



School of Exercise & Nutritional Sciences

GRADUATE STUDIES 2019-2020

"The School of Exercise and Nutritional Sciences is a community of faculty, students, and staff who promote health and fitness as well as the rehabilitation of those with injury, illness, disease, or disability. It seeks to serve as a nationally recognized center for professional and academic training within an environment that emphasizes scientific inquiry, discovery, and application. To do so, the school aims to provide high quality, innovative education to graduate and undergraduate students in exercise, nutrition, and rehabilitation sciences. We strive to create a generation of leaders who contribute to the health, well-being, and rehabilitation of local, national, and international communities."



Application Procedures & Deadlines

Fall 2019 admission application opens **October 1, 2019** (no spring admission)

1. Submit the California State University Online Application available via [Cal State Apply](#) by **December 16, 2019**
Application fee: \$55. You will then be directed to the School of ENS Interfolio application.
2. Have official test scores sent to SDSU by **January 12, 2020**
SDSU institution code: 4682
GRE scores and TOEFL (if applicable) should be sent directly using SDSU institution code
3. Send official transcripts to **SDSU Enrollment Services** (see address below) by **January 12, 2020**. Applicants must send one set of official transcripts from all institutions attended (except SDSU, if applicable).
4. **Submit the SDSU ENS Interfolio application in January 12, 2020**
Upload via [Interfolio](#) application link on the ENS Program Admissions Website:
 - unofficial copies of bachelor's degree transcripts and any transcripts where prerequisite coursework was taken
 - copies of GRE (and if applicable, TOEFL) test scores
 - name and email address of two references, who will be invited to complete a recommendation electronically
 - personal statement of your background, research interests/experiences, and professional goals
 - prerequisite grade sheet, available in the Interfolio application and on the ENS website
 - optional materials, indicated via SDSU ENS prompt

ENS Graduate Advising Team

ENS Graduate Advisor
Suzanne Meredith, BS

ENS Graduate Assistant Advisor
Louise Chatagnier, BS, Dual MS Student

Current advising hours:

<http://ens.sdsu.edu/student-resources/advising/meet-your-advisor/>

ENS 357
ensgrad@sdsu.edu

SDSU Enrollment Services

Graduate Admissions Document Processing Unit

5500 Campanile Drive
San Diego, CA 92182 7416

Graduate Advising

SDSU School of Exercise & Nutritional Sciences, Room 357
5500 Campanile Drive
San Diego, CA 92182 7251
619 594 5979



Meet Our Faculty

Harsimran Baweja, P.T., Ph.D., Associate Professor
University of Florida

Teaching areas: Neuroscience, Cardiopulmonary Therapeutics
Research interests: Neurophysiology of aging and Parkinson's disease with cognitive impairment, driving competence, mechanisms for neuroplasticity using virtual reality

Surabhi Bhutani, PhD, Assistant Professor
University of Illinois

Teaching areas: Nutrition throughout the lifespan
Research interests: Appetite and Eating Behavior, Odor Perception, Food Choices, Body Composition, Energy Balance, Obesity and Neuroimaging

Michael Buono, Ph.D., Professor
University of Arizona

Teaching areas: Human Physiology, Pathophysiology
Research interests: Environmental physiology, thermoregulation, exercise biochemistry

Daniel Cannon, Ph.D., Associate Professor
University of Leeds (UK)

Teaching areas: Pathophysiology, Exercise Physiology
Research interests: Exercise intolerance, skeletal muscle abnormalities in cardiopulmonary disease

Antoinette Domingo, P.T., Ph.D., Assistant Professor
University of Michigan

Teaching areas: Neuro-biomechanical Relationships, Geriatrics
Research interests: Locomotor rehabilitation, rehabilitation robotics motor learning and control of balance & gait after neurological

Sara Gombatto, Ph.D., P.T., Associate Professor
Washington University, St. Louis

Teaching areas: Evidence Based Practice
Research interests: mechanisms underlying musculoskeletal pain, low back pain, sports biomechanics, 3D motion capture, mobile sensor technologies, MRI

Mee Young Hong, Ph.D., R.D.N., Professor
Texas A&M University

Teaching areas: Advanced Nutrition laboratory, Child Nutrition
Research interests: Nutrition (dietary fat and phytochemicals) effects on inflammation, CVD & cancer

