



Master in the

SCIENCE OF APPLIED NUTRITION

CONTEXT AND RELEVANCE

Considering the prevalent equity gaps in Mexico, the World Health Organization recommends social equity-based measures to improve health status. These measures focus on disease prevention and medical attention, considering socio-cultural determinants, as well as social and individual wellbeing.

The anthropological, social and economic perspectives of malnutrition, undernutrition and obesity highlight their association with the systems of food production and supply, as well as with changes in dietary patterns, life-styles and overall health habits, specially eating habits, and with the economic and social fluctuations occurring in different periods of history. Customs and traditions around culinary and eating practices are also important, as is the impact of the media in the selection of food, specially on children.

Malnutrition in childhood interferes with neuropsychological development, impairs height and induces anemia and other nutritional deficiency diseases. In the long term, it reduces intellectual and working capabilities in adulthood. Obesity is frequently associated with other disease, such as type 2 diabetes mellitus, hypertension, dyslipidemias and heart disease, which increase the risk of premature death.

The Master's in the Science of Applied Nutrition is a response to the Mission of our University, pursuing the development and dissemination of knowledge in order to build a society with more freedom, equity and solidarity, training professional with humanist vocation, highly qualified to develop, implement and evaluate programs tackling priority issues of concern for our country, such as the integral the development of health, specially in social and economic adverse conditions.

The student of our Master's receives high quality training in Applied Nutrition, humanistic ethics and social awareness approach, in an environment of openness, academic freedom, respect, and deep sense of social justice.

M

The Master is part of CONACYT's National Program of Quality Graduate Programs, in the category of Program in Development

LINKAGE

The Health Department has links with several national and international institutions, pursuing three main objectives:

- Structured, supervised practical training.
- Academic exchange for students and professors.
- Research projects.

Primarily practical training institutions

- Instituto Nacional de Ciencias Médicas y Nutrición "Salvador Zubirán"
- Instituto Nacional de Perinatología "Isidro Espinosa de los Reyes"
- Instituto Nacional de Enfermedades Respiratorias "Ismael Cossio Villegas"
- Instituto Nacional de Pediatría
- Hospital Infantil de México "Federico Gómez"
- Hospital General de México "Dr. Eduardo Liceaga"
- Centro Médico ABC. Hospital Inglés. Clínica de Obesidad
- Hospitales de la Secretaría de Salud del Distrito Federal
- Museo Interactivo Infantil, A.C. (Papalote Museo del Niño)
- Casa Meneses Centro Comunitario de la Universidad Iberoamericana
- Centro de Diagnóstico Ángeles
- Centro de Prevención y Tratamiento Anorexia, Bulimia y Obesidad Barcelona, España
- Baylor College of Medicine
- Hospital for Sick Children, Toronto, Canada

Primarily academic exchange and research institutions

- Instituto Nacional de Medicina Genómica
- Instituto Nacional de Salud Pública
- Instituto Nacional de Geriátria

- Fundación Mexicana para la Salud A.C.
- Centro de Investigación en Alimentación y Desarrollo A.C (CIAD)
- Fundación SERTULL
- Instituto Nacional de las Personas Adultas Mayores (INAPAM)
- Sistema para el Desarrollo Integral de la Familia del Estado de México "DIFEM"
- Cruz Roja Mexicana
- Saint Louis University, USA
- Universidad de Granada, España
- Universidad Alcalá de Henares, España

OBJECTIVES

General

To train high level professionals with knowledge, skills and attitudes to work within a multidisciplinary team, managing strategies aimed at the prevention and treatment of nutrition-associated diseases, considering the determinants of each disease, as well as the socio-economic and cultural contexts of the affected population.

Specific

- To train professionals working in multidisciplinary teams to improve the health of populations affected by diseases where the promotion of nutrition, physical activity, and healthy behaviors are core elements.
- Design, coordinate and evaluate campaigns, public policies and/or media communication strategies to prevent and control nutrition-associated problems from a multidisciplinary approach.

