

UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO

FACULTAD DE INGENIERÍA
CIRCUITO INTERIOR S/N
CD. UNIVERSITARIA
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PETROLEUM DEPARTMENT GRADUATE: DANIEL GARCÍA GAVITO, Ph. D.
PETROLEUM DEPARTMENT UNDERGRADUATE: JOSÉ MARTÍNEZ PÉREZ, M Sc.

CONTACT INFORMATION

UNDERGRADUATE

Office	Contact Name	Phone	E-mail
Student Services	Mrs. Mireya Fernández Silva	(011) (52) (55) 56 22 08 63 / 64	mireyaf@cosmeg.fi-a.unam.mx
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Earth Science Department	M.S. José Ángel Gómez Cabrera	(011) (52) (55) 56 22 08 51 / 53	jagomez@correodict.fi-a.unam.mx
Petroleum Engineering Department	M.S. Néstor Martínez Romero	(011) (52) (55) 55 50 87 12	romeron@servidor.unam.mx

GRADUATE

Office	Contact Name	Phone	E-mail
Student Services	Ph. D. Salvador Landeros Ayala	(011) (52) (55) 56 22 30 04 to 06	sland@fi-b.unam.mx
Administrative office	C. P. José Luis Hernández Carreón	(011) (52) (55) 56 22 32 74/ 55 50 87 12	jlhcarreon@hotmail.com

DEGREE INFORMATION

DEGREES OFFERED IN PETROLEUM ENGINEERING

Degree	Petroleum Hours	Total Hours	Curriculum Description
Bachelor	46	206	www.fi-b.unam.mx www.ingenieria.unam.mx
Master	48	72	http://dgep.posgrado.unam.mx/ingenieria/petrolera/inicio.htm
Ph. D.	---	---	http://dgep.posgrado.unam.mx/ingenieria/petrolera/inicio.htm

ACCREDITATION: The five year entire program in Petroleum Engineering is accredited by the CACEI. The graduate program has been accredited by the Consejo Nacional de Ciencia y Tecnología (CONACYT)

CURRICULUM DESCRIPTION

Undergraduate: The Engineer School keeps a constant and wide revision of its program, which are structured in four main areas: 1) Basic Sciences: Chemistry, Mathematics and Physics; 2) General Engineering; 3) Petroleum Engineering; and 4) Humanities and Social Sciences.

The complete program covers 450 credits and includes practices in the laboratories and field practices in order to develop engineering skills. The program has been designed to be covered in 10 semesters.

Masters: The department is staffed with industry-experienced faculty who has an average of more than 20 years of experience per faculty member. This experience is combined with sound engineering and scientific principles in the classroom and made an integral part of the candidate's educational challenge.

Doctorate: The PhD degree program requires a minimum of 6 semesters beyond the baccalaureate degree. Students in the PhD program devote at least 1/3 of their time to petroleum engineering courses, approximately 2/3 to research. An acceptable dissertation is required for the PhD degree

PROGRAM ADMISSION REQUIRMENTS

Undergraduate:

Masters: The master's program requires 72 graduate credit hours above the baccalaureate degree(8 courses), including 24 credit hours allowed for the thesis. At least 18 credit hours of petroleum engineering courses are required in addition to the thesis. Additional credit hours of other engineering, mathematics, or science will be allowed when approved by the candidate's advisory committee and graduate advisor. The graduate program for each candidate is specifically tailored for that candidate's educational background, industry experience, and individual interest. Qualified students with a B. S. degree in a related field may enter the M. S. program in petroleum engineering by completing without graduate credit leveling work as needed in mathematics, geology and basic engineering courses. The details of the leveling program will be worked out on an individual basis is by the graduate advisor, and the length of the program will depend on the students background and experience.

Doctorate: For graduate admission in petroleum engineering, an applicant must hold a baccalaureate degree from a college or university of recognized standing and must be able to demonstrate fundamental skills in petroleum engineering. The application to the University must include an official transcript from all previous university study.