Shirin Hooshmand, Ph.D., Associate Professor
Florida State University

Teaching areas: Advanced Nutrition, Geriatric Nutrition
Research interests: Functional foods, bone, osteoporosis and osteoarthritis

David Kahan, Ph.D., Associate Director and Professor
Ohio State University, Columbus

Teaching areas: Curriculum and Development, Physical Education and Physical Activity
Research interests: religious/ethnic minorities' barriers and facilitators to physical activity, school-based interventions on physical activity, physical activity policy

Mark Kern, Ph.D., R.D., Professor
Purdue University

Teaching areas: Nutrition for Athletes, Nutrition and Energy, Advanced Seminar in Nutrition
Research interests: Exercise and nutrition, nutrition and chronic disease

Jochen Kressler, Ph.D., Associate Professor
University of Miami

Teaching areas: Pathophysiology, Exercise Physiology
Research interests: Cardiovascular and metabolic adaptations with exercise and nutritional manipulations

Susan Levy, Ph.D., Professor
Oregon State University

Teaching areas: Statistics, Research Methods
Research interests: Motivational factors & health related outcomes in exercise and physical activity, measurement of physical activity

Changqi Liu, Ph.D., Assistant Professor
Florida State University

Teaching areas: Advanced Food Science, Experimental Food Science
Research interests: Food allergy, novel food source, functional food

Matthew Mahar, Ed.D., School Director and Professor
University of Houston

Research interests: physical activity and fitness in youth, assessment of physical activity, physical activity promotion across the lifespan, youth fitness testing, school-based physical activity related to on-task behavior and cognitive function

Katrina Maluf, Ph.D., P.T., Professor
Washington University, St. Louis

Teaching areas: Clinical reasoning, psychosocial aspects of rehabilitation
Research interests: Chronic pain, psychosocial stress, motor control & rehabilitation

Amanda C. McClain, PhD, MS, Assistant Professor
Cornell University

Teaching areas: Nutrition counseling, Nutrition and Physical Activity Behavior change, Community Nutrition, and Health Promotion
Research Interests: Social, cultural and life course influences on food security, diet behaviors, quality and cardiometabolic health, capacity-based interventions to improve food security.

Shawn O'Connor, Ph.D., Assistant Professor
University of Michigan

Teaching areas: Biomechanics of Human Movement
Research interests: Biomechanics and energetics of locomotion: balance, metabolic cost, muscle

Mitchell J. Rauh, Ph.D., B.S.P.T., M.P.H., Professor and DPT Director
University of Washington

Teaching areas: Evidence Based Practice, Musculoskeletal Therapeutics/Orthopedics, Cardiopulmonary Therapeutics
Research interests: Running injuries, Female Athlete Triad, sports injury epidemiology, functional-based tests for clinical assessment

Michael Rosenthal, D.Sc., M.P.T., Assistant Professor
Baylor University

Teaching areas: Differential Diagnosis in Physical Therapy, Musculoskeletal Therapeutics Lab
Research interests: Human performance optimization, blood flow restriction training, imaging of neuromusculoskeletal injury, electrophysiological testing

Lori Tuttle, Ph.D., P.T., Associate Professor
Washington University, St. Louis

Teaching areas: Case Presentations, Medical Therapeutics in Physical Therapy
Research interests: Women's health, pelvic floor muscle function

Frequently Asked Questions

What type of degree do I need to apply?

Bachelor of Science or Bachelor of Arts, although it does not need to be in related field as long as all prerequisite courses are completed

Do I have to finish all prerequisite courses listed before admission to the degree program?

Priority consideration will be given to those students with all prerequisites fulfilled. Students not meeting all prerequisites can be recommended for conditional admission by approval of the faculty; however, all prerequisites must be completed in the first year of graduate study. Students lacking any prerequisites noted with an asterisk by the start of the program will not be accepted on a conditional basis.

How do I know if the classes I've taken count as prerequisites or not?

If you are currently attending a university and believe you have fulfilled the prerequisite courses, you will need to send an email to the ENS Graduate Advising office containing the name of the school, course name, credit hours, any prerequisites for the course, and course description from the syllabus or catalog, and which prerequisite you believe it meets. To check for equivalent courses, you can use www.assist.org for community college courses taken in California or SDSU_TAP for courses taken at institutions within and outside of California. If you cannot find your school, we can evaluate it via email as noted above. We will not evaluate complete transcripts.