APPLICANTS PROFILE

Knowledge

- Bachelor's degree in Health Science or related fields: Nutrition, Medicine, Nursing, and Psychology.
- Knowledgeable on the dietary and nutritional problems of our country.
- Knowledge of the general lines of the medical management of diseases related with food excess or deficiency.
- Clinical experience.

Skills

- Clear oral and written communication in Spanish.
- English reading and understanding skills.
- Management and analysis of statistical data and dietary and nutritional information.

Involvement in interdisciplinary team work.

- Attitudes and Values
- Interest in helping others improve their quality of life.
- Critical, proactive and service-prone attitudes
- Personal and professional ethics

GRADUATES' PROFILE

The graduates from the Master's of Applied Nutrition are distinguished by

Sound knowledge of:

- Nutritional and eating strategies for the prevention and treatment of diseases caused by unhealthy nutrition (deficiency or excess of nutrients).
- Personalized strategies to promote the adoption of healthy behaviors in the context of a multidisciplinary group.

- Design, head, execute and evaluate programs in nutrition and feeding.

Skills to:

- Design nutritional, eating and healthy behavior promoting strategies aimed at individuals undertaking group therapy for unhealthy nutritional habits (deficiency or excess).
- Head professional health teams in the implementation and evaluation of said strategies.
- Adequate an efficient communication with the targeted population and the health team, for the attention of problems associated with malnutrition (deficiency or excess).

Attitudes:

- Willingness to work with quality, creativity, leadership and ethics on the solution of nutritional problems associated with malnutrition (deficiency or excess), in the Mexican social context.

FIELD OF WORK

Graduates from this program work at:

- Public and private institutions implementing and evaluating health promoting programs, addressing diseases caused by nutritional deficiencies or excess.
- Universities and higher education institutions, teaching at bachelor's and graduate levels; as private advisors and consultants; delivering courses and workshop to train and up-date health staff; management of programs to prevent and treat diseases caused by nutritional deficiencies or excess.

FACULTY MEMBERS

Teresita González de Cosío Martínez

*Member of the National Research System (SNI) Level 2
National Health Institutes' Researcher, Level F.
Ph.D. and M.A. in International Nutrition, Cornell University.
B.A. in Nutrition and Food Science, Universidad Iberoamericana.*

(Head of the Health Department)

Lines of Research:

Breast-feeding, obesity and population's health.

Relevant Publications:

González-Cosío, T., Rivera Dommarco, J. López Acevedo, G. Rubio Soto, GM., (eds). *Nutrición y Pobreza. Política Pública basada en evidencia*. México: Banco Mundial/Secretaría de Desarrollo Social, 2008; Colchero A., Contreras-Loya, D., López-Gatell, H., González Cosío, T. "The costs of inadequate breastfeeding of infants in Mexico". *AJCN*. 2015; 101:579-86; Rivera, M., Escobar, L., González Cosío, T. "Breastfeeding and Maternal Employment Results from Three National Nutritional Surveys in Mexico." *Maternal and Child Health Journal* 18(9):2014; Hernández-Cordero, S., Barquera, S., Rodríguez-Ramírez, S., Villanueva Borbolla, M.A., González de Cosío, T., Rivera Dommarco, J., and Popkin, B. "Substituting Water for Sugar-Sweetened Beverages Reduced Circulating Triglycerides and the Prevalence of Metabolic Syndrome in Obese but not in Overweight Mexican Women in a Randomized Controlled Trial." *J Nutr* 144:1742-1752 2014.; González de Cossío, T., Escobar Zaragoza, L., González Castell, L.D., Shamah, T., Rivera, J. "La Lactancia materna exclusiva en menores de seis meses se asocia con un mejor peso para la longitud en hogares con inseguridad alimentaria en México". *Salud Pública de Méx* 2014. 56 suppl 1:S31-S38.