FACULTY INFORMATION

UNDERGRADUATE

Name	Degree	Position	Major Field of Interest	E-mail	Phone
Javier Farias Espinoza	M.S.	Professor	Project managment/ Oilfield Development	jfariase@pep.pemex.com	(011) (52) (55) 52 03 40 54
Néstor Martínez Romero	M.S.	Lecturer	Production / Oilfield Development Planning	romeron@servidor.unam.mx	(011) (52) (55) 55 50 90 97
Manuel Villamar Vigueras	Bachelor	Lecturer	Reservoir / Well logging	none	(011) (52) (55) 56 22 08 51 ext. 126
Eva Sánchez Olea	Bachelor	Professor	Production / PhysicalChemistry	evasanolea@yahoo.com.mx	(011) (52) (55) 56 22 08 51 ext. 110
Mario Becerra Zepeda	Bachelor	Professor	Reservoir / Production	mbecerra@dcf.pemex.com	(011) (52) (55) 56 27 76 10
José Ángel Gómez Cabrera	M.S.	Lecturer	Production / Artificial Lift Systems	jagomez@correodict.fi-a.unam.mx	(011) (52) (55) 56 22 08 51
Daniel García Gavito	PhD.,PE	Lecturer	Drilling / Well Design	dgavito@servidor.unam.mx	(011) (52) (55) 56 22 30 17 to 19
Carlos Lira Sil	Bachelor	Professor	Production / Transporting	cls@imp.mx	(011) (52) (55) 30 03 65 16
Rafael Rodríguez Nieto	PhD.,PE	Lecturer	Petroleum Fluid Mechanics / Reservoir	rafaeln10@hotmail.com	(011) (52) (55) 56 22 08 51 ext. 111
José Martínez Pérez	M.S.	Lecturer	Drilling / Well Completion	josemp@cancun.fi-a.unam.mx	(011) (52) (55) 57 22 25 28
José Antonio González Guevara	M.S.	Professor	Programing Systems / Production	jguevara0960@hotmail.com	(011) (52) (55) 56 22 30 19
María Guadalupe Contreras	Bachelor	Professor	Petroleum Fluids Chemistry	gcordaz1@correo.unam.mx	(011) (52) (55) 56 22 08 51 ext. 127
Agustín Galindo Nava	M.S	Professor	Reservoir Simulation	agalindon@smx.pep.pemex.com	(011) (52) (55) 52 03 27 39

Eduardo G. Loreto Mendoza	Bachelor	Lecturer	Reservoir / EOR	egeloret@avantel.net	(011) (52) (55) 55 54 59 29
Claudia M. Castro Romero	Bachelor	Professor	Computer Applications	ccastro@mexico-city.oilfield.slb.com	(011) (52) (55) 52 63 32 86
Héctor Díaz Zertuche	Bachelor	Professor	Production / Artificial Lift Systems	hdiazz@smx.pep.pemex.com	(011) (52) (55) 52 03 27 39
José J. Mancilla Castillo	Bachelor	Professor	Drilling/ Well Completion	mancilla@mexico-city.oilfield.slb.com	(011) (52) (55) 52 63 30 70

GRADUATED

Name	Degree	Position	Major Field of Interest	E-mail	Phone
Fernando Samaniego Verduzco	Ph. D. PE	Professor	Oilfield Development	ance@servidor.unam.mx	(011) (52) (55) 56 22 30 17 to 19 / 55 50 87 12
Jesús Rivera Rodríguez	Ph. D. PE	Professor	Transport Phenomena	jrivera@servidor.unam.mx	(011) (52) (55) 56 22 30 17 to 19 / 55 50 87 12
Héber Cinco Ley	Ph. D. PE	Professor	Pressure Tests Analysis	none	(011) (52) (55) 57 26 13 11
Daniel García Gavito	Ph. D. PE	Professor	Rock Mechanics/ Drilling / Well Design	dgavito@servidor.unam.mx	(011) (52) (55) 56 22 30 17 to 19 / 55 50 87 12
Guillermo Cruz Domínguez Vargas	Ph. D. PE	Professor	Geophysics	none	011) (52) (55) 56 22 30 17 to 19 / 55 50 87 12
Fernando Javier Rodríguez de la Garza	Ph. D. PE	Professor	Reservoir Simulation	none	(011) (52) (55) 52 54 08 46
Vicente Casariego González	Ph. D. PE	Professor	Drilling/Well Design	none	(011) (52) (55) 30 03 67 92
Yuri Fairuzov	Ph. D. ME	Professor	Oil and Gas Production	fairuzov@servidor.unam.mx	(011) (52) (55) 56 23 35

