

# **Doctoral Research Programme**

## **Module Specifications**



**RAMAIAH**  
**UNIVERSITY**  
OF APPLIED SCIENCES

[Approved by the Board of Governors at its Meeting Held on 26.09.2014 vide  
Resolution Ref. No.: 3.1e]

## Module Specifications: Research Methodology

|              |                      |
|--------------|----------------------|
| Module Title | Research Methodology |
| Module Code  | RIC601               |
| Course       | Doctoral Programme   |

**I. Module Summary****1. Aim and Summary**

This module deals with the principles of research, research methodology and significant phases of research. Students are taught the realistic guidelines to be followed in the choice of field of research, topic of research and formulation of research problem. Key and careful considerations in the choice of tools for the solution of research problem are covered in this module. The module emphasizes the desirable close knit relation between innovation and concept of out of the box thinking. The principles of effective research and the need for a Proactive approach in a successful research programme are also explained. The module discusses the significant role of Literature Review in a research cycle and the expectations from good literature review as well as procedure for systematic literature review. Students will get an insight into the privilege, honour and the associated responsibilities of a researcher.

**2. Module Size and Credits:**

|                        |  |
|------------------------|--|
| Number of credits      | 10   |
| Total Study Hours      | 150  |
| Number of Weeks        | 5 weeks Full-time or 8 weeks Part-time.  |
| Module marks           | Total Marks : 100<br>Assignment : 75% Weight<br>Seminar : 25% Weight   |
| Pass requirement       | A student is required to score a minimum of 40% for successful completion of a module and earning the credits. |
| Attendance requirement | 85% attendance is mandatory to be eligible for seminar and assignment submission                               |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Describe the value, scope, relevance and mandatory steps of research as well as principles of effective research
2. Discuss the guidelines to progress from the choice of broad field of research to specific topic of research
3. Demonstrate the application and utility of the Systematic approach and out of box thinking concepts for research to be effective
4. Adapt and demonstrate the procedures outlined for a systematic Literature Review
5. Analyze and prepare well structured research proposal and research paper invoking clearly outlined principles

## 2. **Module Contents**

Foundations of Research – Definitions of Research, Mandatory Steps in Research, Types of Research, Relevance of Research for Innovation and Technology Development, Effective Research and Self Discipline.

Formulation of Research Problem: Identification of problems, Narrowing down the problem, Factors to be considered for problem selection.

History and Evolution of Science & Technology

Out Of the Box Thinking and Systematic approach in Research – Transformation to

Impossible Thinking, Convergent and Divergent Thinking, Generation, Evaluation and Selection of Ideas, Critical Thinking

Literature Review – Importance of Literature Review, Constituents of Good Literature Review, Strategies for Literature Search, Referencing, Paraphrasing, and Summarizing Academic Standards and Ethics

Research Proposal – Structure of a Good Research Proposal, Getting Started, Tips for Compilation of Good Research Proposal.

## 3. **Method of Assessment**

Assessment is through submission of written report (75 % weight) of Literature Review followed by presentation (25 weight).

Students are required to submit a word processed assignment report comprising the literature review of :

(i) Abstract, Introduction and Conclusion of Two Ph.D. Theses closely related to the student's research topic of interest

(ii) Five research papers pertaining to the student's specific field of research

Initial evaluation of the written report/presentation is by the module leader and is

followed with a review by the second examiner

#### 4. Reassessment

In keeping with University regulations, reassessments will be permitted

### III. Module Resources

#### a. Essential Reading

1. Class Notes
2. Booth W. C, Colomb and G.G Williams. (2005) The Craft of Research, Chicago University Press
3. William M.K and Trochim. (2003) Research Methods, 2nd Edition, Biztantra Publications
4. Jonathan Grix. (2004) The Foundation of Research, Palgrave Study Guides

#### b. Recommended Reading

1. Wisker Gina. (2001) The Post Graduate Research Handbook, Palgrave
2. Rugg G. and Petre M. (2004) The Unwritten Rules of Ph.D research, Open University Press

#### c. Magazines and Journals

- 1.

#### d. Websites

- 1.

#### e. Other Electronic Resources

- 1.

### IV. Module Organization

|  |                      |              |
|--|----------------------|--------------|
| <b>Module Code</b>                             | RIC601               |              |
| <b>Module Title</b>                            | Research Methodology |              |
| <b>Module Teacher/s Name</b>                   |                      |              |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>        | 0804906 5555 |
|  | <b>E-mail:</b>       |              |
| <b>Module Specifications Approval Date</b>     |                      |              |
| <b>Next Module Specifications Review Date:</b> |                      |              |



## Module Specifications: Technical Communication

|              |                         |
|--------------|-------------------------|
| Module Title | Technical Communication |
| Module Code  | RIC602                  |
| Course       | Doctoral Programme      |

**I. Module Summary****1. Aim and Summary**

This module deals with essential aspects of technical communication. This module facilitates the students to develop desirable writing skills for the preparation of research document including research paper. The module emphasizes the skills and considerations required for an effective presentation to convey the views/ideas in a clear, effective and confident manner. The importance and significance of active listening skill needed for an effective presentation are also highlighted in this module. From research career perspectives, the requisite transformation and enhancement in student's communication skills and confidence level form the core theme of this module

**2. Module Size and Credits:**

|                        |  |
|------------------------|--|
| Number of credits      | 10   |
| Total Study Hours      | 150  |
| Number of Weeks        | 5 weeks Full-time or 5 weeks Part-time   |
| Module marks           | Total Marks : 100<br>Assignment : 75% Weight<br>Seminar : 25% Weight   |
| Pass requirement       | A student is required to score a minimum of 40% for successful completion of a module and earning the credits. |
| Attendance requirement | 85% attendance is mandatory to be eligible for seminar and assignment submission                               |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Discuss the process of submission to a journal, the specific format requirements, communication to editor, the review process, effective answering to the reviewer's comments
2. Recognize the adequacy criterion to judge the quality of a research work for a possible publication
3. Select appropriate journal and conference for publication of research work
4. Write a clear and concise paper to effectively communicate the findings/novelty of the research work
5. Prepare posters and slides for oral presentation of research findings

## 2. **Module Contents**

Technical English for a non-English speaking person

Use of articles, prepositions, synonyms, antonyms, punctuation etc. Words often misspelt, misapplied and mispronounced.