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Loredana Tavano Colaizzi

*M.A. in Public Sciences and B.A. in Nutrition and Food Science, Universidad Iberoamericana.
Specialty in Clinical Nutrition Research, Instituto Nacional de Perinatología*

Areas of work:

Obesity and Comorbidities, Nutrition and Health of Elderly Persons.

Relevant Publications:

Escalante, E., Tavano, L. "Redes de apoyo social para el adulto mayor" In: Pérez Lizaur AB, 10 hábitos efectivos para la salud del Adulto Mayor. México: Instituto Nacional de Ciencias Médicas y Nutrición "Salvador Zubirán"/Universidad Iberoamericana, Ciudad de México/INGer/INAPAM, 2011; Cruz, I., Suverza, A., Tavano, L., Alemán-Mateo H., Tavano, L., Pérez Lizaur, A.B. "Nutritional Status and its Association with Body Composition Compartments in Physically Independent, Elderly Mexican Subjects". *Journal of Aging Research & Clinical Practice*, 2012; Tavano, L., Arroyo, P., Loria, A., Pérez Lizaur, A.B., and Pérez Zepeda, U. "Clinimetric Testing in Mexican Elders: Associations with Age, Gender and Place of Residence". *Frontiers in Medicine*, 2014.

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Teresa Ochoa Rivera

Ph.D. in Social Anthropology, M.A. in Human Development, B.A. in Nutrition and Food Sciences. Universidad Iberoamericana.

Areas of work:

Anthropology of Feeding, Nutritional Education and Diet Orientation.

Relevant Publications:

Ochoa, T. "Alimentación y Diferenciación Social: el caso de una comunidad en México". *Revista Internacional en Ciencias Sociales Interdisciplinarias*, México, 2013. 2(1), pp:9-19; Ochoa, T., Pérez, V. "San Jerónimo Amanalco. Hábitos alimentarios de una comunidad en transición." In: Magazine, R., Martínez, T., Texcoco en el Nuevo Milenio: Cambio y continuidad en una región periurbana del Valle de México. México, UIA, 2010; Ochoa, T. Los nutroides. El club de los 5 niños que les gusta comer, pero a veces no saben cómo. CD educativo. México: Universidad Iberoamericana/Instituto Danone, 2007.

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Alicia Parra Carriedo

*Ph.D. in Science of Human Development, Colegio Internacional de Educación Superior
M.A. in History of Thought, Universidad Panamericana
B.A. in Nutrition and Food Science, Universidad Iberoamericana*

Area of work:

Clinical Nutrition and Psychosocial Aspects

Relevant Publications:

Parra, A., Pérez-Lizaur, A., Masliah, C., and Velasco, T. "Nutritional Status, Risky Eating Behaviors and Body Dissatisfaction in a Population of Mexican Artisans". *The Faseb Journal*. 2012:819.12; "Factores determinantes de la obesidad: un enfoque interdisciplinario". In: *Pobreza y desigualdad: Un enfoque multidisciplinario*. México: Universidad Iberoamericana, 2014; Parra-Carriedo, A., Cherem-Cherem, L., Galindo de Noriega, D., Díaz-Gutiérrez, M.C., Pérez-Lizaur, A.B., Hernández-Guerrero, C. "Comparación del gasto energético en reposo determinado mediante calorimetría indirecta y estimado mediante fórmulas predictivas en mujeres con grados de obesidad I a III". *Nutr Hosp*. 2013; 28(2):357-364. Hernandez-Guerrero, C., Parra-Carriedo, A., Isoard, F., Perez-Lizaur, A.B., Galindo De Noriega, D., and Cherem-Cherem, L. "Association Between Single Nucleotide Polymorphism Ala-9-Val of Manganese-Superoxide Dismutase and Normal Weight, Overweight and Obesity in Mexican Population". *The Faseb Journal*. 2012:824.7.

