Subject area: 5131

Created: 09/03/2017

Active since: 09/03/2017

Number of credits: 4

Hours:

<table>
<thead>
<tr>
<th>Theoretical (per week)</th>
<th>Practical (per week)</th>
<th>Self-study (per week)</th>
<th>Duration</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>12</td>
<td>6</td>
<td>2 weeks</td>
<td>60 hours</td>
</tr>
</tbody>
</table>

Faculty member responsible:

Edimar Alcides Bocchi

Objectives:

Training of human resources with skills in research planning to ensure publication based on the scientific quality of the research and adequate submission to the scientific journals of greater impact.

Background:

One of the major limitations to the success of postgraduate programs is the difficulty of publishing in scientific journals of greater prestige and impact. The scientific papers resulting from postgraduate theses. The main reasons for the challenge of publication in scientific journals of greatest impact are the quality of the research results and the form of preparation / submission of the resulting manuscript. The program of this course will be composed of strategies for proper planning of the research and adequate preparation of the manuscript aiming at accuracy for prestigious journal submission and greater likelihood of success. In planning the development of research and methodology, these strategies will be the reason for classes / presentations / seminars aiming at subjects of high relevance and appropriate design to obtain innovative results for science and clinical practice, contributing to the development of the country. The complex aspects of research planning will be approached in a way that will be accessible to students or candidates for the postgraduate course. In the planning of the manuscript preparation, students will be able to receive orientation and participate in classes / presentations / seminars, including topics such as the choice of the appropriate journal, adequate presentation of the manuscript, analysis and presentation of results, interpretation of results and their implications, balanced and based discussions in evidence, appropriate titles, etc.

Content:

Theoretical Lessons "Systematic" bibliographic review of published studies, records, and meta-analyses on the hypothesis to be tested. How to analyze and judge published data. Is the hypothesis innovative and original? How to interpret the results of previous studies for an innovative and relevant research. CONSORT Choice of relevant and innovative hypotheses. Feasibility of the study. Basics of scientific methodology: types of research (cross-sectional studies, case-control, cohort, randomized), benefits and risks associated with research, legal
norms for research in humans and in laboratory animals. Research protocol: material (configuration of the study population, inclusion and exclusion criteria), consent term, Research Ethics Committee, limitations. Questionnaires: how to describe a goal (primary and secondary), sample selection techniques, sample size calculation, discrepant data. Avoid Type I and Type II Errors. Basic points of experimentation (I): technical terms, study of the effect of a treatment, positive control, comparative studies, historical controls. Basic points of experimentation (II): study of dose-response, wash-out, follow-up, how to use the individual as their own control. Observational studies: definition, case control study, cohort study, one factor may be clinically important and not statistically significant, a factor may be statistically and not clinically important. Retrospective studies. Prognostic studies. Prospective population studies. Advantages and disadvantages Trials: experimental design, superiority vs equivalence, recruitment, randomization (similar distribution of factors), subgroup analysis, secondary outcomes, intention-to-treat analysis vs. treatment, studies Multicentric vs. unicentric. Characteristics of high impact studies. The randomization, the control group, the "sham", the blind study. Execution of the study. Importance of accuracy. Adequate follow-up time? Basic statistics. How to analyze results carefully. The value of p. Potential explanation for the results Causality versus association. "Limitations of surrogate end-points". Relation between "surrogated-endpoints" with "hard-endpoints". How it differs from other studies. Statistical difference versus clinical importance. MID. Definition of authorship of scientific article publication according to the ICMJE International Committee of Medical Journal Editors (http://www.icmje.org). Conflict of interest. How to avoid: plagiarism, "salami", inappropriate authorship, duplicate or multiple submission, duplicate data, overlapping, errors or manipulation in figures, etc. How to prepare a good manuscript. Orientation, for title, abstract, introduction, rational, definition of objectives, objective methodology in detail, validity of methodology, accuracy, reproducibility, results, discussion, implications, and conclusions. To emphasize what is innovation or originality, "first" or Given "definitive" where there is controversy. If it is a larger population or incremental or confirmatory study for the selected population, properly define the results in relation to the objective. Size of the manuscript. Number of tables and figures.

Assessment Method:

Performance and participation during lessons and discussions (the faculty members responsible encourage participation and will attend all classes)

Observation:

Minimum number of students: 7 Maximum number of students: there is not a limit

Bibliography:

DeMaria AN. Clinical trials and clinical judgment. JACC 2008;51:1120-1122.