Basics of Technical Communication

Process of communication, importance of Technical Communication

Technology in Communication

Impact of technology, software tools for effective communication

Oral Communication

Listening, effective presentation strategies – organizing the contents, preparation of visual aids (audience and allotted time consideration), effective delivery (rehearsals with timing), effective question handling (listening, to the point non-defensive response)

Written Communication

Why, When, Where and What to publish. Contents organisation, language(vocabulary, grammar, sentence construction), paragraph development, visual presentation of data/results, standardized use of units, symbols, abbreviations etc., art of condensation, consistency in presentation. Forms of written technical communication

Critical assessment of published papers

Studying the Abstracts – Picking up the relevant papers for study – Review articles – Identifying front line and active researchers in the area, comprehension skills

Literature Review

How the work stands in relation to other publications in the field – what are the similarities and what is the contribution of the present work – referencing of key recent and past papers, referencing of items like formulae, data, results of other works, requirements for written permission for referencing

Style and Content of a journal article

Introduction – context of the problem – problem statement —investigation methodology – result presentation –conclusions, as per the prescribed format

Thesis writing

Purpose, Quality, Contents, Originality, Impact

Authorship Qualities

Basic ethics; Integrity; Plagiarism; Coauthors / Acknowledgements; Facing rejection, IPR / Copyright related issues; Use of copyright material

### 3. Method of Assessment

Assessment will be through submission of Written Report (75% weight) and Seminar (25%)

Written assessment will be based on the submission of a research paper for a mock journal of the student's choice

Seminar will be based on a formal convention for presentation of student's research paper in a conference and the research paper is based on student's article in a mock journal.

### 4. Reassessment

In keeping with University regulations, reassessments will be permitted

## III. Module Resources

### a. Essential Reading

1. Class Notes
2. Meenakshi Raman & Sangeeta Sharma (2004) Technical Communication: Principles and Practice. Oxford University Press.

### b. Recommended Reading

1. Bruce M Cooper(1979) Writing Technical report. Penguin Books.
2. Judith F Olson, Writing Skills Success. Goodwill Skill Builders Series, Goodwill Publishing House, New Delhi.
3. Craig Harkins & Daniel L Plung, Eds. (1982) A Guide for Writing Better Technical Papers. IEEE Press.
4. Robert A. Day (1998) How to Write and Publish a Scientific Paper. Oryx Press.



**c. Magazines and Journals**

1.

**d. Websites**

1.

**e. Other Electronic Resources**

1.

**IV. Module Organization**

|  |                         |              |
|--|-------------------------|--------------|
| <b>Module Code</b>                             | RIC602                  |              |
| <b>Module Title</b>                            | Technical Communication |              |
| <b>Module Teacher/s Name</b>                   |                         |              |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>           | 0804906 5555 |
|  | <b>E-mail:</b>          |              |
| <b>Module Specifications Approval Date</b>     |                         |              |
| <b>Next Module Specifications Review Date:</b> |                         |              |



## Module Specifications: Literature Review – 1

|              |                       |
|--------------|-----------------------|
| Module Title | Literature Review – 1 |
| Module Code  | RIC603                |
| Course       | Doctoral Programme    |

**I. Module Summary****1. Aim and Summary**

This module deals with survey, review and critical analysis of literature pertaining to the specific field of research identified by the research student in consultation with the supervisory team. This module is a first step in the search, identification and formulation of a research problem of doctoral thesis. Through the initial process of literature review, this module facilitates the student a broader exposure to the status of research work related to the identified specific field of research. This module emphasizes the student to apply good practices and guidelines of a systematic and structured literature review to collect, comprehend, sort and document the available information in open literature. In the context of reviewed contemporary research work, student acquires wider breadth of knowledge in the chosen specific field of research. The outcome of this module enables the research student to progress from the specific field of research to potential specific topic of research confirming the research progress to be on a desirable research trajectory.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 10  |
| Total Study Hours | 150   |
| Number of Weeks   | 5 weeks Full-time or 7 weeks Part-time  |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

- Describe the scope and context of the Literature Review –1 through identification of the broad parameters of the chosen specific field of research and discuss the strategies for search of information related to field of research

2. Identify numerous sub topics under the purview of chosen specific field of research and sort the collected information on field of study under respective sub topics
3. Assess the nature, quantum and pace of progress of past research to predict the possible future research trajectories of sub topics of specific field of research
4. Develop a scheme for relative comparison of the abundance, versatility and resource requirements to pursue the future work on various sub topics directed along the predicted research trajectories
5. Select, analyze and rank the potential sub topics of specific field research and select a couple of appropriate sub topics for the next module contemplated under Literature Review- II module
6. Prepare a document highlighting the successful literature search by short listing it to handful of ranked sub topics potentially leading to the choice of specific topic of research

## 2. **Module Contents**

Discussion on identifying the Specific Field of Research

Definition and classification of various important sub topics under specific field of research

Identification and definition of Broad parameters for each of sub topics

Three Pass method of reviewing a research paper

Assessment, classification, sort and gradation of collected information for structured documentation and analysis

Discussion on pattern of the past research and predicting the present and future trends in the sub topics of specific field of research

Documentation of literature survey of the module RIC603

## 3. **Method of Assessment**

Through Checklist: CHLRIC603

Research student is required to submit a word processed document about the literature review carried out as a part of RIC603.

Initial assessment by the supervisor is followed by the second examiner's review

## 4. **Reassessment**

**III. Module Resources****a. Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

- 1.

**c. Magazines and Journals**

- 1.

**d. Websites**

- 1.

**e. Other Electronic Resources**

- 1.

**IV. Module Organization**

|  |                       |              |  |
|--|-----------------------|--------------|--|
| <b>Module Code</b>                             | RIC603                |              |  |
| <b>Module Title</b>                            | Literature Review – 1 |              |  |
| <b>Module Teacher/s Name</b>                   |                       |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>         | 0804906 5555 |  |
|  | <b>E-mail:</b>        |              |  |
| <b>Module Specifications Approval Date</b>     |                       |              |  |
| <b>Next Module Specifications Review Date:</b> |                       |              |  |



## Module Specifications: Literature Review – 2

|              |                       |
|--------------|-----------------------|
| Module Title | Literature Review – 2 |
| Module Code  | RIC604                |
| Course       | Doctoral Programme    |