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Ericka Escalante Izeta

*Ph.D. in Pedagogy, Universidad de Granada
M.A. in Health Sciences, Instituto Nacional de Salud Pública
B.A. in Psychology, Universidad Nacional Autónoma de México*

Area of work:

Psychology of Eating and Prevention of Obesity.

Relevant Publications:

Escalante-Izeta, E. I., Radosh Sverdlin, A., and Mena Rangel, M.C. "Diseño de la identidad de un programa comunitario para la prevención de la obesidad". *Revista Iberoamericana de Comunicación*. 2013; 24(1):123-14; Salazar Coronel, A., Shamah Levy, T., Escalante Izeta, E., and Jiménez Aguilar A. "Validación de material educativo: Estrategia sobre alimentación y actividad física en escuelas primarias mexicanas". *Revista Española de Comunicación en Salud*. 2012; 3 (2): 96-109; Escalante-Izeta, E. and Pérez Lizaur, A.B. "Educación a lo largo de la vida: Aprender a cualquier edad". In: 10 hábitos efectivos para la salud del adulto mayor Tomo IV. México: Universidad Iberoamericana, 2012; Escalante-Izeta, E. and Tavano, L. "Redes de apoyo social para el adulto mayor". In: 10 hábitos efectivos para la salud del adulto mayor. México: Universidad Iberoamericana, 2011.

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Isabel Cruz Rodríguez

Ph.D. in Education, M.A. in Research and Development of Education, B.A. in Nutrition and Food Science, Universidad Iberoamericana

Areas of work:

Food Services and Evaluation of Educational Programs.

Relevant Publications:

Ávila-Rosas, H. Tudela, V., Cruz, I., Feinholz, D., Lartigue, MT., Caraveo, V. "La escolaridad de los progenitores en relación con el acceso a la educación superior de sus hijas e hijos". In: *Género y Educación. Colección Estudios de Género en la Frontera Sur*. Tuñón, P.E (coordinadora). México: ECOSUR/COESPO, 2005; Cruz, R. I. et al. "Sistematización del proceso de salud". In: Crispín, M.L. y Ruiz, M.M (eds.) *Huellas de un caminar. Misión Jesuita de Bachajón*. México: Universidad Iberoamericana, 2010. pp. 163-186.

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César Hernández Guerrero

Member of the National Research System, Level 1.

Ph.D. in Chemistry and Biology Sciences, M.A. in Clinical Biology, B.A. in Chemistry-Bacteriology-Parasitology. Instituto Politécnico Nacional.

Areas of work:

Basic Research on Genetic and Biochemical Pro-oxidant and Anti-oxidant Characteristics in Individuals with Obesity and its Main Comorbidities.

Relevant Publications:

Mier-Cabrera, J., Jiménez-Zamudio, L., García-Latorre, E., Cruz-Orozco, O., Hernández-Guerrero, C. “Quantitative and Qualitative Peritoneal Immune Profiles, T-cell Apoptosis and Oxidative Stress-Associated Characteristics in Women with Minimal and Mild Endometriosis”. British Journal of Obstetrics and Gynaecology. 2011; 118(1):6-16; Mier-Cabrera, J., Aburto-Soto, T., Burrola, S., Jiménez, L., Tolentino, M., Casanueva, E., Hernández, C. “Women with Endometriosis Improved their Peripheral Antioxidant Markers after the Application of a High Antioxidant Diet”. Reproductive Biology and Endocrinology. 2009, 7:54.

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Ana Bertha Pérez Lizaur

M.A. in Health Sciences, Universidad Autónoma del Estado de México.

B.A. in Nutrition and Food Science, Universidad Iberoamericana

Area of work:

Research in Nutritional Education. Public Schools Projects.