What is the minimum GPA to apply?

3.0 overall or in last 60 units of bachelor's coursework

What are the minimum GRE scores I need to apply?

Verbal score ≥ 151 (or 475 for old test) and Quantitative score ≥ 142 (or 475 for old test).

The writing section must also be completed and may be considered for applicant writing potential in the program.

How recent must my GRE scores be?

GRE scores do not expire. Hard copies of official scores can also be accepted if scores are not available in an online format.

What if I'm a foreign applicant?

A TOEFL ≥ 550 paper test (or 213 computer test) is required. Minimum score for iBT is 80 (or 550 for paper test). Scores must be no more than two years old. Questions regarding international student admission should be directed to intl_admissions@sdsu.edu. For more information, please visit: <http://www.isc.sdsu.edu/>.

Who has to take the TOEFL?

All graduate and post-baccalaureate applicants, regardless of citizenship, whose native language is not English and whose preparatory education was principally in a language other than English must demonstrate English competency. Those applicants who do not possess a bachelor's degree from a postsecondary institution where English is the principal language of instruction must submit official TOEFL or IELTS results.

Do California residents get admission preference?

Yes, San Diego State University is a State school so slight preference is given to residents of California. However, California residents do not receive automatic acceptance. Admission to ENS master's programs is competitive and all completed applications are evaluated.

Consequently, many out-of-state students receive admission into our programs. The most competitive applicants are offered admission.

How is my residency status determined?

California residency of graduate students is in accordance with the regulations of the Board of Regents and the laws of the State of California. A full statement of the regulations is available in the SDSU Graduate Bulletin. Out-of-state residents must pay the out-of-state graduate student tuition rate. Please visit <http://arweb.sdsu.edu/es/registrar/residency.html> for more information on residency classification for tuition purposes.

Who writes my letters of recommendation and is there a form he/she needs to fill out?

Letters can be from professionals in academic or professional areas. You will be prompted to provide the names and email addresses of two recommenders on the SDSU ENS Interfolio application. Recommenders will receive an email prompt to upload letters.

What should I include in my Statement of Purpose? How long should it be?

Statements should be 1-2 pages describing your background, research interests/experiences, and goals relevant to the degree sought. The Statement of Purpose used for admission decisions should be uploaded to the SDSU ENS Interfolio application. While you may include your Statement of Purpose in your Cal State Apply application, you have the option to indicate in that section of the Cal State Apply application: "Statement sent/to be sent directly to the department via ENS supplemental application."

When will I know if I'm accepted?

Admission decisions will appear on your WebPortal account in the weeks following the deadline. Email acceptance notifications will be sent by the ENS department beginning in March.

If I'm accepted, when would I begin my master's coursework in the program?

The program starts in the Fall of the year in which you were offered an acceptance. Acceptance cannot be deferred for a later start. Applicants unable to start in the Fall of the year they are accepted must reapply to the program if interested in a later program start.

Are GA (Graduate Assistantships) or TA (Teaching Associateships) available?

Yes, ~15 GA/TA positions are awarded per semester to current and incoming students. Positions generally become available each semester.

How do I apply for a GA/TA position?

GA/TA applications are available in the SDSU ENS Interfolio application and on the ENS website and should be uploaded via that application.

Frequently Asked Questions (continued)

How competitive are the programs?

Our graduate programs are becoming increasingly competitive with many qualified applicants vying for a limited number of spots. In 2018, our applicants had the following average GPAs:

Exercise Physiology - 3.41

Nutritional Sciences - 3.62

Dual Exercise Physiology and Nutritional Sciences - 3.56

Are there research opportunities in the program?

Yes, our students engage in a variety of research projects. Many students team up with faculty members or get involved with community-based projects. Students are expected to complete a research project to satisfy the Thesis or Directed Readings requirement to graduate.

Can I apply for more than one program?

No, you may only apply for one SDSU graduate program, including our Doctorate of Physical Therapy program.

When does the application open?

October 1st of the fall prior to the fall of intended program start

What coursework should I enter on the Cal State Apply application?

Since admissions decisions are based on official transcripts, you should only enter your in progress and planned coursework on the Cal State Apply coursework history. Do not enter all of your previously completed high school and undergraduate coursework.

