



Learning Objectives (Knowledge, Skills and Competences)

1) Fundamental Scientific Literacy and Engineering Skills

- Demonstrate the ability to understand and apply mathematical and scientific principles to address practical engineering challenges, forming a basis for professional competence.
- Acquire foundational knowledge in basic and clinical medicine to meet technical and role-specific requirements.
- Stay informed on developments in modern science and technology and their application prospects.

2) Specialized Knowledge and Skills in Clinical Engineering

- Possess knowledge and practical skills in engineering drawing, electronics, and electrical engineering, with basic competencies in network information technology, computer applications, and maintenance.
- Develop strong professional and technical skills relevant to clinical engineering.
- Lay the groundwork for advanced study, research, and professional development.

3) International Communication Proficiency

- Gain sufficient expertise in English to engage with international peers and pursue further studies abroad.
- Demonstrate the ability to search, read, and translate specialized materials in foreign languages, along with collaboration skills in technical documentation.
- Be equipped with cross-cultural and linguistic competencies to work effectively in international environments or multinational companies.

4) Computer and Information Application Abilities

- Acquire proficiency in computer software and network utilization.
- Master common methods for literature, information, and data retrieval, with the ability to gather and utilize information effectively.
- Integrate specialized knowledge with computer skills, such as computer-aided design (CAD) and simulation.

5) Engineering and Professional Practice Skills

- Develop solutions for practical problems encountered in clinical engineering roles,



particularly in intensive care, dialysis centers, operating rooms, and other hospital settings.

- Be proficient in the installation, calibration, operation, and maintenance of critical medical devices, such as ventilators, dialysis machines, heart-lung machines, defibrillators, and infusion pumps.

6) Teamwork and Management Abilities

- Demonstrate good mental health and personal integrity.
- Possess legal awareness and a sense of social responsibility.
- Exhibit a spirit of teamwork and basic management skills.
- Capable of performing effectively in competitive and challenging work environments