M.Phil./ Ph.D. Synopsis

**Synopsis Guidelines for M.Phil. and Ph.D. Programs at National Centre of Excellence in Analytical Chemistry**

**(Title Case Times New Roman bold 18 Font)**

Name of Scholar: Muhammad Ahmed Chang

Name of Supervisor: Prof. Najma Memon

Name of Co-supervisor: AAAAAAAA

Enrollment number:

Date of Enrollment:

1. **Outline of the Topic:** Describe briefly your research question and your plan to solve the problem. Don’t provide hard core technical details but elaborate in simple language. It should not exceed 400 word including spaces.
2. **Objective, Justification and Scope of the Proposed Research**

Write introduction for your research proposal by citing literature relevant to your area. Start writing with general introduction in first paragraph. Second paragraph may talk about broader data on your topic then narrow down the topic by developing a good story; telling the audience what the exact problem is and how your proposed solution would be useful in resolving the problem.

* 1. Problem statement: Mention the problem in few lines based on past and future aspects of proposed study.
  2. Aims and Objectives

Mention the aim of work and then add bullet wise objectives.

* Mention your first objective here. For example, to develop a micrometric size material having magnetite core and polyamine shell.
* Mention second objective here. Your objectives usually start with word ‘To’. For example, to optimize the process and composite ratios to be used for solid-phase extraction material.
* Mention third objective. Keep in mind that your experiments are not objectives. Do NOT mention FTIR analysis or SEM analysis in objectives. These things are part of Experimental in research plan.

1. **Research Design/ Work Plan**

Mention about the type of study you will be conducting and then by looking into the objectives you have set; develop your research plan. Mention how each objective will be achieved. For example,

*Stage-1:* The first objective will be achieved by preparing magnetite particles (magnetic properties and crystal structure will be confirmed by ………….techniques), followed by coating with polyamine using dip-coating, spray coating and surface functionalization. Coating will be confirmed using FTIR and stability will be studied by leaching measurements.

*Stage-2:*

Complete the various levels of research plan.

* 1. *Expected output*

Mention here about the output, you expect on the completion of the research.

* 1. *Importance/impact of the research study*

Describe in one to two sentences for possible importance/impact of study.

* 1. *Limitation of the research study*

Describe in brief the possible limitation or drawback of study.

* 1. *Scope of Research Study*
     1. Area of Research
     2. Who would be benefited from this research?

1. **Brief Bibliography**

Use IEEE style guide for adding references in your synopsis. You must use bibliography software like Endnote, Mendeley or any other.

**General Guidelines:**

*Cover Page*

1. Use Times New Roman font throughout.
2. Use 18 Bold size for title aligned in Centre.
3. Use 14 size for adding name of scholar, supervisor, and enrollment info with ‘justify’ page alignment.
4. Use Centre’s logo in ‘Header’.
5. Use page number in format of 1/10, 2/10…… in footer.

*Body text*

1. Use Times New Roman 12 font size throughout the body text.
2. Use Times New Roman 12 font size in bold for headings (Sentence Case)
3. Use Times New Roman 12 font size in bold- Italic for sub-headings (Sentence Case).
4. Use A4 size page layout with 1,1 and 1.25, 1.25 margins.
5. Use 1.15 line spacing except title page (single line spacing)
6. Whole synopsis should not exceed 10 pages.
7. Split body text in the sections

Outline of the Topic

Objective, Justification and Scope of the Proposed Research

Research Design/ Work Plan

Brief Bibliography

**Use IEEE style for in-text and adding bibliographic information.**