When will my Red ID number be issued?

You will be issued a Red ID 2-3 weeks after submitting the Cal State Apply application.

Can I enroll in classes at SDSU prior to acceptance?

Contact the Office of Extended Studies for information on [Open University](#) for taking pre-requisite classes prior to acceptance. Please see Graduate Advisor if, upon acceptance, you wish to take prerequisite classes at SDSU the summer prior to your start date.

Can I apply for the Didactic Program in Dietetics (DPD) too?

It is possible to complete the DPD coursework along with MS in Nutritional Sciences or Dual MS in Exercise Physiology and Nutritional Sciences. Graduate students must complete 1 semester in the Nutritional Sciences or Dual program before becoming eligible to apply to the DPD. Please contact the ENS Graduate Advisors or visit <http://ens.sdsu.edu/academic-programs/dpd/admissions/> for more information.

How big is the ENS graduate department?

There are approximately 50 active graduate students enrolled in our three programs.

Do I have to complete a thesis?

Some students do opt to complete a thesis. There is an option to complete a Directed Readings, which is an alternative to a thesis project. The Directed Readings course offers students several options for completing the research requirement, including a manuscript submission.

How much does it cost to attend SDSU?

California resident fees: \$8,177 per year (full-time student) (2019-20)

Non-resident fees: \$8,177 plus \$396 per credit unit (2019-20)

For more tuition information, please visit: <http://bfa.sdsu.edu/financial/student/tuition.aspx>.

Is Financial Aid available? How do I apply for Financial Aid?

The SDSU Financial Aid office can discuss information regarding specific financial aid options. Please contact the Financial Aid Office at (619) 594-6323 or http://go.sdsu.edu/student_affairs/financialaid/ for more specific information. You can receive up to 125% of your Program of Study units of financial aid. Students taking above 125% of units, usually for the DPD, may not be eligible for financial aid for all Program of Study and Didactic Program in Dietetics units.

Are scholarships available? How do I apply for them?

There are scholarships available for ENS students. Most are available after at least 9 graduate units have been completed at SDSU. For more information, please visit: http://go.sdsu.edu/student_affairs/financialaid/sdsuscholarshipshowtosearch.aspx.

How long does it take to complete the degree?

Length of program is sequenced to be 2 years (3 years for Dual MS). You must complete your degree in no more than 7 years.

Does the ENS department offer doctoral degrees?

We offer a clinical doctorate in Physical Therapy. There are no PhD or other doctorate programs in our department at this time.

Can I visit before I come?

Visits are encouraged and can be arranged via email: ensgrad@sdsu.edu. Students are encouraged to meet with potential faculty advisors prior to applying. To arrange a campus tour, see: http://arweb.sdsu.edu/es/admissions/tours_events/index.html.

Have other questions?

Contact the ENS graduate advisors by email at ensgrad@sdsu.edu.

See walk-in hours at <http://ens.sdsu.edu/student-resources/advising/meet-your-adviser/>.





M.S. Kinesiology Applied Movement Science

(Current Admissions on Hold)

Applied movement science is a growing, interdisciplinary field that focuses on the measurement and evaluation of human function and its relation to fitness, disability, and rehabilitation. The program delivers a unique combination of biomechanical, motor control, and exercise physiology principles aimed at preparing for a diverse set of health and fitness related careers. The program emphasizes clinical research to include the development of data acquisition and analysis skills for the assessment of motor performance in health, sports, and exercise related environments. The degree can serve as both an entry point into clinical research positions or as preparation for doctorate degrees in kinesiology, physical therapy, or other rehabilitation science based graduate programs. **(36 units)**

Undergraduate Prerequisite Coursework or Equivalent

- Human Anatomy (BIOL 212)*
- Human Physiology (BIOL 261 or 336)*
- Applied Kinesiology (ENS 303)*
- Biomechanics (ENS 306)*
- Physiology of Exercise (ENS 304)*
- Motor Learning and Performance (ENS 307)
- Statistics (e.g., PSY 280)*

* Must be completed prior to admission

Required Courses (24 units):

- ENS 601** Experimental Methods in ENS (3)
ENS 602 Research Evaluation in ENS (3)
ENS 610 Biomechanics: Measurement Tech. I Kinematics (3)
ENS 611 Biomechanics: Measurement Tech. II Kinetics (3)
ENS 612 Biomechanics: Measurement Tech. III EMG (3)
ENS 613 Motor Control and Rehabilitation Science (3)
BIOL 570 Neurobiology (3)
ENS 799A Thesis (3) **OR**
ENS 790 Directed Readings (3)
Electives (12 units) selected in consultation with advisor.