**I. Module Summary****1. Aim and Summary**

This module deals with survey, review and critical analysis of literature pertaining to the specific topic of research identified by the research student in the module RIC603. This module emphasizes the key considerations and significant care to progress towards precise definition of research topic /problem of thesis. This module emphasizes the student to develop enhanced skills to apply more effectively the good practices and guidelines of a systematic and structured literature review to collect, comprehend, sort and document the available information on specific topic of search in open literature. This module enables the research student to inculcate the aptitude to author opinion about the status of research, research trend and potential academic gaps in the chosen specific topic of research after holistic consideration of observations and inferences derived through methodical and detailed analysis of available literature. In view of the exhaustive review of literature on contemporary research work, student acquires deeper understanding of chosen specific topic of research. The outcome of this module enables the research student to progress from the specific topic of research to potential research topic/problem of thesis.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 10  |
| Total Study Hours | 150   |
| Number of Weeks   | 5 weeks Full-time or 8 weeks Part-time.   |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Describe the scope and context of the Literature Review –II through identification of

the broad parameters of the chosen specific topic of research and discuss the strategies for search of research information

2. Identify appropriate sub domains under the purview of chosen specific topic of research and sort the collected information under respective sub domains
3. Analyze critically the nature, quantum and pace of past research progress to predict the potential future research trajectories under sub domains of specific topic of research
4. Formulate and evaluate the abundance, versatility and resource requirements to pursue the future work on various sub domains along the lines inferred through literature review
5. Identify and select the most appropriate and promising sub domain as a potential research topic/problem of the thesis keeping in view the scholar's technical grasp, interest, aptitude and resource availability as differentiating parameters
6. Prepare a document highlighting the progress and success of literature review to arrive at an identification of research topic/problem for the doctoral thesis.

## 2. **Module Contents**

Discussion on identifying the research problem of the thesis

Definition and classification of various sub domains under specific topic of research

Critical review and analysis of literature review on each sub domain of specific topic of research

Three Pass method of reviewing a research paper

Critical Analysis, assessment, classification, sorting and gradation of collected information for structured documentation and analysis

Discussion on pattern of the past research in the specific topic of research and predicting its present and future trends

Documentation of literature survey of the module RIC604

## 3. **Method of Assessment**

Through Checklist: CHLRIC604

Research student is required to submit a word processed document about the literature review carried out as a part of RIC604.

Initial assessment by the supervisor followed by the second examiner's review.

## 4. **Reassessment**

**III. Module Resources****a. Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

- 1.

**c. Magazines and Journals**

- 1.

**d. Websites**

- 1.

**e. Other Electronic Resources**

- 1.

**IV. Module Organization**

|  |                       |              |  |
|--|-----------------------|--------------|--|
| <b>Module Code</b>                             | RIC604                |              |  |
| <b>Module Title</b>                            | Literature Review – 2 |              |  |
| <b>Module Teacher/s Name</b>                   |                       |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>         | 0804906 5555 |  |
|  | <b>E-mail:</b>        |              |  |
| <b>Module Specifications Approval Date</b>     |                       |              |  |
| <b>Next Module Specifications Review Date:</b> |                       |              |  |



## Module Specifications: PhD-Research Problem Formulation

|              |                                  |
|--------------|----------------------------------|
| Module Title | PhD-Research Problem Formulation |
| Module Code  | RIC605                           |
| Course       | Doctoral Programme               |

**I. Module Summary****1. Aim and Summary**

This module deals with definition and formulation of research programme for the doctoral thesis. Student proposes the title of the thesis and aim of the research programme. Student will identify and formulate 5 key research objectives to accomplish the proposed aim of the research. A succinct report on the status of research in the chosen topic of research and the identified gaps in the existing literature forms a significant component of this module. The appropriateness and choice amongst potential techniques required in accomplishing the research objectives, suitability and appropriateness of the assumptions, the requirement of resources, anticipated original contributions, key milestones to monitor the progress of research and the timelines for each of the research objectives are also identified. The outcome of this module facilitates a research student to develop a comprehensive research proposal encompassing the outline and roadmap of the entire research programme of the doctoral thesis with requisite details.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 10  |
| Total Study Hours | 150   |
| Number of Weeks   | 5 weeks Full-time or 8 weeks Part-time.   |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Discuss the scope and core theme of doctoral thesis
2. Define the topic of research of the doctoral thesis



3. Identify and summarize the potential gaps in the literature pertinent to the chosen research topic
4. Define the title, aim and objectives of thesis
5. Identify, discuss and propose appropriateness of possible solution techniques/framework required to accomplish research objectives
6. Prepare a comprehensive research proposal depicting the outline, framework and roadmap of doctoral thesis

## 2. **Module Contents**

Research proposal and plan - Key milestones and deliverables, use of task lists and Gantt charts, identification of key research questions, resources and methodology and identification of proposed contribution to knowledge or practice

Supervisor meetings - Initial discussion on topic of research, focusing and defining the topic, identification of resources, identification of subject-specific and research methods

modules

Outline Research Plan - The different schemes, assessment, key milestones and deliverables, maintenance of records, research documentation and examination arrangements

## 3. **Method of Assessment**

1. Checklist Assessment CHLRIC605
2. Research proposal stating the title, aim, summary of literature, objectives, solution methodologies, original contributions, Gantt Chart and key references
3. Evaluation of research proposal initially by the supervisor and reviewed by second examiner
4. Presentation to PRP

## 4. **Reassessment**

### III. **Module Resources**

#### a. **Essential Reading**

1. To be decided by Supervisory team

#### b. **Recommended Reading**

- 1.

c. **Magazines and Journals**

1.

d. **Websites**

1.

e. **Other Electronic Resources**

1.

**IV. Module Organization**

|  |                                  |              |  |
|--|----------------------------------|--------------|--|
| <b>Module Code</b>                             | RIC605                           |              |  |
| <b>Module Title</b>                            | PhD-Research Problem Formulation |              |  |
| <b>Module Teacher/s Name</b>                   |                                  |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>                    | 0804906 5555 |  |
|  | <b>E-mail:</b>                   |              |  |
| <b>Module Specifications Approval Date</b>     |                                  |              |  |
| <b>Next Module Specifications Review Date:</b> |                                  |              |  |



## Module Specifications: Research Related Module – 1

|              |                             |
|--------------|-----------------------------|
| Module Title | Research Related Module – 1 |
| Module Code  | RIC606                      |
| Course       | Doctoral Programme          |

**I. Module Summary****1. Aim and Summary**

This module deals with the identification and study of a domain specific module to facilitate better appreciation of the peripheral/core issues relevant and specific to research problem of the thesis. The study of this identified module facilitates the student in acquiring/augmentation of analytical and problem solving as well as cognitive skills required to proceed with the formulated research proposal. The module enables the research student to develop/demonstrate the skills of decision making to deal with the modalities/technicalities closely related to research oriented tasks of the doctoral thesis. The module aims at enabling the student to exercise and exhibit a considerate/learned judgment in the identification and choice of analytical techniques, experimental procedures and set up, software tools and commercial simulators required for solution of specified research tasks.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 10  |
| Total Study Hours | 150   |
| Number of Weeks   | 5 weeks Full-time or 8 weeks Part-time.   |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Identify, describe and justify the need for acquiring/enhancing the technical grasp in specific sub topics or special techniques belonging to the identified research problem of the thesis
2. Discuss the benefits the identified module brings to pursue the research objectives of the thesis

3. Demonstrate the enrichment in analytical/problem solving/cognitive skills acquired through the study of identified sub topics
4. Exhibit the ability of improved decision making/ judgment in the identification of choice of analytical techniques, experimental procedures and set up, software tools and commercial simulators

## 2. **Module Contents**

Supervisor meetings – On-going discussion on topic of research, focusing and defining the topic, identification of specific topics closely related to research thesis which potentially augments the research/analytical/problem solving/cognitive skills of the student.

