Contribution of UNAM to a Sustainable and More Equitable World

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Overview of UNAM

History
- Founded in 1551 as Real y Pontificia Universidad de México; in 1910, inaugurated as National University of Mexico; in 1929 obtained its autonomy
- Public and autonomous

Size and Infrastructure
- 25.55 hectares / 2,555,764 m² of built area
- 2,098 buildings
- 4,203 classrooms
- 2,840 laboratories
- 134 libraries with a collection of 1,341,027 titles and 6,468,651 volumes
- 66,000 computers connected within UNAM’s network
- Manages Mexico’s connection to Internet 2

2013 budget: US$2.705 billion

- Teaching: 62.2%
- Research: 25.1%
- Institutional management: 5.0%
- University extension: 7.7%

* Data from the Statistical Agenda, UNAM, 2012
unam, a comprehensive research university

13 Faculties, 7 Multidisciplinary Units and 4 Schools
• teaching and research
• faculties have PhD programs and schools do not

30 Research Institutes:
• focused primarily on research

16 Research Centers:
• focused primarily on research

9 University Programs:
• multidisciplinary research projects on specific issues
• to train UNAM academic staff through the establishment of links between research groups and external entities

* Data from the Statistical Agenda, UNAM, 2012
3,624 faculty belong to the National Research System
- generates 50% of the country’s academic research
- 1 out of every 3 research publications in Mexico is written by UNAM experts
- over 8,800 research projects are developed annually, in all areas of knowledge

2012
- 4,558 researchers
- 40,442 professors

Academic appointments: 45,253

* Data from the Statistical Agenda, UNAM, 2012
### Faculties & Schools Subsystem

**13 Faculties of:**
- Architecture
- Sciences
- Political & Social Sciences
- Accounting & Business Administration
- Law
- Economics
- Philosophy & Literature
- Engineering
- Medicine
- Veterinary
- Medicine & Zootechnology
- Odontology
- Psychology
- Chemistry

**7 Multidisciplinary Faculties:**
- Acatlán
- Aragón
- Cuautitlán
- Iztacala
- Zaragoza
- Higher studies – León
- Higher-studies- Morelia

**4 National Schools of:**
- Plastic Arts
- Nursing & Obstetrics
- Music
- Social Work

**2 High-school subsystems**

### Humanities Research Subsystem

**6 Centers, on:**
- Latin-American Studies
- Interdisciplinary Research on Sciences & Humanities
- Multidisciplinary Research (in Cuernavaca)
- Bibliotecology Research
- Research on North America
- Foreign Language Teaching

**10 Institutes, on:**
- Anthropology
- Bibliography
- Economics
- Aesthetics
- Philology
- Philosophy
- History
- Law
- Sociology
- University & Education

### Scientific Research Subsystem

**11 Centers, on:**
- Applied Sciences & Technological Development
- Mathematics
- Atmospheric Sciences
- Genomic Sciences
- Nanosciences and Nanotechnology
- Applied Physics & Advanced Technology
- Geosciences
- Ecosystems
- Energy
- Environmental Geography
- Radioastronomy & Astrophysics

**19 Institutes, on:**
- Astronomy
- Biology
- Biotechnology
- Physical Sciences
- Marine Sciences & Limnology
- Nuclear Sciences
- Ecology
- Physics
- Cell Physiology
- Geophysics
- Geography
- Geology
- Engineering
- Biomedical Research
- Materials Science Research
- Applied Mathematics & Systems
- Mathematics
- Neurobiology
- Chemistry

### University Programs

**10 Programs, on:**
- Food Program
- Health Research
- Environment
- Climate Change
- Science and Engineering
- Materials
- Gender Studies
- Studies of the City
- Mexico
- Multicultural Nation
- Human Rights Development
B.C.: Nanosciences; Nanotechnology; Astronomy

Son.: Geology, Ecology

Sin.: Sea and Limnology

Mich.: Ecosystems; Radio Astronomy and Astrophysics; Environmental Geography; Natural Magnetism; Geophysics; Interplanetary Scintillation; Archaeometrics; Environmental Sciences, Geosciences, Geohistory, Intercultural Literature, History of Art (ENES Morelia)

Jal.: Tropical Biology

Edu. Mex.: Geomagnetics, Geophysics

Pue.: Astronomy

Gro.: Spanish Teaching

Oax.: Multiculturalism

Mor.: Biotechnology; Genomics; Energy; Biotechnology; Physics; Physical Sciences, Mathematics

Gto.: Intercultural Development and Management; Industrial Economy; Odontology; Physiotherapy, Farm Management; Agro-genomic Sciences (ENES León)

Qro.: Applied Physics; Geosciences; Neurobiology, Engineering

Hgo.: HQ from SEP-H UNAM Program

Ver.: Biology

Tlax.: Biology

Q.R.: Sea and Limnology

Yuc.: Humanities; Social Sciences

Tab.: Social Work

Chis.: Anthropology

Edo. Mex.: Geomagnetics, Geophysics

V.H.: Biology

B.C.: Multiculturalism

national presence
unam @ a glance

international presence

Teaching Center for Foreigners
- San Antonio, Tx, USA
- Los Angeles, Ca, USA
- Chicago, Ill, USA
- Gatineau, Quebec, Canada
- Seattle, Wash, USA
- Beijing, China

Potential foreign offices
- Madrid, Spain
- Sao Paulo, Brasil
- San José, Costa Rica
community services provided to the country:

- National Seismological Service
- National Astronomical Observatory
- National Botanical Garden
- National Library
- National Newspaper and Periodicals Library
- National Mareographic Service
- National Herbarium
- 4 ecological reserves
- Monitoring of the Popocatepetl Volcano
Higher education enrollment (2011-2012)