Faculty:

Harsimran Baweja (594 1312; hbaweja@sdsu.edu)
 Antoinette Domingo (594 3289; adomingo@sdsu.edu)
 Sara Gombatto (594 3288; sgombatto@sdsu.edu)
 David Kahan (594 3887; dkahan@sdsu.edu)
 Susan Levy (594 5672; slevy@sdsu.edu)
 Matthew Mahar (594 5543; mmahar@sdsu.edu)
 Katrina Maluf (594 5552; kmaluf@sdsu.edu)
 Shawn O'Connor (594 1917; soconnor@sdsu.edu)
 Mitch Rauh (594 3706; mrauh@sdsu.edu)
 Michael Rosenthal (594 2425; mrosenthal@sdsu.edu)
 Lori Tuttle (594 1918; ltuttle@sdsu.edu)

M.S. EXERCISE PHYSIOLOGY

The MS degree in Exercise Physiology is built around both basic and applied science to provide a robust foundation for students entering diagnostic, preventive, and rehabilitative healthcare. The program also provides preparation for those intending to pursue a doctoral degree in a variety of physiology disciplines. The faculty includes researchers active in exercise physiology, pathophysiology, and nutrition subspecialties such as environmental, metabolic, skeletal muscle, pulmonary, cardiac, spinal cord injury, etc. The faculty provide graduate student opportunities in basic, clinical, and translational research. Graduate students learn essential human physiology laboratory skills in areas such as cardiopulmonary exercise testing, spirometry, exercise training interventions, body composition, and thermoregulation. Graduate students have opportunities to master cornerstone biochemistry techniques such as Western blotting, qPCR, ELISA, spectrophotometry, mitochondrial respirometry and fluorometry, and tissue histology. **(36 units)**

Undergraduate Prerequisite Coursework or Equivalent

- Human Anatomy (BIOL 212)*
- Human Physiology (BIOL 261 or 336)*
- Physiology of Exercise (ENS 304)*
- Exercise Physiology Lab (ENS 304L)*
- Applied Kinesiology (ENS 303)
- Statistics (e.g., PSY 280)*

* Must be completed prior to admission

Required Courses (29 units):

- ENS 601** Experimental Methods in ENS (3)
ENS 602 Research Evaluation in ENS (3)
ENS 632 Physiological Chemistry of Exercise (3)
ENS 661 Seminar in Exercise Physiology (3)
ENS 662 Advanced Exercise Physiology Laboratory (3)
DPT 750 Concepts in Physiology, Pathophysiology, & Pharmacology (4)
DPT 830 Cardiopulmonary Therapeutics (4)
ENS 796 Exercise Specialist Internship (3)
ENS 799A Thesis (3) **OR**
ENS 790 Directed Readings (3)
Electives (7 units) selected in consultation with advisor.

Faculty:

Michael Buono (594 6823; mbuono@sdsu.edu)
 Daniel Cannon (594 8283; dcannon@sdsu.edu)
 Jochen Kressler (594 0323; jkressler@sdsu.edu)



M.S. NUTRITIONAL SCIENCES

Graduates with the MS degree in Nutritional Sciences may be employed as administrators or providers of community nutrition programs, food service, and higher education. Others may find positions in administrative, research, or quality control in government and industry. The program also prepares those intending to pursue a doctoral degree in a variety of nutrition related disciplines. The faculty includes researchers active in food science, allergies, clinical nutrition interventions, functional foods, osteoporosis/osteopenia, cancer pathogenesis, and sports dietetics. The faculty provide graduate students opportunities in basic, clinical, and translational research including bone physiology, cancer biology, immune function, and food chemistry. Graduate students have opportunities to master cornerstone techniques such as Western blotting, qPCR, ELISA, antibody production, spectrophotometry, chromatography, and tissue histology. Students who apply to and complete the DPD are eligible to apply to dietetic internships. **(30 units)**