Research Work – Work here will involve the implementation of methods and techniques identified in literature review to study /analyze the pertinent issues specific to the research thesis. Formulation of study material to compose the indicative content of the module,

assessment modalities, contact classes. The content and the criteria/nature/quantum of work for the successful completion of module will be in accordance with the requirements of the individual research tasks This module can be a regular Masters level or customized to the research programme of the student. In case of customized nature of the module, the scheme and modalities of the assessment are determined by the supervisory team of the student.

## 3. **Method of Assessment**

Through Checklist:CHLRIC606

- (a) In case of customized nature of the module RIC606, the student is required to submit a word processed document conforming to the assessment requirements as determined by the module leader/ supervisory team.
- (b) The formal formalities of assessment and examination are applicable if RIC606 is a regular Masters level module

Initial assessment by the module leader/ supervisor followed by the second examiner's review.

## 4. **Reassessment**

### III. **Module Resources**

#### a. **Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

1.

**c. Magazines and Journals**

1.

**d. Websites**

1.

**e. Other Electronic Resources**

1.

**IV. Module Organization**

|  |                             |              |  |
|--|-----------------------------|--------------|--|
| <b>Module Code</b>                             | RIC606                      |              |  |
| <b>Module Title</b>                            | Research Related Module – 1 |              |  |
| <b>Module Teacher/s Name</b>                   |                             |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>               | 0804906 5555 |  |
|  | <b>E-mail:</b>              |              |  |
| <b>Module Specifications Approval Date</b>     |                             |              |  |
| <b>Next Module Specifications Review Date:</b> |                             |              |  |



## Module Specifications: Research Related Module – 2

|              |                             |
|--------------|-----------------------------|
| Module Title | Research Related Module – 2 |
| Module Code  | RIC607                      |
| Course       | Doctoral Programme          |

**I. Module Summary****1. Aim and Summary**

This module is similar to Research Module RIC606 in its intent, scope and structure. This module deals with the identification and study of an additional domain specific specialized topic to facilitate wider and diversified grasp/exposure to the peripheral/core issues relevant and specific to research topic of the thesis. Study of this identified module facilitates the student in acquiring/augmentation of additional analytical and problem solving as well as cognitive skills required to work and deal the research issues pertinent to

the proposed thesis. The module enables the research student to develop/demonstrate the further improvement in skills of decision making to deal with the modalities/technicalities closely related to research oriented tasks of the doctoral thesis. The module aims at enabling the student to exercise and exhibit a considerate/learned judgment in the identification and choice of analytical techniques, experimental procedures and set up, software tools and commercial simulators required for solution of specified research tasks or its variants.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 10  |
| Total Study Hours | 150   |
| Number of Weeks   | 5 weeks Full-time or 8 weeks Part-time.   |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Identify, describe and justify the need for acquiring/enhancing the technical grasp in specific sub topics or special techniques belonging to the identified research problem of the thesis

2. Discuss the benefits the identified module RIC607 brings to pursue the research objectives of the thesis
3. Demonstrate the improvement/enhancement in analytical/problem solving/cognitive skills acquired through the identified sub topics
4. Exhibit the ability of improved decision making/ judgment in the identification and choice of analytical techniques, experimental procedures and set up, software tools and commercial simulators

## 2. **Module Contents**

Supervisor meetings – On-going discussion on topic of research, focusing and defining the topic, identification of specific topics closely related to research thesis which potentially augments the research/analytical/problem solving/cognitive skills of the student.

Research Work – Work here will involve the implementation of methods and techniques identified in literature review to study /analyze the pertinent issues specific to the research thesis. Formulation of study material to compose the indicative content of the module,

assessment modalities, contact classes. The content and the criteria/nature/quantum of work for the successful completion of module will be in accordance with the requirements of the individual research tasks This module can be a regular Masters level or customized to the research programme of the student. In case of customized nature of the module, the scheme and modalities of the assessment are determined by the supervisory team of the student.

## 3. **Method of Assessment**

Through Checklist:CHLRIC607

- (a) In case of customized nature of the module RIC606, the student is required to submit a word processed document conforming to the assessment requirements as determined by the module leader/ supervisory team.
- (b) The formal formalities of assessment and examination are applicable if RIC606 is a regular Masters level module  
Initial assessment by the module leader/ supervisor followed by the second examiner's review.

## 4. **Reassessment**

### III. **Module Resources**

#### a. **Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

1.

**c. Magazines and Journals**

1.

**d. Websites**

1.

**e. Other Electronic Resources**

1.

**IV. Module Organization**

|  |                             |              |  |
|--|-----------------------------|--------------|--|
| <b>Module Code</b>                             | RIC607                      |              |  |
| <b>Module Title</b>                            | Research Related Module – 2 |              |  |
| <b>Module Teacher/s Name</b>                   |                             |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>               | 0804906 5555 |  |
|  | <b>E-mail:</b>              |              |  |
| <b>Module Specifications Approval Date</b>     |                             |              |  |
| <b>Next Module Specifications Review Date:</b> |                             |              |  |





## Module Specifications: Research Module -1

|              |                    |
|--------------|--------------------|
| Module Title | Research Module -1 |
| Module Code  | PhD601             |
| Course       | Doctoral Programme |