- **UNAM 15%**
- **68%** Public
- **32%** Private

**2,882 Higher Education Institutions (HEIs) in Mexico**

- 1,955 Private (68%)
- 927 Public (32%)

**3,161,195 Total Higher Education Enrollment in Mexico (2011-2012)**

UNAM’s participation in national higher education enrollment

- **UNAM 10.26%**
- Rest of the HEIs **89.74%**

*Data from the Mexican Education Ministry (SEP by its acronym in Spanish), term 2011-2012*
unam’s students’ profile

324,413 students in the academic year 2011-2012

- 18,072 bachelor degree students graduated in 2011
- 7,482 postgraduate students graduated in 2011

* Data from the Statistical Agenda, UNAM, 2012
teaching programs

- 102 undergraduate programs
- 40 graduate programs (MSc, PhD), 33 specialties and 139 syllabuses
- compulsory social service learning
- open university system (graduate & undergraduate)
- distance learning program

* Data from the Statistical Agenda, UNAM, 2012
unam, culture university

University Cultural Center
Espacio Escultórico (Sculptural Space)
Paseo de las Esculturas (Sculptures Walk)
Pedregal Snakes
Julio Torri Library
Restaurants

Academic Extension
Cinematographic Studies University Center
Theater University

Performance of Arts
Music
Philharmonic Orchestra of UNAM (OFUNAM)
Symphonic Orchestra of the Palace of Mining
Philharmonic Choir of UNAM
Nezahualcóyotl Concert Hall
Carlos Chávez Concert Hall
Simón Bolívar Amphitheater and Salón Generalito in the Antiguo Colegio de San Ildefonso

Theater
Theater Department
Juan Ruiz de Alarcón Theater
Sor Juana Inés de la Cruz Forum
Santa Catarina Theater (Coyoacán)

Dance
Department of Dance
Miguel Cobarrubias Dance Hall

Cinematographic Activities
Office of Cinematographic Activities
Film library with more than 41 thousand titles
Cinematographic Programming Audiovisual material production

Media
TV UNAM
Radio UNAM
Podcast “Download Culture UNAM”
Website
www.cultura.unam.mx

Literary Activities and Publications
Literature Department
Culture Promotion and Literary creation «Punto de partida»
Collection: Voz Viva de México y América Latina, received the distinction «Memoria del Mundo de la UNESCO en 2005»
Four online publications: periódico de poesía, punto de partida, punto en línea and material de lectura
Certamen Caza de letras (Letters Hunting Award)

Department of Publications and Editorial Promotion
UNAM Editorial House
Libraries system

Museums and Cultural Centers
Museo Universitario Arte Contemporáneo
MUCA Campus
MUCA Roma
Museo Experimental El Eco
Museo Universitario del Chopo
Casa del Lago Juan José Arreola
Centro Cultural Universitario Tlatelolco
Museo de la Autonomía among others...
• 25 museums
• 18 historical buildings
• Symphonic Orchestra of the Palace of Mining & Philharmonic Orchestra of UNAM
• archives include more than 400,000 film and disc recordings (music and sound, film titles, artwork and video material in specialized collections)
• 2,633 publications in 2011 (books, journals and e-books)
• 8,200 artistic and cultural activities in 2011
• 1,947,671 people attended artistic and cultural activities in 2011
• 22 million library consultations are registered annually
• 5 million books are lent annually

* Data from the Statistical Agenda, UNAM, 2012
Examples of research initiatives
Legal aspects to attend national problems.

Strong academic exchange with foreign institutions.
Áreas de investigación

<table>
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<tr>
<th>Núcleo de estudios de salud y derecho</th>
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<tr>
<td>Social law</td>
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<td>Derecho Ambiental</td>
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<td>Derecho Internacional</td>
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<td>Derecho Penal</td>
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- Derecho y Bioética
- Derecho y Genética
- Equidad en los servicios de salud
The Institute produces individual books published in co-Edition with different universities in the world.

Organizes seminars discussing current issues associated with global economic reality.

Agreements for academic exchange with institutions of higher education.

Develops academic programs with graduate programas on Economics and Latin American studies.
IIEc conducts 186 research projects

14 research units

6 Areas of research

Word Economy

Economics of the energy sector

Industrial Economy

Economy and the environment

Economics of education, science and technology

Political economy of development
Centro de Investigaciones en Ecosistemas

Campus-Morelia

Environment

Nature

Society

Systems socio-ecological

Science for sustainability
Áreas de investigación

- Conocimiento y gestión de la biodiversidad
- Gestión de sistemas socioeconómicos
- Cambio global
- Sistemas hidrológicos, agua y sociedad
- Energía sostenible y futuro

- 31 investigadores

% de Investigadores en SNI

- Nivel I: 23%
- Nivel II: 27%
- Nivel III: 50%
• **Projects of Impact at national and international level**

- Human and Biophysical Dimensions of Tropical Dry Forest.
- Role of biodiversity in climate change mitigation
- Bioenergy, sustainability and trade-offs: can we avoid deforestation while promoting bioenergy?
- Successional pathways and rates of change in tropical wet forest of Brazil, Costa Rica and México
Instituto de Energía Renovables

IER- Cuernavaca

Research on novel technologies for generating, transformation and use of energy, contributing to a sustainable development of the country.
IER

3 Graduate degrees

- Engineering
- Physical sciences
- Science and engineering materials

19 Postdocs in 2012

International academic exchange

13 foreign researchers conduct research at IER
Lines of research

- Solar materials
- Thermo science
- Energy systems
- Cooling and heat pumps
- Solar concentration
- Geoenergy