REASONS TO APPLY

Because biomedical engineers work at the interface between biology and medicine, and technology

Because biomedical engineering students can learn techniques and methods inherent in electric and electronics engineering, computer and information technology, automatic, mechanical and chemical engineering, that shall be used to engineer solutions to biomedical problems

Because biomedical engineers know and can manage health care systems, and have industrial skills

Because biomedical engineers have learnt to work across different disciplines, are flexible and can therefore work in several different working environments and under different conditions, even not specifically related to biomedicine

Coordinator of MSc degree in Biomedical Engineering
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Useful Links

Polytechnic and Basic Sciences School
www.scuolapsb.unina.it

Department of Electric Engineering and Information Technology
Via Claudio 21, 80125 Napoli
www.dieti.unina.it

Biomedical Engineering Degree links
ingegneria-biomedica.dieti.unina.it
www.facebook.com/ingbiomedica/
www.linkedin.com/in/ingegneria-biomedica-unina-655313135/

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Opening hours: Monday to Friday, from 9.00 to 12.00
Tuesday and Thursday also from 14.30 t 16.30

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UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II
SCUOLA POLITECNICA E DELLE SCIENZE DI BASE

ENGINEERING

MASTER'S DEGREEE IN BIOMEDICAL ENGINEERING

DIETI UNINA

2020|21

LEARNING OUTCOMES

- The teaching course in Biomedical Engineering offers the theoretical and practical background necessary to play technical roles, management roles, to become a skilled engineer or a scientist working in those fields in which knowledge in bioscience-based engineering discipline can bridge medicine and technology.

- Upon graduation, biomedical engineers will have acquired skills and expertise matching the needs of a society that is facing severe health issues and challenges, aligned to the latest cutting-edge research in biology and medicine.

ADMISSION REQUIREMENTS

For being admitted to the Master Degree Course in Biomedical Engineering, one must have one of the following

- Bachelor's degree – information engineering (classe delle lauree in ingegneria dell'informazione)
- Bachelor's degree – industrial engineering (classe delle lauree in ingegneria industriale)
- Bachelor's degree – science in information technology (classe delle lauree in scienze e tecnologie informatiche)

MASTER'S DEGREE PLAN

Program: 2 years / 120 CFU

The Master's Degree Course in Biomedical Engineering includes a first year common core curriculum and four additional distinctive curricula.

FIRST YEAR - Common core Curriculum	CFU
Strumentazione Biomedica	9
Elaborazione di segnali e immagini biomediche	9
Fisiopatologia Generale	6
Sistemi Informativi Sanitari	9
Fondamenti di Ingegneria Clinica	6

Curriculum medical devices (DISPOSITIVI MEDICI)	
Strumentazione avanzata per la diagnosi e terapia	9
Dispositivi per la telemedicina	9
Circuiti e sistemi elettronici per applicazioni biomedicali	9
Misure elettroniche per la bioingegneria	9
Circuiti di elaborazione dei segnali per la bioingegneria*	9
Tecniche di elaborazione dei segnali per la bioingegneria*	9
Campi elettromagnetici in diagnosi e terapia*	9

Curriculum digital health (SALUTE DIGITALE)	
Simulazione in medicina	9
Modelli organizzativi sanitari	9
Machine learning e big data per la salute	9
Bioinformatica	9
Tecnologie informatiche per la salute*	9
Strumenti e tecniche di programmazione*	9
Tecnologie wireless per la salute digitale*	9

Curriculum clinical engineering (INGEGNERIA CLINICA)	
Strumentazione e ingegneria clinica	9
Management delle strutture sanitarie	9
Impianti ospedalieri per IEQ	9
Impianti e sicurezza elettrica in ambito ospedaliero	9
Edilizia sanitaria*	9
Progettazione in sicurezza elettromagnetica dell'ambiente ospedaliero*	9
Fisica sanitaria*	9
Reattori biochimici per applicazionianalitiche e terapeutiche*	9

Curriculum bio-robotics and bionics (BIOROBOTICA e BIONICA)	
Sistemi di controllo fisiologici	9
Robotica medica	9
Sistemi di controllo per la bioingegneria	9
Fondamenti di robotica	9
Visione per sistemi robotici*	9
Sensori per applicazioni biomediche*	9
Meccanica dei tessuti biologici*	9

*Esame a scelta.

JOB OPPORTUNITIES

Those who will graduate in Biomedical Engineering are professionals able to work in advanced work environments, steadily evolving, with particular emphasis to technological innovations in the medical field and specifically in:

- Companies and industries involved in the design, fabrication and commercialization of biomedical devices.
- Pharmaceutics or biomedical industry.
- Clinics, hospitals and health structures or systems, to manage workflow, resources and technology.
- Service companies not strictly related to the biomedical field.
- Research centers or universities.

FURTHER STUDIES

Biomedical engineer with MSc degree can have access to post-grad research fellowships or PhD positions. In particular at DIETI are active two PhD Schools:

iteePhD - Information Technology and Electrical Engineering
itee.dieti.unina.it/index.php/en/
ICTHPhD - ICT for Health
icth.dieti.unina.it/index.php/en/

CAMPUS AREA

Teaching and laboratory activities take place in the campus of Napoli Ovest, via Claudio, Napoli.
This area is easily accessible and well connected via public transport.