



7 QUESTIONS TO CONSIDER
WHEN EVALUATING A
BIOMEDICAL ENGINEERING
GRADUATE SCHOOL



*Florida Institute
of Technology*

High Tech with a Human Touch™

A photograph of a university campus. In the foreground, a large green lawn features a central fountain with water spraying upwards. To the left, a building with a prominent dome and classical architectural elements is visible. In the background, a large, modern brick building with many windows is situated. The sky is blue with scattered white clouds.

7 TOOLS TO EVALUATE THE RIGHT SCHOOL FOR BIOMEDICAL ENGINEERING

FLORIDA INSTITUTE OF TECHNOLOGY

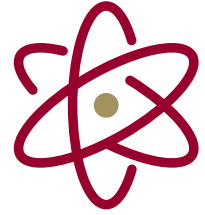
Biomedical engineering is the cutting-edge practice of applying engineering principles to solve challenges in the field of human health. With opportunities ranging from medicine to technological design, a graduate degree in biomedical engineering opens the door to a career that changes lives through the blend of technology and ingenuity.

The interdisciplinary nature of a career in biomedical engineering allows you to focus your passion for multiple subjects and makes refining your choice of educational institutions all the more significant. The constantly evolving nature of the field means that to remain relevant in a developing industry, your school of choice must also be willing to develop and evolve.

Choosing the right graduate school for your career path will prove to be one of the most critical decisions in your growth as a biomedical engineer.

CONSIDER SEVEN QUESTIONS TO HELP YOU EVALUATE YOUR IDEAL SCHOOL, SO YOU CAN SPECIALIZE YOUR CAREER IN AN INDUSTRY THAT BECOMES MORE EXCITING AND RELEVANT EVERY DAY.

1



HOW CREATIVE IS THEIR APPROACH?

In its simplest form, biomedical engineering is any career that works through the union of medicine and engineering. Encompassing a vast collection of careers, it ranges from designing new software for hospitals, to creating mechanical prosthetic devices, to teaching biomedical engineering itself.

The qualities of a potential biomedical engineer begin with an understanding and passion for engineering. This passion is expanded upon through exploration during your graduate degree, developing clinical knowledge, dedication to medicine, and an extensive ability for communication. Whether you are collaborating with fellow researchers or helping a patient learn new technologies, your career is expanded by your sharing of knowledge. As new developments are constantly in progress, effective communication is essential to move this process forward. To identify and understand each new problem in human health and to address that through innovative engineering, you require an environment that fosters communication and creativity. **When choosing your graduate school, consider an attitude to teaching that focuses on educational development through creative thinking.**

IS THERE OPPORTUNITY FOR HANDS-ON FIELDWORK?

In almost every specialization of biomedical engineering, your career will involve research and development of new technologies. Your success will be dependent upon your ability to understand and create, to solve problems in the medical field with a hands-on approach. Therefore, it is essential that your education place an equally high focus not only on understanding existing knowledge, but in synthesizing new knowledge as well. That is why fieldwork is the backbone of any successful biomedical engineering degree—it applies classroom learning to real-world industry and promotes you as an industry professional even before you graduate.

Your school of choice should offer a variety of fieldwork opportunities for its students, allowing you to gain experience while developing your own skills.

Fieldwork is an essential part of any post-secondary experience, but particularly in a field that requires hands-on creative development. Laboratory research and mentorship opportunities allow you to explore your own interests in bioengineering specialization, while also allowing you to gain industry experience and establish your own studies prior to graduation.



HOW INVOLVED ARE THE FACULTY IN RESEARCH ACTIVITIES?



One of the most exciting elements of a career in biomedical engineering is the constant development of new practices and technologies. Every day reveals a deeper understanding of human health, and brings forth a host of new problems that must be addressed. In a field that never stays still, it is essential that education evolve at an equally demanding rate. Instruction in biomedical engineering is far from simply studying a textbook—it requires professors who can offer lecture material that is up to date and relevant to each new development in the industry. To fulfill this capability, professors of biomedical engineering are often active researchers themselves. They have the ability to share their unique findings with students and help them develop their own creative processes. Through this cutting-edge blend, professors ensure their students are inherently connected to the constantly evolving industry of biomedical engineering.

The combination of active research professors and real industry professionals certifies that students remain constantly involved in all aspects and discoveries in the biomedical engineering community.

4 ARE THEIR LABS RELEVANT TO THE KINDS OF RESEARCH AND DEVELOPMENT YOU WANT TO PURSUE?

If hands-on research is essential to a graduate degree, then the quintessential graduate school must offer facilities that go above and beyond. The specific nature of research facilities will depend on your desired specialization, and will ideally offer the opportunity to explore a variety of possibilities in your field. Within the scope of biomedical engineering, there are several facilities that are essential to a comprehensive graduate research experience.

