standing.

Foreign Students

- Foreign students should apply not later than 6 months before the start of the academic term. Moreover, they should be in Baguio City at least 4 weeks before the start of classes of the academic term for them to take the EPT as well as SLU-CEE / QE / GPEE, and Personality Test.
- Foreign students applying for the first time either in the undergraduate or graduate program should initially possess satisfactory proficiency in English and have passed the EPT as well as the pertinent entrance examination and Personality Test. Before enrolling, they undergo Preadmission Processing at the Student Affairs Office.
- Foreign students must secure a valid Student Visa. There are two options in securing a Student Visa. For related information, consult Foreign Student section of the Registrar's Office.

SCHEDULE OF FEES

FIRST YEAR TUITION FEE AS OF AY 2022 - 2023		
COURSE	PARTIAL	FULL
BS INDUSTRIAL Engg	P 9,400.00	P 25,069.00
FEES LISTED PER SEMESTER AND ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE		

JOB OPPORTUNITIES AND FUTURE PROSPECTS

- Manufacturing Technician
- Quality Assurance Inspector
- Industrial Mechanic
- Industrial Electrician
- Industrial Designer
- Manufacturing Production Supervisor
- Supply Chain Analyst
- Cost Estimator
- Industrial Engineer
- Quality Engineer
- Manufacturing Engineer
- Process Engineer
- Occupational Health and Safety Manager

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