Relevant Publications:

Loria, A., Arroyo, P., Pardío, J., Tavano, L., Pérez-Lizaur, A.B. “Values of a Body Mass Index Surrogate in Older Adults Using Knee Height Instead of Height”. J Am Geriatr Soc. 2015 Nov;63(11):2413-4; Tavano-Colaizzi, L., Arroyo, P., Loria, A., Pérez-Lizaur, A.B., Pérez-Zepeda, U. “Clinimetric Testing in Mexican Elders: Associations with Age, Gender and Place of Residence”. Frontiers in Medicine, 2014; “El uso de las vitaminas en el adulto mayor”. In 10 Hábitos efectivos para la salud del adulto mayor. México: Instituto Nacional de Ciencias Médicas y Nutrición “Salvador Zubirán”/Universidad Iberoamericana, Ciudad de México/InGer/INAPAM, 2011; Balcázar, H., Fernández-Gaxiola, A.C., Pérez-Lizaur, A.B., Peyron, R.A., Ayala, C. “Improving Heart Healthy Lifestyles Among Participants in a Salud Para Su Corazón Promotores Model: The Mexican Pilot Study, 2009–2012”. Prev Chronic Dis 2015; 12:140292.

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José Monroy Ruíz

Ph.D. in Cardiovascular Physiology. Universidad de Salamanca

M.A. in Food Science and Technology. Universidad Iberoamericana

B.A. in Biology Universidad Autónoma Metropolitana

Areas of work:

Cardiovascular Diseases, Mechanisms of Action of Nutrients in Cardiovascular Health, Functional Food.

Relevant Publications:

Santos, P., Sevilla, Ma., Carrón, R., Monroy-Ruiz, J., Montero, M.J. “Licopeno previene la hipertensión y la hipertrofia cardiovascular producida por angiotensina II”. Actualidades en Farmacología y Terapéutica. 2013; 11:279-281; I Mar Contreras, M., Sevilla, Monroy-Ruiz, J., Amigo, L., Gómez-Sala, B., Molina, E., Ramos, M., Recio, I. “Food-Grade Production of an Antihypertensive Casein Hydrolysate and Resistance of Active Peptides to Drying and Storage”. International Dairy Journal. 2011, 21(1): 470-476; Monroy-Ruiz, J., Sevilla, MA., Carrón, R., Montero, MJ. “Astaxanthin-Enriched-Diet Reduces Blood Pressure and Improves Cardiovascular Parameters in Spontaneously Hypertensive Rats”. Pharmacological Research. 2011. 63(1): 44-50.

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Mireya Vilar Compte

Member of the National Research System, Level 1

Ph.D. and M.A. in Public Administration, M.A. in Development and Public Policies, New York University.

B.A. in Political Sciences, ITAM.

Areas of work:

Health Policies and Economics, Program Evaluation, Quantitative Methods.

Relevant Publications:

Vilar-Compte, M., Martínez-Martínez, O., Orta-Alemán, D., & Perez-Escamilla, R. (2016). “Functional Limitations, Depression, and Cash Assistance are Associated with Food Insecurity among Older Urban Adults in Mexico City”. Journal of Health Care for the Poor and Underserved, 27(3), 1537-1554; Vilar-Compte, Mireya, et al. “The Impact of the 2008 Financial Crisis on Food Security and Food Expenditures in Mexico: a Disproportionate Effect on the Vulnerable”. Public Health Nutrition 18.16 (2015): 2934-2942; Vilar-Compte, M., Bernal-Stuart, A., Orta-Alemán, D., Ochoa-Rivera, T., Pérez-Escamilla, R. (2014) “Is the Latin American and Caribbean Food Security Scale an Appropriate Instrument for Mexican Urban Older Adults?” Journal of Frailty & Aging, volume 3:3 (p. 173-179); Vilar-Compte, M., Bernal-Stuart, A., Sandoval, S, Pérez-Lizaur, AB. (2014) “The Effect of Mexican Household Food Security Status and Income Distribution on Food Access”. Food Studies, volume 3:2 (p. 31-40); Vilar-Compte, M., Bernal-Stuart, A., Sandoval, S, Pérez-Lizaur, AB. “México: Un complejo mosaico de problemas de nutrición poblacional” In Pobreza y Desigualdad: un enfoque multidisciplinario. México: Universidad Iberoamericana, 2014.