**I. Module Summary****1. Aim and Summary**

This module initiates research student into the actual execution of the research programme whose scope and mandate have already undergone the prior scrutiny. The module facilitates the students to widen their knowledge and grasp of the existing literature, in an attempt to solve the task associated with the first research objective. This module enables the students to put into practice the earlier explored theories and methodologies to a specific context of first objective of the research programme, using an

appropriate range of techniques, tools and methodologies. It also aims to develop basic and initial levels of research skills, including those relating to interpretation of results, deriving inferences and conclusions. This module prepares the students to demonstrate their judgment in research design decisions. One of the desirable features of this module is the student's professional capability to arrive at an amicable resolution to deal issues involved not only in the conduct of the research but also in assessing the significance of research contribution.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 40  |
| Total Study Hours | 600   |
| Number of Weeks   | 15 weeks Full-time or 22 weeks Part-time.   |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Discuss the scope, intent and contributions of the first research objective in the overall perspective of the proposed research thesis

2. Identify all the pertinent issues of the first objective that warrant further in depth study and analysis
3. Analyse the availability of appropriate frame work/techniques/tools/ methodologies. needed to undertake the first objective and ascertain any desirable modifications to them
4. Implement the analyzed framework//techniques/tools/ methodologies to the defined context/scenario of first research objective and verify its performance/conformity/versatility/adaptability
5. Map and link the results /research findings of first objective to its intended contribution and define the measure of its success
6. Implement/adopt the defined measure to validate and substantiate the research findings of the first objective

## 2. **Module Contents**

Discussion on scope, aim and objectives of the thesis. Key considerations of first objectives. Research issues of first objectives and strategy to address it. Relevance and significance of first objective to the overall thesis. Potential research findings of first objective and its influence on second and subsequent objectives

Research work – Topic of research, underlying themes and the desired intent of the first objective determine the broad nature/quantum of work and the consequent research finding attributed to the first research objectives.

## 3. **Method of Assessment**

1. Checklist Assessment CHLPhD601
2. Method of assessment through a report submission in the format recommended by MSRUAS and presentation at PRP
3. The submitted report will be initially evaluated by the supervisor and reviewed by second examiner
4. Satisfactory grade assessed through supervisor and second examiner
5. Affirmative decision of PRP

## 4. **Reassessment**

## III. **Module Resources**

### a. **Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

1.

**c. Magazines and Journals**

1.

**d. Websites**

1.

**e. Other Electronic Resources**

1.

**IV. Module Organization**

|  |                    |              |  |
|--|--------------------|--------------|--|
| <b>Module Code</b>                             | PhD601             |              |  |
| <b>Module Title</b>                            | Research Module -1 |              |  |
| <b>Module Teacher/s Name</b>                   |                    |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>      | 0804906 5555 |  |
|  | <b>E-mail:</b>     |              |  |
| <b>Module Specifications Approval Date</b>     |                    |              |  |
| <b>Next Module Specifications Review Date:</b> |                    |              |  |



## Module Specifications: Research Module -2

|              |                    |
|--------------|--------------------|
| Module Title | Research Module -2 |
| Module Code  | PhD602             |
| Course       | Doctoral Programme |

**I. Module Summary****1. Aim and Summary**

This module deals with the second objective of the research programme. This module provides an opportunity to re-assess the progress, research output, unresolved and critical issues of prominence in the first research objective to direct the student to more effective research orientation. Like in PhD601, this module also enables the students to put into practice the earlier explored theories and methodologies to a specific context second objective of the research programme. It also introduces the student to look for suitable schemes to introduce desired modifications using appropriate techniques, tools and methodologies. The module insists the student to solve the research tasks associated with the second objective. It also aims to develop student's research skills, including those relating to interpretation of results, deriving inferences and conclusions. This module involves the student in identifying the specific nature or form of output/outcome of this module and validate/verify it either through qualitative or quantitative measures. This module prepares the students to demonstrate their judgment in research design decisions. This module enhances further the earlier acquired student's competency to arrive at an amicable resolution to deal issues involved in the conduct of the research and the assessment of research contributions.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 30  |
| Total Study Hours | 450   |
| Number of Weeks   | 12 weeks Full-time or 18 weeks Part-time  |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Discuss the scope, intent, contributions of the second research objective in the overall perspective of the proposed research thesis and the key issues of the second objective that warrant special consideration
2. Analyse the availability of appropriate frame work/techniques/tools/ methodologies, needed to undertake the second objective and ascertain any desirable modifications to them
3. Suggest and develop suitable schemes to introduce appropriate modifications to the analyzed frame work/techniques/tools/ methodologies required for second research objective
4. Implement the analyzed framework//techniques/tools/ methodologies to the defined context/scenario of second research objective
5. Explain the significance of obtained results and research findings of the second research objective and if need be, correlate them with the first research objective
6. Map and link the results /research findings of first objective to its intended contribution and define the measure of its success
7. Implement/adopt the defined measure to validate and substantiate the research findings of the second objective

## 2. **Module Contents**

Discussion on scope, aim and objectives of the thesis. Key considerations of second objective. Research issues of second objective and strategy to address it. Relevance and significance of second objective to the overall thesis. Potential research findings of second objective and its influence on earlier and subsequent objectives

Research work – Topic of research, underlying themes and the desired intent of the second objective determine the broad nature/quantum of work and the consequent research finding attributed to the second research objectives.

## 3. **Method of Assessment**

1. Checklist Assessment CHLPhD602
2. Method of assessment through a report submission in the format recommended by MSRUAS and presentation at PRP
3. The submitted report will be initially evaluated by the module leader and reviewed by second examiner
4. Satisfactory grade assessed through supervisor and second examiner
5. Affirmative decision of PRP

## 4. **Reassessment**

**III. Module Resources****a. Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

- 1.

**c. Magazines and Journals**

- 1.

**d. Websites**

- 1.

**e. Other Electronic Resources**

- 1.

**IV. Module Organization**

|  |                    |              |
|--|--------------------|--------------|
| <b>Module Code</b>                             | PhD602             |              |
| <b>Module Title</b>                            | Research Module -2 |              |
| <b>Module Teacher/s Name</b>                   |                    |              |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>      | 0804906 5555 |
|  | <b>E-mail:</b>     |              |
| <b>Module Specifications Approval Date</b>     |                    |              |
| <b>Next Module Specifications Review Date:</b> |                    |              |



## Module Specifications: Research Module -3

|              |                    |
|--------------|--------------------|
| Module Title | Research Module -3 |
| Module Code  | PhD603             |
| Course       | Doctoral Programme |

