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**INSTRUCTIONS TO THE STUDENTS**

1. The research methodology has been defined to inculcate the research culture among students.
2. The main objective of the research methodology lab is to write a review paper or a research paper.
3. Students must follow research methodology for carrying out their work. A thorough literature survey is mandatory to identify appropriate research gaps and to formulate research objective.
4. If a student has his/her own idea, discuss with the mentor for the feasibility of the work and finalize the task with mutual understanding. Students can also get the help from the lab in charge if the area of interest matches.
5. The topic has to be selected from SCOPUS/SCI/SCIE indexed journal (refer 'indexed in' section of the journal website) or A/A\* category conferences through the website <http://portal.core.edu.au/conf-ranks/> . Can also refer [scimagojr.com](http://scimagojr.com/) and [csrankings.org](http://csrankings.org/) to search journal and to filter out particular research areas and journal papers.
6. A synopsis of one page has to be submitted after finalizing the domain and research area. Include an appropriate title for the review or the research paper in the synopsis.
7. Faculty in charge of the lab and the mentor will be evaluating the synopsis, mid-term progress and final progress of the work.
8. In case a student misses a lab, it is his/her responsibility to complete the assigned work in time.
9. Students should bring & use the observation book effectively to document the work done in the lab.
10. Late submissions (either synopsis/midterm/final papers) will incur a loss of 10% of the secured marks and in time arrival to lab is expected.

**Guidelines to Faculty In charge of the Lab**

1. Faculty in charge of the lab and the mentor are responsible for the synopsis, mid-term and final evaluation of the work.
2. All the documents submitted by the student pertaining to submissions must be scrutinized and approved by the faculty in charge of the lab.
3. Faculty in charge of the lab are expected to have a frequent interaction with the student to monitor the work progress and to sign the weekly progress report.
4. Student has to get the signature once in a week from their mentor and this will be checked by the lab in charge.

**Timeline for Evaluation**

|  |  |  |
| --- | --- | --- |
|  | **Submission Details** | **Evaluation of work** |
| **Synopsis** | Week 3 | NA |
| **Midterm Report** | Week 7 | Week 8 |
| **Final Report** | Week 11 | Week12 |

**Guidelines for RMTC lab midterm and final evaluations**

|  |  |  |
| --- | --- | --- |
| Mid-Term evaluation | Background research(05), Identification of research gaps (05), Problem formulation (05), Future scope of the work (05) | 20 |
| Final evaluation | Presentation(10), Research methodology concepts(05), Report(05) | 20 |
| Final Paper in the IEEE Format should be submitted | 10 |
|  | Total | 50 marks |

**LIST OF TASKS:**

1. **Identify Relevant Research Area**
2. **Literature Review**
3. **Formulate the Research Problem**
4. **Conceptualize the Study**
5. **Comparison and Analysis of the Paper**
6. **Writing a Review or Research Paper**
7. **Understanding the Concept of References and Bibliography**

**WEEK1 & WEEK 2**

* Identify relevant research area
* Review of literature
* Identifying at least 20 to 30 papers in the relevant area

**WEEK 3 & WEEK 4: (at least 10 papers must be reviewed)**

* Planning a Research Study
* Identify the problem, variables, and methodologies
* Identify research gap and problem formulation

**WEEK 5 & WEEK 6: (at least 10 more papers must be reviewed again)**

* Continue the work as carried out in week 3 and week 4
* By the end of 6th week, rough draft must be prepared in the IEEE format

**WEEK 7 & WEEK 8:**

* Discussion on the work
* Presentation of the work with proper research gap

(Mid-Term Evaluation)

**WEEK 9 & WEEK 10:**

* Work on Pre-Final Draft of the Paper
* Mid-term Evaluation Suggestions should be incorporated in the paper

**WEEK 11 & WEEK 12:**

* Writing a Review or Research Paper
* Understanding the Concept of References and Bibliography
* End Semester Evaluation

**References:**

1. Stuart Melville and Wayne Goddard, “Research methodology: an introduction for science & engineering students’”
2. Wayne Goddard and Stuart Melville, “Research Methodology: An Introduction”
3. Ranjit Kumar, 2 ndEdition, “Research Methodology: A Step by Step Guide for beginners”
4. Kerlinger, F.N., & Lee, H.B. (2000). Foundations of Behavioural Research (Fourth Edition), Harcourt Inc.
5. Rubin, Allen & Babbie, Earl (2009). Essential Research Methods for Social Work, Cengage Learning Inc., USA.
6. Chawla, Deepak & Sondhi, Neena (2011). Research methodology: Concepts and cases, Vikas Publishing House Pvt. Ltd. Delhi.
7. Pawar, B.S. (2009). Theory building for hypothesis specification in organizational studies, Response Books, New Delhi.
8. Neuman, W.L. (2008). Social research methods: Qualitative and quantitative approaches, Pearson Education.