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Araceli Suverza Fernández

M.A. in Education Research and Development. Universidad Iberoamericana

Specialty in Clinical Nutrition. Hospital Regional 20 de Noviembre ISSSTE

B.A. in Dietetics and Nutrition. Dietetics and Nutrition School, ISSSTE, Nutritionist Certified by the Mexican College of Nutritionist.

Areas of work:

Evaluation of Nutritional Status: Anthropometrics and Body Composition, Dietetic, Clinical and Biochemical Aspects; Overweight and Obesity in the Adult Based on the Study of the Factors Associated with Diet and Nutrition; Clinical Nutrition in the Adult.

Relevant Publications:

Suverza, F.A., Haa, N.K. Obesidad consideraciones desde la nutriología. México: McGrawHill, 2012. Suverza, F.A. “Introducción a la antropometría. Conceptos básicos”. In: Manual de Antropometría para la Evaluación del Estado Nutricio en el Adulto. México: Universidad Iberoamericana, 2009. Capítulo I, pp. 19-30.

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LINES OF RESEARCH

1) Biological and Molecular Mechanisms Associated to Chronical Non-Communicable Disease Development.

Objective:

Study the relationship between a group of anti-oxidant genetic characteristics and the pro-inflammatory and anti-inflammatory response, with the onset and development of chronic disease such as obesity, insulin resistance, diabetes, dyslipidemias, cardiovascular conditions, metabolic syndrome, etc., as well as study the benefits of functional foods and the mechanisms of action in the physiopathologic processes of cardiovascular diseases and other diseases mentioned above.

2) Encourage nutrition centered in family, culture and environment.

Objective:

Explain the mechanisms involved in the development of interventions to promote, educate and communicate topics related to nutrition, considering the influence of family, culture and environment.

3) Epidemiologic Research in Gerontology

Objective:

Develop research projects in epidemiology and gerontology to create new knowledge on prevention, diagnosis and attention of priority health problems associated with human aging, contributing to improve the quality of life of this population group.

4) Multidisciplinary Approach to Maternal Breast-feeding Promotion, Protection and Support System.

Objective:

Organize multidisciplinary teams and promote a stimulant and collaborative environment among the Maternal Breast-Feeding Team and participant groups to implement research projects generating pertinent, timely and excellence knowledge on maternal lactation.

Specialty in Health Graduate with at least 46 credits acknowledge by the Secretaría de Educación Pública (SEP)

SYLLABUS

3RD SEMESTER

Nutrition and Health Communication

3 Hours / 4 Credits

Epidemiology and Biostatistics

4 Hours / 8 Credits

Research Methodology

4 Hours / 6 Credits

4TH SEMESTER

Evaluation of Nutrition and Health Programs

4 Hours / 6 Credits

Community Practice

4 Hours / 4 Credits

Elective Subject

2 Hours / 4 Credits

ELECTIVE SUBJECTS

- Theory and Technique in the Group Process
- Community Human Social Development
- Socioanthropological Aspects of Obesity
- Selected Topic in Nutrition and Health

* Graduation forms:

Thesis | Case Study | General Knowledge Exam

ADMISSION PROCEDURES

- Interview with the program coordinator. Bring the following documents:
- Curriculum Vitae
- Letter of Purpose
- Certified copy of studies with grade average
- Copy of Degree and Professional Health Specialty License (both sides) with at least 46 credits acknowledged by SEP.
- Copy of valid INE, IFE or passport
- At the end of the interview, upon request of the coordinator, write an autobiography by hand (no longer than one page).
- Admission Committee Meetings. The candidate will be notified if she/he may enroll for the National Graduate Admission Exam III (EXANI III)
- Earn 1000 points or more as global score
- Earn 1000 points or more in the English Test Section
- Continue admission formalities at the University's Student Services Directorate.

For further information please contact:

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