



SAINT LOUIS
UNIVERSITY
BAGUIO CITY, PHILIPPINES

MINING 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 Mining 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

	Course No.	Course Descriptive Title	Units	Co/Pre-requisite
FIRST YEAR	1st Semester			
	EM 1111	Principles of Geology	3	
	EnggChem	Chemistry for Engineers (LEC)	3	
	EnggChem L	Chemistry for Engineers (LAB)	1	with/after EnggChem
	EnggMath 1	Pre-Calculus	4	
	GMATH	Mathematics in the Modern World	3	
	NSTP-CWTS 1	Foundations of Service	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	25	

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
2nd Semester			
EM 1211	Principles of Mining	3	EM 1111
EM 1221	Principles of Metallurgy	3	EnggChem/L
EnggMath 2	Differential Calculus	4	EnggMath 1
GETHICS	Ethics	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	
GART	Art Appreciation	3	
GIT	Living in the IT Era	3	
	TOTAL UNITS	27	

	Course No.	Course Descriptive Title	Units	Co/Pre-requisite
SECOND YEAR	1st Semester			
	EM 2111	Underground Mining	3	EM 1211
	EM 2121	Elementary Mineralogy	3	EM 1111
	EM 2131	Techniques of Metallurgical Analysis	1	EM 1221
	EM 2131L	Techniques of Metallurgical Analysis	1	w/after EM 2131
	GHIST	Readings in Philippine History	3	
	EnggMath 3	Engineering Data Analysis	3	GMATH
	EnggMath 4	Integral Calculus	4	EnggMath 2
	CFE 103	Catholic Foundation of Mission	3	
	FIT AQ	Physical Activity Towards Health and Fitness (Aquatics)	2	
	GSELF	Understanding the Self	3	
		TOTAL UNITS	26	
	Course No.	Course Descriptive Title	Units	Co/Pre-requisite
	Short Term			
	EM 2241	Engineering Mechanics	3	EnggPhys
	GPCOM	Purposive Communication	3	
	EnggCAD	Computer Aided Drafting (LAB)	1	ComProg
		Total Units	7	

Course No.	Course Descriptive Title	Units	Co/Pre-requisite
2nd Semester			
EM 2211	Surface Mining	3	EM 2111
EM 2221	Mine Safety	3	EM 2111
EM 2231	Engineering Surveying	2	GMATH
EM 2231F	Engineering Surveying Field	1	with/after EM 2231
EnggMath 5	Differential Equations	3	EnggMath 4
EnggPhys	Physics for Engineers (LEC)	3	EnggMath 1
EnggPhys L	Physics for Engineers (LAB)	1	with/after EnggPhys
ComProg	Computer Fundamentals and Programming Lab	2	
GCWORLD	The Contemporary World	3	
FIT OA	Physical Activity Towards Health and Fitness (Outdoor and Adventure Activities)	2	
CFE 104	CICM Missionary Identity	3	CFE 103
	TOTAL UNITS	26	





CURRICULUM

	Course No.	Course Descriptive Title	Units	Co/Pre-requisite	Course No.	Course Descriptive Title	Units	Co/Pre-requisite
THIRD YEAR	1st Semester				2nd Semester			
	EM 3111	Rock Mechanics	3	EM 2211, EM 2241	EM 3221	Mineral Processing (LEC)	2	EM 2131, EM 3131
	EM 3121	Elective 1 (Coal Mining)	3	EM 2221	EM 3221L	Mineral Processing (LAB)	1	with/after EM 3221
	EM 3131	Petrology (LEC)	2	EM 2121	EM 3231	Structural Geology (LEC)	2	EM 3131/L
	EM 3131L	Petrology (LAB)	1	with/after EM 3131	EM 3231L	Structural Geology (LAB)	1	with/after EM 3231
	EM 3141	Mine Surveying	2	EM 2231	EM 3241	Drilling, Blasting, and Tunneling	3	EM 3111
	EM 3141F	Mine Surveying (Field)	1	with/after EM 3141	EM 3251	Fluid Mechanics	3	EM 3151
	EM 3151	Strength of Materials	3	EM 2241	EM 3261	Environmental Science and Engineering	3	
	EM 3161	Basic Electrical Engineering	3	EnggPhys /L	EM 3271	Engineering Management	3	EM 3171
	EM 3171	Engineering Economics	3	EnggMath 3	Techno 101	Technopreneurship (LEC)	2	GENTREP
	GENTREP	The Entrepreneurial Mind	3		Techno 101L	Technopreneurship (LAB)	1	with/after Techno 101
	CFE 105A	CICM in Action: Justice, Peace, and Integrity of Creation; Indigenous Peoples; and Interreligious Dialogue	1.5	CFE 104	CFE 105B	CICM in Action: Environmental Planning and Mngmt.; and Disaster Risk Reduction Mngmt.	1.5	CFE 105A
					GSTS	Science, Technology, and Society	3	
		Total Units	25.5			Total Units	25.5	
FOURTH YEAR	1st Semester				2nd Semester			
	EM 4111	Mine Research and Studies 1	1	EM 3241/OJT	EM 4211	Mine Research and Studies 2	1	EM 4111
	EM 4111L	Mine Research and Studies 1 Lab	2	w/after EM 4111	EM 4211L	Mine Research and Studies 2 Lab	2	w/after EM 4211
	EM 4121	Mine Management	3	EM 3271	EM 4221	Mine Ventilation	3	EM 3251
	EM 4131	Mine Economics	3	EM 3171	EM 4231	Mine Plant Design	2	EM 4121
	EM 4141	Mineral Deposits	3	EM 3231	EM 4231L	Mine Plant Design Laboratory	1	w/after EM 4231
	EM 4151	Elective 2 (Introduction to Petroleum Engg)	3	EM 3231,3241	EM 4241	Mining, Environmental Laws, Contacts	3	EM 4131
	EM 4161	Mine Environmental Management	3	EM 3261	EM 4251	Elective 3 (Best Practices in Mining)	3	EM 4151
	GRIZAL	The Life and Works of Rizal	3		EM 4262F	Mining Engineering Board Review (Field)	1	w/after EM 4251
	CFE 106A	Embracing the CICM Mission	1.5		CFE 106B	Embracing the CICM Mission	1.5	CFE 106A
		Total Units	22.5			Total Units	17.5	
	TOTAL PROGRAM UNITS			202				

MINE AND PLANT PRACTICE (OJT): 320 hours of actual practice/7 weeks (Short Term after 3rd Year - must have finished all 3rd year EM subjects).

NOTE 1. The maximum load a graduating student allowed to enroll is :

- a) Regular semester : Regular load + 6 units
- b) Short term : Regular load + 3 units
2. The year level is based on 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. Total required units: 202





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 MINING Engg	P 9,400.00	P 27,418.00
FEES LISTED PER SEMESTER AND ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE		





JOB OPPORTUNITIES AND FUTURE PROSPECTS

- Mining Engineer
- Mineral Dressing Engineer
- Mineral Engineer
- Mining Safety Engineer
- Geophysical Engineer
- Mineralogy Technician
- Mines Exploration Engineer
- Mining and minerals Process Engineer

CONTACT INFORMATION

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