**I. Module Summary****1. Aim and Summary**

This module deals with the third objective of the research programme. The module provides an opportunity to assess the relevance and significance of the third objective in the overall context of aims and objectives of the research programme. This module can be a continuation or extension of the module PhD602 depending upon the topic of research as well as the strategy adopted in the formulation of research objectives. This module prepares the student to examine and determine the academic requirement of study comprising development or modification of framework, design/model/simulation/analysis/experiment or their variants/combination to undertake

and successfully complete this module. The student is required to adopt or modify the earlier explored frameworks/theories/approaches/methodologies/solution procedures to the specific context of the research programme using appropriate resources or tools. The student is able to specify nature or form of output/outcome of this module and validate/verify it either through qualitative or quantitative measures. This module enhances further the student's skill/competency to arrive at an amicable resolution to effectively deal issues involved in the conduct of the research and the assessment of research contributions.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 30  |
| Total Study Hours | 450   |
| Number of Weeks   | 12 weeks Full-time or 18 weeks Part-time  |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Describe the role and significance of the research findings of the third objective in the overall context of the aim and objectives of the research programme
2. Examine the nature of academic component of the study required to undertake the third objective of the research programme
3. Discuss and identify attribute/s of to define the success of the third objective and suggest a scheme to measure, verify and validate the success of this objective
4. Formulate a solution strategy to apply or modify the earlier explored frameworks /theories/approaches/methodologies/solution procedures to the specific context of the third research objective using appropriate resources or tools
5. Analyze, interpret, infer and justify the research findings of the module with appropriate reasoning and rational
6. Prepare a document highlighting the scope, relevance of the research findings/contributions for PRP and possible publication

## 2. **Module Contents**

Interaction with Supervisory Team and Direction – On-going discussion on topic of research, Scope and relevance of Third Objective, Discussion on nature of expected outcome of the objective, identification of resources, identification and selection/development of appropriate solution strategy or formulation, critical review of student’s work and on-going guidance.

Research Work – Research may involve the extended application of methods and techniques introduced in the earlier research related or/and research module specific to the objective under context. Identification and definition of metrics of success of the module and framework or scheme to measure it form a significant constituent of this module

Research Output – Document incorporating the analysis, interpretation, inference and justification of the research findings pertinent to the study related to third research objective. The form or nature of output should conform not only be appropriate but also should meet the reasonable general standard specific to the topic of research

## 3. **Method of Assessment**

1. Checklist Assessment CHLPhD603
2. Method of assessment through a report submission in the format recommended by MSRUAS and presentation at PRP
3. The submitted report will be initially evaluated by the module leader and reviewed by second examiner
4. Satisfactory grade assessed through supervisor and second examiner
5. Affirmative decision of PRP

## 4. **Reassessment**



**III. Module Resources****a. Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

- 1.

**c. Magazines and Journals**

- 1.

**d. Websites**

- 1.

**e. Other Electronic Resources**

- 1.

**IV. Module Organization**

|  |                    |              |  |
|--|--------------------|--------------|--|
| <b>Module Code</b>                             | PhD603             |              |  |
| <b>Module Title</b>                            | Research Module -3 |              |  |
| <b>Module Teacher/s Name</b>                   |                    |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>      | 0804906 5555 |  |
|  | <b>E-mail:</b>     |              |  |
| <b>Module Specifications Approval Date</b>     |                    |              |  |
| <b>Next Module Specifications Review Date:</b> |                    |              |  |



## Module Specifications: Research Module -4

|              |                    |
|--------------|--------------------|
| Module Title | Research Module -4 |
| Module Code  | PhD604             |
| Course       | Doctoral Programme |

**I. Module Summary****1. Aim and Summary**

This module deals with the fourth objective of the research programme. The module provides an opportunity to assess the relevance and significance of the fourth objective in the overall context of aims and objectives of the research programme. This module can be a continuation or extension of the module PhD603 depending upon the topic of research as well as the intent embedded in the formulation of research objectives. This module prepares the student to analyze and assess the academic requirement of study comprising development or modification of framework/design/model/simulation/analysis/experiment or their variants/combination to undertake and successfully complete the fourth objective.

The student is required to adopt or modify the earlier explored frameworks/theories/approaches/methodologies/solution procedures to the specific context of the research programme using appropriate resources or tools. The student is able to specify nature or expected form of output/outcome of this module and validate/verify it either through qualitative or quantitative measures. Through this module, the student demonstrates the further improvement in research aptitude and advanced skill including those relating to interpretation of results/observations, deriving inferences and conclusions from the conducted research study of the module.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 30  |
| Total Study Hours | 450   |
| Number of Weeks   | 13 weeks Full-time or 20 weeks Part-time  |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Describe the role and significance of the research findings of the fourth objective in the overall context of the aim and objectives of the research programme
2. Examine the nature of academic component of the study required to undertake the fourth objective of the research programme
3. Discuss and identify attribute/s of to define the success of the objective and suggest a scheme to measure, verify and validate the success of this objective
4. Formulate a solution strategy to apply or modify the earlier explored frameworks /theories/approaches/methodologies/solution procedures to the specific context of the fourth research objective using appropriate resources or tools
5. Analyze, interpret, infer and justify the research findings of the module with appropriate reasoning and rational
6. Prepare a document highlighting the scope, relevance of the research findings/contributions for PRP and possible publication

## 2. **Module Contents**

Interaction with Supervisory Team and Direction – On-going discussion on topic of research, Scope and relevance of fourth Objective, Discussion on nature of expected outcome of the objective, identification of resources, identification and selection/development of appropriate solution strategy or formulation, critical review of student’s work and on-going guidance.

Research work – Research may involve the extended application of methods and techniques introduced in the earlier research related or/and research module specific to the objective under context. Identification and definition of metrics of success of the module and framework or scheme to measure it form a significant constituent of this module

## 3. **Method of Assessment**

1. Checklist Assessment CHLPhD604
2. Method of assessment through a report submission in the format recommended by MSRUAS and presentation at PRP
3. The submitted report will be initially evaluated by the module leader and reviewed by second examiner
4. Satisfactory grade assessed through supervisor and second examiner
5. Affirmative decision of PRP

## 4. **Reassessment**

**III. Module Resources****a. Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

- 1.

**c. Magazines and Journals**

- 1.

**d. Websites**

- 1.

**e. Other Electronic Resources**

- 1.

