



UNIVERSIDADE FEDERAL DE SÃO CARLOS
PRÓ – REITORIA DE PÓS-GRADUAÇÃO

COURSE DESCRIPTION SHEET



1. Course Name: **Electrochemical Sensors and Biosensors**
2. Course Code: 220
3. Semester offered: 2nd
4. Total course credits: 6
5. Course workload
 - 5.1. Lecture classes: 45h
 - 5.2. Practical classes:
 - 5.3. Seminars: 45h
6. Course Syllabus:
 - Potentiometry; coulometry; voltammetry; Potentiometric sensors; Modified electrodes; Voltammetric sensors;
 - Enzymatic biosensors; DNA sensors; Immunosensors; Disposable sensors for Point of Care; Nanostructured materials;
 - Implantable sensors; Impedimetric biosensors.
7. Main Bibliography:
 - SKOOG,D. A., HOLLER, F. J. WEST,D. M. Fundamentos de Química Analítica; 9 edição, Cengage Learning 2014
 - Articles.
 - BARD, A. J., FAULKNER, L. R. ELECTROCHEMICAL METHODS Fundamentals and Applications, John Wiley & Sons, inc
 - BRETT , A.M.C.F.O., BRETT, C. M. A. Eletroquímica principios metodos e aplicações. Almedina 1992