# PhD in Information and Communication Technology for Health

# Università degli Studi di Napoli Federico II

# Module Title: Professional skills in clinical environment for biomedical

# engineering

# Lecturer:

# Gianni D’Addio

## Istitute of Care and Scientific Research

## Istituti Clinici Scientifici Maugeri SPA SB

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## CV: Gianni D’Addio since 1995 is director of the Bioengineering Service and of the Prevention and Protection Service of the Institute of the ICS Maugeri SPA SB Institute of Care and Scientific Research, Telese Terme (BN) from which he is member of the Committee for the Control of Hospital Infections, of the Risk Management Committee, company referent of the NSIS platform, Coordinator of the Scientific Gait Analysis Laboratory. He has been and is Principal and Co-Principal Investigator and Scientific Director of several Current and Finalised Research Projects of the Ministry of Health, of the Ministry of Economic Development, of the Ministry of University and Scientific Research, of the Campania region and of the European Community. He is Lead Auditor of Safety Management System (SGSL) OHSAS 18001 and he has gained long experience in the management of biomedical technologies, clinical engineering and risk assessment within the SSN. Since 2009 he has been a member of the National Bioengineering Group and the Research Staff of the Biomedical Engineering Group at the Department of Electrical Engineering and Information Technologies of the University of Naples “Federico II”. Since academic year 2019/20 he is teacher of the course “Telemedicine Devices” at the Degree Course in Biomedical Engineering of the University of Napes “Federico II” where from a.y. 2012/13 to a.y. 2017/18 he was teacher of the course “Organization and Automation of Health Companies and Telemedicine” and form 2012 to 2014 he was lecture in charge of the Department of Preventive Medical Sciences and from a.y 1994/95 to a.y 1998/99 he was lecturer in the course of “Biomedical Technologies” at the Faculty of Medicine and Surgery.

# Dates and Locations

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| --- | --- | --- | --- |
| Date | Hours | Room | Lecturer |
| **12th October 2020** | 11.00-13.00 | [Microsoft Teams Link](https://teams.microsoft.com/l/team/19%3ae032908d777a493a9c594cccecfef9c4%40thread.tacv2/conversations?groupId=fcb25b12-6bee-444e-b390-89344b414cd4&tenantId=2fcfe26a-bb62-46b0-b1e3-28f9da0c45fd) | Gianni D’Addio |
| **19th October 2020** | 11.00-13.00 | [Microsoft Teams Link](https://teams.microsoft.com/l/team/19%3ae032908d777a493a9c594cccecfef9c4%40thread.tacv2/conversations?groupId=fcb25b12-6bee-444e-b390-89344b414cd4&tenantId=2fcfe26a-bb62-46b0-b1e3-28f9da0c45fd) | Gianni D’Addio |
| **26th October 2020** | 11.00-13.00 | [Microsoft Teams Link](https://teams.microsoft.com/l/team/19%3ae032908d777a493a9c594cccecfef9c4%40thread.tacv2/conversations?groupId=fcb25b12-6bee-444e-b390-89344b414cd4&tenantId=2fcfe26a-bb62-46b0-b1e3-28f9da0c45fd) | Gianni D’Addio |
| **2nd November 2020** | 11.00-13.00 | [Microsoft Teams Link](https://teams.microsoft.com/l/team/19%3ae032908d777a493a9c594cccecfef9c4%40thread.tacv2/conversations?groupId=fcb25b12-6bee-444e-b390-89344b414cd4&tenantId=2fcfe26a-bb62-46b0-b1e3-28f9da0c45fd) | Gianni D’Addio |

# Content

**Lesson I – The Organization and Automation of Health Companies**: The fundamental principles of the SSN. SSN bodies. The organizational elements of the health companies. The Company Act. The organs of Business Management. The corporate structures of the ASL. The Health Districts and their organization forms. The departmental organization. Hospital attendants. Regional organizational models of ASL. Hospital Companies. The regulatory framework for the authorisation and accreditation of healthcare facilities. The system of performance remuneration in the SSN. Elements of organization of health processes: e-Health Information Strategy and New Health Information System (NSIS). The Electronic Health Record. Architectural model. Telematic health certificates. E-Prescription – Electronic medical recipe. CUP – Information desk to book health appointments. The dematerialization.

**Lesson II – Methodology of Risk Assessment in the healthcare field.** Structure and contents of Legislative Decree 81/08. Classification and Definition of Risk Factors. The Document and risk assessment methodologies. The fire risk assessment in health facilities. Biological Risk Assessment, Biological Agent Classification and Biosafety Levels. Chemical Risk. Exposure to biological and chemical risks in health care, mapping of work areas exposed to biological risk, monitoring and control systems. Personal and collective protective devices: chemical and biological hoods.

**Lesson III – The Health Certification Systems**: ACCREDIA. Health Quality Management Systems – SGQ. The Quality Manual (MQ). Health and Safety Management Systems – SGSL. Organisational and management models. D.lgs 231 – The administrative responsibility of companies. UNI-INAIL guidelines for SGSL. OHSAS 18001 standard.

**Lesson IV – Guidelines and implementation of telemedicine in healthcare:** Definition of main areas purpose and classification of telemedicine services. Specialist telemedicine, televisit, teleconsultation, telecooperation, telesalute, teleassistance. Schematic representation of the telemedicine classification. Characterisation and description of a telemedicine service. Organisation of a telemedicine service. Opportunities and problems in the dissemination of telemedicine on a large scale. The international and national panorama of telemedicine. Integration of telemedicine into the health service. Regulatory framework. Model of regional governance of telemedicine initiatives. Remunaration and economic evaluation of telemedicine services. Performance indicators. Ethical aspects. Processing of personal data and clinical data with electronic instruments. Definition and scenario of mobile health. Potential in terms of health care. Mobile health app market. Data protection, regulatory framework and patient safety and trasparency of information. Role of m-health in health systems and equal access. Interoperability. Reimbursement models. Risks and critical use. M-health as a medical device.

# ECTS Credits: 2

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