**IV. Module Organization**

|  |                    |              |  |
|--|--------------------|--------------|--|
| <b>Module Code</b>                             | PhD604             |              |  |
| <b>Module Title</b>                            | Research Module -4 |              |  |
| <b>Module Teacher/s Name</b>                   |                    |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>      | 0804906 5555 |  |
|  | <b>E-mail:</b>     |              |  |
| <b>Module Specifications Approval Date</b>     |                    |              |  |
| <b>Next Module Specifications Review Date:</b> |                    |              |  |



## Module Specifications: Research Module - 5

|              |                     |
|--------------|---------------------|
| Module Title | Research Module - 5 |
| Module Code  | PhD605              |
| Course       | Doctoral Programme  |

**I. Module Summary****1. Aim and Summary**

This module deals with the final objective of the research programme. The module provides an opportunity to assess the relevance and significance of the final objective in the overall context of aims and objectives of the research programme. This module can be a continuation or extension of the module PhD604 or any other prior research module depending upon the topic of research as well as the strategy adopted in the formulation of research objectives. This module provides an opportunity to re assess the progress, research output, unresolved and critical issues of prominence in any of the research objective directed towards more effective completion of core study phase of research. This module prepares the student to examine and determine the academic requirement of study comprising literature review /design/model/simulation/analysis/experiment or their variants/combination to undertake and successfully complete this module. The student is required to adopt or modify the earlier explored frameworks/theories/approaches/methodologies/solution procedures to the specific context of the research programme using appropriate resources or tools. The student is able to specify nature or form of output/outcome of this module and validate/verify it either through qualitative or quantitative measures. This module imparts the student a further improvement in research aptitude and advanced skill including those relating to interpretation of results/observations, deriving inferences and conclusions from the conducted research study of the module. This module will also test the student's ability to adapt to the uncertainties and challenges that may arise during the research programme.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 30  |
| Total Study Hours | 450   |
| Number of Weeks   | 12 weeks Full-time or 20 weeks Part-time  |
| Pass requirement  | Satisfactory grade assessed through supervisor and second examiner<br>Affirmative decision of PRP |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Describe the role and significance of the research findings of the fifth and final objective in the overall context of the aim and objectives of the research programme
2. Examine the nature of academic component of the study required to undertake the fifth objective of the research programme
3. Discuss and identify attribute/s of to define the success of the objective and suggest a scheme to measure, verify and validate the success of this objective
4. Formulate a solution strategy to apply or modify the earlier explored frameworks /theories/approaches/methodologies/solution procedures to the specific context of the fifth research objective using appropriate resources or tools
5. Analyze, interpret, infer and justify the research findings of the module with appropriate reasoning and rational
6. Prepare a technical document highlighting the scope, relevance of the research findings/contributions for PRP and possible publication

**2. Module Contents**

Interaction with Supervisory Team and Direction – On-going discussion on topic of research, Scope and relevance of fifth Objective, Discussion on nature of expected outcome of the objective, identification of resources, identification and selection/development of appropriate solution strategy or formulation, critical review of student's work and on-going guidance.

Research work – Research may involve the extended application of methods and techniques introduced in the earlier research related or/and research module specific to the objective under context. Identification and definition of metrics of success of the module and framework or scheme to measure it form a significant constituent of this module

**3. Method of Assessment**

1. Checklist Assessment CHLPhD605
2. Method of assessment through a report submission in the format recommended by MSRUAS and presentation at PRP
3. The submitted report will be initially evaluated by the module leader and reviewed by second examiner
4. Satisfactory grade assessed through supervisor and second examiner
5. Affirmative decision of PRP

**4. Reassessment****III. Module Resources****a. Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

- 1.

**c. Magazines and Journals**

- 1.

**d. Websites**

- 1.

**e. Other Electronic Resources**

- 1.

**IV. Module Organization**

|  |                     |              |  |
|--|---------------------|--------------|--|
| <b>Module Code</b>                             | PhD605              |              |  |
| <b>Module Title</b>                            | Research Module - 5 |              |  |
| <b>Module Teacher/s Name</b>                   |                     |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>       | 0804906 5555 |  |
|  | <b>E-mail:</b>      |              |  |
| <b>Module Specifications Approval Date</b>     |                     |              |  |
| <b>Next Module Specifications Review Date:</b> |                     |              |  |



## Module Specifications: Thesis Writing - 1

|              |                    |
|--------------|--------------------|
| Module Title | Thesis Writing - 1 |
| Module Code  | PhD606             |
| Course       | Doctoral Programme |

**I. Module Summary****1. Aim and Summary**

This module deals with the formative stage of thesis writing phase of doctoral research programme. This module offers the student an opportunity to further streamline the ongoing research activities for an organized, smooth and logical conclusion of the research programme undertaken. This module provides an impetus/momentum for the student to consolidate the research work. This module offers the student an opportunity for the analyzed projection of the research findings to evaluate the authenticity and completeness of core study phase of research programme. The inculcated/acquired research aptitude along with written and oral communication skills of the student are assessed during the preparation and evaluation of synopsis of the thesis. Students are advised on the key components of a good Synopsis by highlighting the need of: comprehension, written communication skill for succinct write up, broader perspective of existing literature, clarity in technical grasp of research topic, elaboration and expansion of specifics of research finding, proposed original contributions and the associated value addition to the research topic. This module also constitutes a pre cursor for the compilation of the thesis of doctoral research programme.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 50  |
| Total Study Hours | 750   |
| Number of Weeks   | 26 weeks Full-time or 44 weeks Part-time  |
| Pass requirement  | Assessment by Supervisory team<br>Affirmative decision to be taken by PRP committee |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Discuss the scope and significance of Synopsis of a thesis



2. Explain the key attributes of an effective Synopsis
3. Recognise and appraise the relevance and importance of the research findings in the context of contemporary work and existing literature
4. Demonstrate the authenticity and completeness of the realized objectives through verifiable results/models/documents
5. Prepare a well documented Synopsis of the thesis incorporating all the key attributes and adhering to the recommended guidelines of the University

## 2. **Module Contents**

Supervisors meetings - On-going discussion on topic of research, Review of student's work, Critical analysis of completed objectives and Discussion on status of ongoing activities of research, Current assessment of the research programme Visa Vis the Gantt Chart, Tasks to be completed for initiation and completion of Synopsis writing,

Synopsis Preparation - Discussion on Synopsis and key constituents of effective Synopsis, Structure of Synopsis and identification of sections for continuity of information flow, relevance and focus of each section to the defined aim and objectives of the thesis.

## 3. **Method of Assessment**

1. Checklist Assessment CHLPhD606
2. Synopsis of a thesis conforming to format and guidelines of University

## 4. **Reassessment**

### III. **Module Resources**

#### a. **Essential Reading**

1. To be decided by Supervisory team

#### b. **Recommended Reading**

- 1.

#### c. **Magazines and Journals**

- 1.

#### d. **Websites**

- 1.

#### e. **Other Electronic Resources**

1.

