

W USFHealth

Taneja College of Pharmacy

GRADUATE PROGRAMS



Welcome!

On behalf of the Taneja College of Pharmacy Graduate Programs, I would like to welcome you to explore the opportunities available in graduate studies at the College.

Pharmacy Graduate Programs was founded in 2013 with the mission of creating graduate educational programs in pharmacy and pharmaceutical sciences and producing global pharmacy leaders one scholar at a time. Graduate Programs funnels this mission through the following vision: Develop cutting-edge research training and education; create a diverse learning environment for students and faculty; and create advanced learning opportunities with the use of emerging technology.

The Master of Science in Pharmaceutical Nanotechnology, M.S. is a flagship graduate degree program, which began accepting students in 2016. Since this time, the program has shown exponential growth in graduate degree and certificate program enrollment. To date, all students who have graduated with the M.S. degree have successfully secured jobs or advanced to higher degrees.

Since 2019, Graduate Programs has developed three additional concentrations: Drug Discovery, Delivery and Development & Manufacturing, Biomedical Engineering, and Complementary and Integrative Pharmacy. This brochure provides a thumb-nail sketch of the University of South Florida, Taneja College of Pharmacy, and Graduate Programs at TCOP.

Explore!!!



Shyam S. Mohapatra, PhD, MBA
Associate Dean of Graduate Programs









UNIVERSITY OF SOUTH FLORIDA POINTS OF PRIDE

- USF is the first public university in Florida to be invited to join the AAU in nearly 40 years and is now one of only two institutions from the State University System of Florida to serve as an AAU member.
- The University of South Florida is home to a student body of 49,776 students representing over 146 different countries.
- The Princeton Review ranked USF in the top 50 best value college among public institutions in 2023 for providing students with high-quality education and career readiness at an affordable cost.
- USF ranks 11th in the nation among public universities and 23rd worldwide for granted U.S patents
- USF is now a "Preeminent State Research University", as designated by the Florida Board of Governors in June of 2018.

USF Health is a partnership of the Morsani College of Medicine, the College of Public Health, the Taneja College of Pharmacy, the College of Nursing, the School of Biomedical Sciences, the School of Physical Therapy & Rehabilitation and the Doctors of USF Health. Togetherthrough talent and innovation, USF Health is integrating research, education and health care to reach our shared value—making life better.

health.usf.edu

Pharmaceutical Nanotechnology

Pharmaceutical Nanotechnology, also referred to as Nanopharmacy and Nanomedicine, is a unique interdisciplinary science that integrates the knowledge of natural sciences and engineering with pharmacy and medicine to develop nanopharmaceuticals.

Nanoscale in Perspective

On a comparative scale, if the diameter of a marble was one nanometer, then diameter of the Earth would be about one meter



Pharmaceutical Nanotechnology: Research & Applications

- Targeted drug delivery using nanoparticles to bind to cancer cells and minimize side effects
- Nanosilver infused bandages to speed up healing of wounds
- Nanoparticles that glow in presence of cancer cells for faster diagnosis
- Development of tumor cells on chips to test treatment options
- Improved disease monitoring using blood glucosedetecting tattoo ink











Academic Options

Nanomedicine

Provides a foundation in pharmaceutical sciences and nanotechnology for students planning to enter a professional program.

<u>Drug delivery discovery, development</u> <u>and manufacturing (D4M)</u>

Provides students an opportunity to do original research in D4M areas, ideal for those wishing to work in academia, industry, or pursue advanced degrees.

Requires thesis.

Entrepreneurship in Pharmacy and Pharmaceutics

Provides the opportunity to complete an internship in the field for students seeking work in industry. Prior research experience is preferred.

Biomedical Engineering

Provides a foundation in pharmaceutical sciences and nanotechnology from an engineering perspective, ideal for those wishing to work in academia, industry, or pursue advanced degrees.

Translational and Clinical Research

Provides students an opportunity to do original research, ideal for those wishing to enter academia or pursue advanced degrees.

Requires thesis.

Complementary and Integrative Pharmacy

This concentration will focus on herbal medications, nutrition, and compounding of traditional medications into alternative dosages to expand on alternative approaches to traditional pharmaceutical drugs.

Master of Science in Pharmaceutical Nanotechnology

The Master of Science degree in Pharmaceutical Nanotechnology is designed to train students in the skills needed to understand technological advances in science at the nanoscale and how nanomaterials and processes can be applied to drug delivery, diagnosis, treatment monitoring, tissue regeneration, personalized medicine and more.



STEM

Who Should Apply?

- Students with bachelor's degrees in the sciences or engineering
- International and domestic students
- Students with a gap year before professional school
- Professional school applicants looking to enhance their applications
- Scientists and clinicians interested in nanotechnology

Networking and Internship Opportunities

Graduate Programs has partnerships with many local companies at the forefront of development in pharmaceutical nanotechnologies. This allows the program to stay relevant to the industry while providing internship opportunities.





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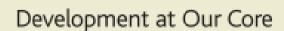






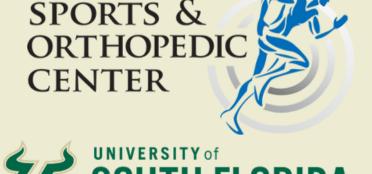


























Nanotechnology in the Workforce

MSPN Alumni Data

Over 2,200 US companies in nanotechnology



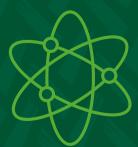




The business sector employs most Science and Engineering workers with a bachelor's degree or higher (71%)

Faster growth in Science and Engineering employment relative to overall employment (13% vs. 7%) is expected to continue through the 2016-2026 period





The nanomedicine market has risen from about \$80 billion in 2013 to a projected \$140 billion by 2024

Application Checklist

- Online application: \$30 application fee
- Transcripts from all colleges/universities attended (Intl. Students: Degree evaluation from a NACES member may be requested, but is not required initially)
- English language proficiency scores for non-native English speakers
- Statement of purpose
- Resume
- Two letters of recommendation
- GRE is NOT Required

Application Deadlines

Summer: February 15th

Fall: June 1st

Spring: October 15th





A limited number of merit-based scholarships are available to qualified students.

Graduate Certificates

Earned a bachelor's degree, but not ready to apply to a graduate or professional program? Graduate Certificates are 12-15 credit programs completed entirely online. Approved coursework can be transferred to the pharmaceutical nanotechnology program. Whether you need preparation before applying to a program in Pharmacy or want a specialization, consider a certificate!

- <u>Nanopharmaceuticals</u>: For students interested in learning about technological advances at the nanoscale and new nanomaterials before entering graduate school.
- <u>Pre-Professional Pharmacy:</u> Designed to prepare applicants for a PharmD degree by expanding knowledge in the areas of biochemistry, physiology, microbiological and immunological activity, and the principles involved in drug action.
- <u>Teaching in Pharmacy</u>: For PharmD, M.S. and Ph.D. students and current pharmacists wishing to teach pharmacy students or serve as preceptors in the field.
- <u>Pharmacy Entrepreneurship, Leadership, and Management:</u> Aimed at pharmacists or future pharmacists who wish to develop a business or join a start-up organization.
- <u>Drug Discovery & Development:</u> for students wishing to work in academia, the drug development industry, research, or pursue an advanced degree such as a PhD program.

Contact US!

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The University of South Florida is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097; Telephone number 404-679-4500, or at http://www.sacscoc.org/) to award degrees at the baccalaureate, master's, specialist and doctoral levels, including the Doctor of Medicine