					13
Fernando Sebastián Flores Ávila	Ph. D. PE	Professor	Drilling Reparation and Completion	ffloresa@pep.pemex.com	(011) (52) (55) 55 31 62 01
Carlos Lira Galeana	Ph. D. PE	Professor	Physicochemistry	clira@imp.mx	(011) (52) (55) 30 03 65 07
Vinicio Suro Pérez	Ph. D. PE	Professor	Geoestatics	none	(011) (52) (55) 55 31 56 85
Fernando Castrejón Vacío	Ph. D. PE	Professor	Well Logging	none	(011) (52) (55) 30 03 69 93
Sergio Berumen Campos	Ph. D. PE	Professor	Hidraulic Fractguring Well Stimulation	sberumen@pep.pemex.com	(011) (52) (55) 52 54 08 46
Rodolfo Gabriel Camacho Velázquez	Ph. D. PE	Professor	Mathematics, Mechanistic Models in Multi-Phase Flow	rcamachov@dcpe.pemex.com	(011) (52) (55) 57 22 25 00 ext. 54963
Faustino Alonso Fuentes Nucamendi	Ph. D. PE	Professor	Artificial Systemas	fsfuenc@sur.pep.pemex.com	
Noel Ernesto Santamaría Guevara	M. S.	Professor	On and Gas Production	none	(011) (52) (55) 30 03 72 19
Luzbel Napoleón Solórzano Zenteno	M. S.	Professor	Project Rentability and Risk Analysis	none	(011) (52) (55) 55 79 87 90
Francisco Sánchez Arredondo	M. S.	Professor	Multi-phase Flow	none	
Eusebio Capitanachi González	Bachelor	Professor	Reology of No-Newtonian Reology	ecapitan@imp.mx	(011) (52) (55) 30 03 83 11
Horacio Zúñiga Puente	Bachelor	Professor	Artificial Production Systems	hzunigap@servidor.unam.mx hzunigap@pep.pemex.com	(011) (52) (55) 56 22 30 17 to 19 / 55 50 87 12

ENROLLMENT & DEGREES CONFERRED INFORMATION

Academic Year	Freshman	Sophomore	Junior	Senior	Undergraduates	B.S.	Master's	M.S.	Ph.D.
1995 -1996	332	217	76	26	6	30	34	10	0
1996 -1997	352	181	76	50	12	50	17	11	1
1997 -1998	359	226	116	30	53	43	18	13	0
1998 -1999	389	132	136	42	84	27	20	12	0
1999 -2000	523	130	142	44	93	28	22	4	0
2000 - 2001	555	252	58	102	88	33	28	12	3
2001 - 2002	438	145	60	49	100	58	23	13	0
2002 - 2003	385	79	73	29	16	37	28	18	0

Cumulative Bachelor Degrees Awarded: 1670

Cumulative Master's Degrees Awarded: 228

Cumulative Doctorate Degrees Awarded: 5

CURRICULUM ANALYSIS

MATHEMATICS

Course Type	Hours Required
Algebra	4.5
Linear Algebra	3
Calculus I	4.5
Calculus II	4.5
Calculus III	4.5
Diff. Equations	4.5
Statistics	3
Probability	3.5
Numerical Methods	4.5
Advanced Mathematics	3

PHYSICS

Course Type	Hours Required
Experimental Physics	2.5
Statics	4.5
Cinematics	3
Dynamics	3
Electricity and Magnetism	4

CHEMISTRY

Course Type	Hours Required
Chemistry	4.5
Lab	2
Chemistry for oil production	5

GENERAL ENGINEERING

Course Type	Hours Required
General Geology	4
Physicochemistry	4.5
Fluid Mechanics	4.5
Oil and Gas Reservoir Geology	5
Thermodynamics	4
Petroleum Geology	5
Advanced programming	4.5
Oil and Gas Production	4.5
Mathematical Reservoir Simulation	4.5
Hydraulics and termodynamical Systems	3
Eléctrical Systems	2

HSS

Course Type	Hours Required
Culture and Communication	3
Philosophy, Science and Technology Thems	3
History, Literature and Society Thems	3
Principles of Economics	3
Applied Ethics Thems	3
Resources and Necessities of México	3

PETROLEUM ENGINEERING

Course Type	Hours Required
Drilling	5
Well Completion and Workover	5
Well Behaviour	4.5
Reservoir Behaviour	3
Formation Characterization	4.5
Well Design	3
Artificial Lift Systems	4.5
Enhanced Oil Recovery	4.5
Reservoir Characterization	4.5
Reservoir Management	4.5
Production Facilities	3

COMMUNICATION

Course Type	Hours Required
Electronic Control on Industrial Systems	3

OTHER

Course Type	Hours Required
Computers and programming	2.5
Graphical Analysis	1.5
Creativity and Innovation	4
Safety and Environment Protection	3
Computer Applications	3
Project Planning	3
Project Management	3
Engineering Project Evaluation	3
Quality	2.5