Undergraduate Prerequisite Coursework or Equivalent

- General Chemistry + Lab (CHEM 100)* ^
- Organic Chemistry (CHEM 130) *^
- Biochemistry (CHEM 160) *^
- General Biology + Lab (BIOL 100 & 100L)* ^
- Microbiology (BIOL 211 & 211L) ^
- Human Physiology (BIOL 261 or 336)* ^
- Basic Nutrition (NUTR 201)*
- Food Science + Lab (NUTR 205 & 205L)
- Advanced Nutrition (NUTR 302 & 302L)
- Statistics (e.g., PSY 280)* ^

* **Must be completed prior to admission;**

^Students interested in the DPD program must complete

^ noted courses and a course in Anatomy (BIOL 212) with ≥ 3.1 GPA.

Required Courses (21 units):

ENS 601 Experimental Methods in ENS (3)
ENS 602 Research Evaluation in ENS (3)
NUTR 799A Thesis (3) **OR**
ENS 790 Directed Readings (3)

NUTR 607 Child Nutrition (3)
NUTR 608 Geriatric Nutrition (3)
NUTR 610 Nutrition and Energy (3)

Select one (3 units) of NUTR 600 or NUTR 700:

NUTR 600 Seminar: Foods and Nutrition (3)
NUTR 700 Seminar in Nutrition (3)

Electives (9 units) selected in consultation with advisor. If both NUTR 600 and 700 are taken, one will satisfy a requirement and the other will satisfy elective units.

Faculty:

Mark Kern (594 1834; kern@sdsu.edu)
 Mee Young Hong (594 2392; mhong2@sdsu.edu)
 Shirin Hooshmand (594 6984; shooshmand@sdsu.edu)
 Changqi Liu (594 7753; changqi.liu@sdsu.edu)

DUAL M.S. EXERCISE PHYSIOLOGY & NUTRITIONAL SCIENCES

The major objective of the concurrent graduate program is to offer preparation in the interrelated fields of nutritional science and exercise physiology in health, aging, disease prevention, and rehabilitation with in depth theoretical knowledge and practical experiences. See both individual program descriptions for more details. Students who apply to and complete the DPD are eligible to apply to dietetic internships. **(48 units)**

Undergraduate Prerequisite Coursework or Equivalent

- General Chemistry (CHEM 100)*
- Organic Chemistry (CHEM 130)*
- Biochemistry (CHEM 160)*
- Human Anatomy (BIOL 212)*
- Human Physiology (BIOL 261 or 336)*
- Physiology of Exercise (ENS 304)*
- Exercise Physiology Lab (ENS 304L)*
- Applied Kinesiology (ENS 303)
- Statistics (e.g., PSY 280)*
- Basic Nutrition (NUTR 201)*
- Advanced Nutrition (NUTR 302 & 302L)

* **Must be completed prior to admission**

Required Courses (41 units):

DPT 750 Concepts in Physiology, Pathophysiology, & Pharmacology (4)

DPT 830 Cardiopulmonary Therapeutics (4)

ENS 601 Experimental Methods in ENS (3)

ENS 602 Research Evaluation in ENS (3)

ENS 661 Seminar in Exercise Physiology (3)

ENS 662 Advanced Exercise Physiology Laboratory (3)

ENS 796 Exercise Specialist Internship (3)

NUTR 600 Seminar: Foods and Nutrition (3)

NUTR 607 Child Nutrition (3)

NUTR 608 Geriatric Nutrition (3)

NUTR 610 Nutrition and Energy (3)

NUTR 700 Seminar in Nutrition (3)

NUTR 799A Thesis (3) **OR**

ENS 799A Thesis (3) **OR**

ENS 790 Directed Readings (3)

Electives (7 units) selected in consultation with advisor.

Faculty:

Michael Buono (594 6823; mbuono@sdsu.edu)
 Daniel Cannon (594 8283; dcannon@sdsu.edu)
 Mee Young Hong (594 2392; mhong2@sdsu.edu)
 Shirin Hooshmand (594 6984; shooshmand@sdsu.edu)
 Mark Kern (594 1834; kern@sdsu.edu)
 Jochen Kressler (594 0323; jkressler@sdsu.edu)
 Changqi Liu (594 7753; changqi.liu@sdsu.edu)