

## **CoPGr CURRICULAR CHAMBER**

### **SUBJECTS PRESENTATION FORM**

SUBJECT'S ACRONYM: **RNP5740**

SUBJECT'S NAME: NeuroImage

CURRICULUM/AREA: Neurology/17140

FOCAL AREA: Neurosciences

INITIAL VALIDITY (Year/Semester):

N. OF CREDITS: 04

Theoretical Classes: 08      Practical Classes, Seminars and Others: 02      Hours of Study: 05  
DURATION IN WEEKS: 4

PROFESSOR(S) IN CHARGE:

USP Professor, n. 94301 – Antonio Carlos dos Santos

USP Professor, n. 3546391 – Carlos Ernesto Garrido Salmon

External Professor, n. USP 1757910 – Sara Regina Escorsi Rosset

ACTUAL COSTS OF THE SUBJECT: BRL

(Presenting, if applicable, the budget foreseen for the year, as an attachment)

#### **PROGRAM**

OBJECTIVES:

Discussion of the technique for performance and application of the different neuroImage methods, emphasizing the most commonly used in the clinical practice: magnetic resonance imaging (MRI), computerized tomography (CT), non-invasive angiography and catheterism (angioMRI and angioCT), simple ultrasound and radiography, with the objective of highlighting the recent technical advances in each method and the current frontiers for the research in the area

JUSTIFICATION:

The neuroImage, in the last decades, has quickly advanced, acquiring each time more resources, such as the functional image in MRI (BOLD functional Image, spectroscopy, pondered image in diffusion and perfusion, tractography and connectivity). The speed of such advances made it hard to the doctor and the researcher to keep up-to-date, being relevant a critical discussion on the techniques and resources, turned to a research methodology and clinical presentation.

CONTENT (SYLLABUS):

#### **MAGNETIC RESONANCE**

- physical basis of the image and traditional sequences
- recent sequences
- advanced techniques: image by diffusion and perfusion, BOLC functional image and spectroscopy.

#### **2. TOPICS OF CLINICAL APPLICATION AND RESEARCH**

- according to the area of action and to the interest of the student, classes and seminars on specific topics

will be introduced.

EVALUATION METHOD:

Participation in seminar, engagement of student in groups, presence and report.