



SAINT LOUIS
UNIVERSITY
BAGUIO CITY, PHILIPPINES

MECHANICAL 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 Mechanical 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; and
13. 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	Course No.	Course Descriptive Title	Units	Co/Pre-requisite
	1st Semester				2nd Semester			
	EnggDraw	Engineering Drawing (LAB)	1		EnggCAD	Computer Aided Drafting (LAB)	1	EnggDraw
	ME 1111	ME Orientation	1		EnggMath 2	Differential Calculus	4	EnggMath 1
	EnggChem	Chemistry for Engineers (LEC)	3		NSTP-CWTS 2	Social Awareness and Empowerment for Service	3	NSTP-CWTS 1
	EnggChemL	Chemistry for Engineers (LAB)	1	with/after EnggChem	GART	Art Appreciation	3	
	EnggMath 1	Pre-Calculus	4		GETHICS	Ethics	3	
	GMATH	Mathematics in the Modern World	3		GIT	Living in the IT Era	3	
	GRVA	Reading Visual Art	3		CFE 102	Christian Morality in Our Times	3	
	NSTP-CTWS 1	Foundations of Service	3		FIT CS	Physical Activity Towards Health and Fitness (Combative Sports)	2	
SECOND YEAR	CFE 101	God's Journey with His People	3					
	FIT HW	Physical Activity Towards Health and Fitness (Health and Wellness)	2					
		TOTAL UNITS	24			TOTAL UNITS	22	
	Course No.	Course Descriptive Title	Units	Co/Pre-requisite				
	Short Term							
	EnggMath 4	Integral Calculus	4	EnggMath 2				
	EnggPhys	Physics for Engineers (LEC)	3	EnggMath 2				
	EnggPhysL	Physics for Engineers (LAB)	1	w/ after EnggPhys				
		TOTAL UNITS	8					
	Course No.	Course Descriptive Title	Units	Co/Pre-requisite	Course No.	Course Descriptive Title	Units	Co/Pre-requisite
	1st Semester				2nd Semester			
	ME 2111L	Workshop Theory and Practice	2	EnggDraw	ME 2211L	Machine Shop Theory	2	ME 2111L
	ME 2121	Thermodynamics 1	4	EnggMath 4, EnggPhys	ME 2221	Thermodynamics 2	3	ME 2121
	ME 2131	Statics of Rigid Bodies for ME	3	EnggMath 4, EnggPhys	ME 2231	Advanced Mathematics for ME	5	EnggMath 5
	ME 2141	Basic Electrical Engineering	2	EnggPhys/L	ME 2241	Dynamics of Rigid Bodies for ME	2	ME 2131
	ME 2141L	Basic Electrical Engineering L	1	with/after ME 2141	ME 2251	Basic Electronics (LEC)	2	ME 2141
	GHIST	Readings in the Philippine History	3		ME 2251L	Basic Electronics (LAB)	1	with/after ME 2251
	EnggMath 5	Differential Equations	3	EnggMath 4	ComProg	Computer Fundamentals and Programming	2	EnggCAD
	CFE 103	Catholic Foundation of Mission	3		GPCOM	Purposive Communication	3	
					GCWORLD	The Contemporary World	3	
	GSELF	Understanding the Self	3		CFE 104	CICM Missionary Identity	3	CFE 103
	FIT AQ	Physical Activity Towards Health and Fitness (Aquatics)	2		FIT OA	Physical Activity Towards Health and Fitness (Outdoor and Adventure Activities)	2	
		TOTAL UNITS	26			TOTAL UNITS	28	
	Course No.	Course Descriptive Title	Units	Co/Pre-requisite				
	Short Term							
	GENTREP	The Entrepreneurial Mind	3	EnggMath 2				
	EnggMath 3	Engineering Data Analysis	3					
		TOTAL UNITS	6					





