

Course Unit	-	Field of study	-
Classification	-	School	School of Health
Academic Year	2015/2016	Year of study	1
Type	Annual	Semester	-
Level	2-1	ECTS credits	3.0
Code	5023-612-1002-00-15		
Workload (hours)	81	Contact hours	T - TP 24 PL - TC - S - E - OT - O -

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Carina de Fatima Rodrigues, Maria Cristina Martins Teixeira

#### Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. To know the evolution of quality concept and to perform a critic evaluation of health practice.
2. To know the different statistical quality tools and to construct and to interpret control charts.
3. Understand the basic statistical concepts for the control charts construction.
4. To understand basic principles of epidemiological research

#### Prerequisites

Not applicable

#### Course contents

The content of this course includes: the contextualization of quality control in health; statistical basics for the control and improvement of quality, including graphics methods, presentation of data; methods for constructing control charts for variables and attributes; process capability, with a resolution of exercises (proper statistical) about experimental data; Epidemiological concepts including study design and reading of results from epidemiological studies.

#### Course contents (extended version)

1. Evolution of quality concept: inspection, control, guaranty and total quality management.
2. Certification and Accreditation: concepts.
3. The Portuguese Quality Institute (Subsystems: Qualification, Metrology and Normalization).
4. Statistical process control (SPC), 7 tools for quality:
  - Check lists;
  - Flowcharts;
  - Fishbone diagram;
  - Pareto analysis;
  - Histograms;
  - Scatter diagrams;
  - Control Charts.
5. Errors in analytical measurements.
6. Control charts for variables.
7. Control charts for attributes.
8. Other types of charts applied to health services.
9. Assess process capability.
10. Epidemiological Research
  - Measures of disease frequency: prevalence, risk, incidence and mortality.
  - Study design: cohort, case-control, cross-sectional and ecologic studies
  - Read of results from epidemiologic studies. Measures of association
  - Systematic Review as the first approach: research of references and results presentation.

#### Recommended reading

1. Pires, A. R. (2007). Qualidade: Sistemas de Gestão da Qualidade. 3ª Edição. Editora Sílabo Ltd: Lisboa.
2. GUIAS DA RELACRE: <http://www.relacre.pt/pt/commissionsandpublications/publications>.
3. Gordis, L. (2010). Epidemiologia. 4ª Edição. Lusodidacta

#### Teaching and learning methods

The theoretical lessons will use the expository method and the students must solve practical exercise in statistics applied to quality control and method validation.

#### Assessment methods

- Alternative 1 - (Regular, Student Worker) (Final, Supplementary, Special)
- Final Written Exam - 60% (Statistical process control: exercises.)
- Practical Work - 40% (Development of practical work: Epidemiology in investigation.)

#### Language of instruction

Portuguese

#### Electronic validation

Carina de Fatima Rodrigues	Ana Maria Gerales Rodrigues Pereira	Olivia Rodrigues Pereira	Maria Helena Pimentel
28-07-2016	28-07-2016	15-08-2016	17-08-2016