Clinical research labs form the foundation of professors facilities. Within these walls, you will conduct a variety of experiments to expand your understanding of the professors field. Microscopy and advanced imaging instrumentation help you develop more sensitive material, while photonics, lasers, and various bioactive materials allow for specialized research.



RESEARCH

5 DO THEY OFFER AN AVENUE TO PROGRESS YOUR EXPERTISE BEYOND YOUR MASTER'S DEGREE?

An inherent passion for improving the human condition is the driving force behind biomedical engineering, and that passion is developed through education to realize a fulfilling career. The process begins at the undergraduate level, and continues with a graduate degree to discover your specialized interests. A graduate degree in biomedical engineering opens many doors, from careers with biomedical and pharmaceutical companies to clinical engineering positions in health care facilities. For those who wish to continue their development, the pursuit of a Ph.D. in biomedical engineering offers the final step to advanced research careers. A Ph.D. presents career opportunities that center around research and development in more sensitive arenas, including academic and government settings.

The advantages of continued education in the biomedical engineering field are another valuable factor when considering possibilities for graduate school. Not only does the option for further education

mean the convenience of continuing at your current post-secondary institution, it also reflects an attitude towards the highest standards of education. The ability to offer Ph.D.-level instruction means your institution has the facilities and faculty to support high-level research and education, the benefits of which are felt at the graduate level as well.

The educational environment of the graduate program instills the attitude that post-secondary education is more than a curriculum, it is career mentorship that fosters creative problem solving. This attitude is invaluable at the Ph.D.-level, during which the ability to create individual research formulae is the foundation of the degree and subsequent career path. The ability to provide the highest degree of learning is a benefit felt at all levels of education and ensures students the opportunity to pursue their passion in an environment that stimulates an individual creative approach.



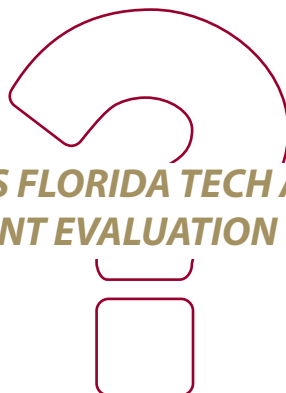
RESEARCH

WILL THEY PREPARE YOU FOR A VARIETY OF NICHE FIELDS OF INTEREST?



As our understanding of human health and the surrounding challenges continues to improve, the variety of jobs available in the field of biomedical engineering expands. The possibilities of study are almost endless—careers in the marketing and sales of biomedical products, designing mechanical elements such as prosthetics, even legal careers in the regulation and administration of biomedical engineering practices. The caliber of careers available expands with your education in biomedical engineering, making a graduate degree essential to applying yourself in the industry.

SO, HOW DOES FLORIDA TECH ANSWER THESE IMPORTANT EVALUATION CRITERIA?



WE ARE CONNECTORS

Florida Institute of Technology promotes research programs for students within the vicinity of the school itself. Hospitals and health care centers in the area provide mentorship programs with licensed medical professionals, giving you the opportunity not only to establish skills in the field, but to experience research in different branches of biomedical engineering.

WE ARE CHAMPIONS OF LIFE-LONG LEARNING

Graduate programs at Florida Tech place a high

focus on ensuring educators provide teaching that goes beyond the classroom. Professors balance teaching with pursuing individual research goals, both with students and other members of the university faculty. Florida Tech also encourages professors to collaborate with other researchers from around the world, bringing a multitude of perspectives and discoveries to the classroom. Students and professors are joined by medical staff from the surrounding community, who provide mentorship programs to graduate students.

WE EMPOWER MEANINGFUL RESEARCH

Florida Tech's research database offers an exploration into research projects conducted through these facilities. Advances in ocular engineering show the benefit of bioactive materials research facilities, while cardiovascular research reveals the findings of advanced imaging exploration. The variety of facilities provided by Florida Tech creates an opportunity for students and faculty alike to delve into highly technical research to solve the

constantly evolving challenges in the field of human health.

WE LAUNCH ENRICHING CAREERS

Graduates of the Florida Tech biomedical engineering program have gone on to fulfilling careers in research and design, developing life-changing products and programs with the National Institutes of Health and other prestigious organizations within the country and around the world.

LEARN MORE ABOUT EARNING AN M.S., IN BIOMEDICAL ENGINEERING

Florida Institute of Technology offers graduate students of biomedical engineering the option to continue on and pursue a Ph.D. with a program that centers around independent investigation and development.

[LEARN MORE HERE](#)



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