CURRICULUM

THIRD YEAR	Course No.	Course Descriptive Title	Units	Co/Pre-requisite	Course No.	Course Descriptive Title	Units	Co/Pre-requisite
	1st Semester				2nd Semester			
	ME 3111	Fluid Mechanics	3	ME 2121	ME 3211	Fluid Machinery	3	ME 3111
	ME 3121	Heat Transfer	2	ME 2221	ME 3221	Refrigeration System	3	ME 3121
	ME 3131	Mechanics of Deformable Bodies for ME	5	ME 2141	ME 3231	Combustion Engineering	3	ME 2221
	ME 3141	Methods of Research for ME	3	EnggMath 3	ME 3241	Material Science & Engineering for ME	3	ME 3131/EnggChem 1
	ME 3151	Machine elements 1 (LEC)	2	ME 2241	ME 3241L	Material Science & Engineering for ME L	1	with/after ME 3241
	ME 3151L	Machine elements 1 (LAB)	1	with/after ME 3151	ME 3251	Machine Elements 2 (LEC)	2	ME 3151
	ME 3161	Vibration Engineering	2	ME 2231	ME 3251L	Machine Elements 2 (LAB)	1	with/after ME a325
	ME 3171	Computer Applications for ME	1	ME 2131	ME 3261L	Mechanical Engineering 1 (LAB)	2	ME 2121
	ME 3181	DC and AC Machinery (LEC)	2	ME 2141	ME 3281	Engineering Economics	3	w/ after Techno 101
	ME 3181L	DC and AC Machinery (LAB)	1	with/after ME 3181	CFE 105B	CICM in Action: EPM (DRRM)	1.5	CFE 105a
	CFE 105a	CICM in Action: JPIC, Ips and IRD	1.5	CFE 104	Techno 101	Technopreneurship	2	GENTREP
	GRIZAL	The Life and Works of Rizal	3		Techno 101L	Technopreneurship (LAB)	1	with/after Techno 101
					GSTS	Science, Technology, and Society	3	
						TOTAL UNITS	28.5	
		TOTAL UNITS	26.5					
	Course No.	Course Descriptive Title	Units	Co/Pre-requisite				
	Short Term							
	ME 3271	On-the-Job Training for ME (240 hours)	1	ME 3281				
		TOTAL UNITS	1					





CURRICULUM

	Course No.	Course Descriptive Title	Units	Co/Pre-requisite	Course No.	Course Descriptive Title	Units	Co/Pre-requisite
FOURTH YEAR	1st Semester				2nd Semester			
	ME 4111	ME Project Study 1	1	ME 3141	ME 4211	ME Project Study 2	1	ME 4111
	ME 4121	Air conditioning and Ventilation Systems (LEC)	3	ME 3221	ME 4221	Industrial Plant Engineering (LEC)	3	ME 4121
	ME 4121L	Air conditioning and Ventilation Systems (LAB)	1	with/after ME 4121	ME 4221L	Industrial Plant Engineering (LAB)	1	with/after ME 4221
	ME 4131	Machine Design 1	3	ME 3241	ME 4231	Machine Design 2 (LEC)	3	ME 4131
	ME 4141	Control Engineering (LEC)	2	ECE 2251	ME 4231L	Machine Design 2 (LAB)	1	with/after ME 4231
	ME 4141L	Control Engineering (LAB)	1	with/after ME 4141	ME 4241	Manufacturing & Industrial Processes	2	ME 3241
	ME 4151	Power Plant Design with Renewable Energy (LEC)	4	ME 3231	ME 4251	ME Laws Ethics, Contracts, Codes and Standards	3	ME 4151
	ME 4151L	Power Plant Design with Renewable Energy (LAB)	1	with/after ME 4151	ME 4261L	Mechanical Engineering Laboratory 3	2	ME 4161L
	ME 4161L	Mechanical Engineering Lab 2	2	ME 3261L/ME 3211	ME 4271	Engineering Management	3	ME 3281
	ME 4171	Basic Occupational Safety & Health for ME	3		ME 4281	Mechanical Engineering Review	3	with/after ME 4231 & ME 4151
	ME ELEC 1	ME Elective 1 (B/F)	2	with/after ME 4111	ME ELEC 2	ME Elective 2 (A/C/D)	2	with/after ME 4211
	CFE 106a	Embracing the CICM Mission A	1.5	CFE 105b	CFE 106b	Embracing the CICM Mission B	1.5	CFE 106a
	TOTAL UNITS		24.5		TOTAL UNITS		25.5	

AL PROGRAM UNITS
220
ELECTIVES

	ME ELECTIVE 1		
ME 4191a	Automotive Engineering	2	with or after ME 4111
ME 4191b	Heating, Ventilating, Air-conditioning and Refrigeration	2	with or after ME 4111
	ME ELECTIVE 2		
ME 4291a	Mechatronics Engineering	2	with or after ME 4211
ME 4291b	Energy Engineering and Management	2	with or after ME 4211

- NOTE 1. The maximum load a graduating student is allowed to enroll is the regular load plus 6 units during the regular semester, and regular load plus 3 units during the short term.
2. The year level assigned to a student is based on his/her completion of at least of 70% of the technical subjects in the highest possible year level in this checklist.
3. Regular students are those with no advanced and back subjects based on the checklist
4. Required units: 220





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 / GPPE, 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 MECHANICAL Engg	P 10,000.00	P 27,234.00
FEES LISTED PER SEMESTER AND ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE		





JOB OPPORTUNITIES AND FUTURE PROSPECTS

- Aerospace Engineer
- Automotive Engineer
- Mechanical Design Engineer
- Machinery Manufacturing
- Control and Instrumentation Engineer
- Transportation Equipment Engineer
- Scientific Research and Development
- Academe Professor
- Electro-mechanical Engineer
- Mechanical Safety Engineer
- Nuclear Engineer
- Logistics Business Planning and Control Engineer

CONTACT INFORMATION

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