**IV. Module Organization**

|  |                    |              |
|--|--------------------|--------------|
| <b>Module Code</b>                             | PhD606             |              |
| <b>Module Title</b>                            | Thesis Writing - 1 |              |
| <b>Module Teacher/s Name</b>                   |                    |              |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>      | 0804906 5555 |
|  | <b>E-mail:</b>     |              |
| <b>Module Specifications Approval Date</b>     |                    |              |
| <b>Next Module Specifications Review Date:</b> |                    |              |



## Module Specifications: Thesis Writing - 2

|              |                    |
|--------------|--------------------|
| Module Title | Thesis Writing - 2 |
| Module Code  | PhD607             |
| Course       | Doctoral Programme |

**I. Module Summary****1. Aim and Summary**

This module deals with the preparation of formal thesis to be submitted for the award of degree of Doctor of Philosophy. This module prepares the student to compile the thesis in a manner that reflects a structured flow of information as well as the progression of research through accomplished novelties and original contributions. The module emphasizes that thesis is a focused academic narration of significant research findings backed with contextual text rather than a mere collection of fragmented concepts and ideas. The module focuses on the demonstration of advanced research skills and expertise

developed through the research programme. The module will impart the student the ability to organize and compile the thesis chapters whose style and format are in conformity with the set standards of the University. The module enables the student to put into practice the acquired advanced research and written communication skills to focus exclusively on the aims and objectives of the research, a literature review, critical analysis and details of all the research methods/solution methodologies, discussion on research findings and derived inferences/conclusions, the relevance and the appropriateness of recommendations for further work.

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 50  |
| Total Study Hours | 750   |
| Number of Weeks   | 23 weeks Full-time or 40 weeks Part-time  |
| Pass requirement  | Assessment by Supervisory team<br>Affirmative decision to be taken by PRP committee |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Discuss the good practices and salient considerations in the preparation of an effective thesis
2. Explain and report the novelties and original contributions of the research in the context of the defined scope of the thesis
3. Demonstrate the relevance and significance of structured flow of information to bring the clarity, conciseness and continuity in expressing view points and decimation of information
4. Translate the scope and research findings of doctoral programme to organized chapters of the thesis
5. Prepare a doctoral thesis featured with clarity of thoughts, continuity and completeness of information flow, critical analysis of relevance and validity of research findings, and appropriate thoughtful recommendations for future work on the topic of research

## 2. **Module Contents**

Supervisors meetings - On-going discussion on topic of research, critical review of student's work, Identification of potential chapters and their hierarchy, Scope and academic contents of each thesis

Chapter, Need for academic narration backed with academic content and continuity of information flow

Thesis Preparation : Standard, style and regulations pertaining to preparation of doctoral thesis of the University, Overview of the examination process, key considerations for effective presentation of research work into a cohesive thesis, identification of potential questions in each thesis chapter and the pertinent answers to bring more clarity, Incorporation of changes to the thesis chapters after supervisory review, Adherence to recommended format for referencing and the size of the thesis.

## 3. **Method of Assessment**

1. Checklist Assessment CHLPhD607
2. Draft copy of thesis reviewed by Supervisory team

## 4. **Reassessment**

### III. **Module Resources**

#### a. **Essential Reading**

1. To be decided by Supervisory team

**b. Recommended Reading**

1.

**c. Magazines and Journals**

1.

**d. Websites**

1.

**e. Other Electronic Resources**

1.

**IV. Module Organization**

|  |                    |              |  |
|--|--------------------|--------------|--|
| <b>Module Code</b>                             | PhD607             |              |  |
| <b>Module Title</b>                            | Thesis Writing - 2 |              |  |
| <b>Module Teacher/s Name</b>                   |                    |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>      | 0804906 5555 |  |
|  | <b>E-mail:</b>     |              |  |
| <b>Module Specifications Approval Date</b>     |                    |              |  |
| <b>Next Module Specifications Review Date:</b> |                    |              |  |



## Module Specifications: Thesis Submission

|              |                    |
|--------------|--------------------|
| Module Title | Thesis Submission  |
| Module Code  | PhD608             |
| Course       | Doctoral Programme |

**I. Module Summary****1. Aim and Summary**

This module deals with the guidelines to be followed by the student for the submission of doctoral thesis to the university. The module also initiates the preparatory work for the constitution of panel of Thesis examiners for the evaluation of thesis. The module facilitates the consolidated statement of academic records of the student during the

course of doctoral research programme to ensure that all the academic requirements are fulfilled before the submission of thesis. This module also facilitates the student to recognize the importance and significance of student's declaration of authenticity of the research findings and contributions of the doctoral thesis

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 60  |
| Total Study Hours |   |
| Number of Weeks   | 15 weeks Full-time or 22 weeks Part-time.   |
| Pass requirement  | Assessment by Supervisory team<br>Affirmative decision to be taken by PRP committee |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Recognise the significance and importance of the declaration about the authenticity of the research findings and original contributions of the thesis
2. Record and sign the declaration affirming and owning the contents of the thesis to be submitted
3. Report consolidated statement of completed modules of the doctoral research

4. Submit specified number of soft bound copies of the thesis to Research and Innovation Council

## 2. **Module Contents**

Supervisors meetings - On-going discussion on topic of research, Review of records of completed module, critical review of student's work and on-going guidance.

Thesis Submission : Critical review of prepared thesis, overview of the examination process, identification of potential questions and answers, Incorporation of changes to the thesis, Review and completion of documents for submission of thesis

Thesis and examination arrangements - Preparation of supporting documentation for thesis submission along with submission of the examination arrangements to the Research and Innovation Council.

## 3. **Method of Assessment**

1. Checklist Assessment CHLPhD608
2. Soft bound copy of the thesis

## 4. **Reassessment**

### III. **Module Resources**

#### a. **Essential Reading**

1. To be decided by Supervisory team

#### b. **Recommended Reading**

- 1.

#### c. **Magazines and Journals**

- 1.

#### d. **Websites**

- 1.

#### e. **Other Electronic Resources**

- 1.

### IV. **Module Organization**

|                    |        |
|--------------------|--------|
| <b>Module Code</b> | PhD608 |
|--------------------|--------|

|  |                   |              |  |
|--|-------------------|--------------|--|
| <b>Module Title</b>                            | Thesis Submission |              |  |
| <b>Module Teacher/s Name</b>                   |                   |              |  |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>     | 0804906 5555 |  |
|  | <b>E-mail:</b>    |              |  |
| <b>Module Specifications Approval Date</b>     |                   |              |  |
| <b>Next Module Specifications Review Date:</b> |                   |              |  |





## Module Specifications: Thesis Evaluation and Viva-Voce

|              |                                 |
|--------------|---------------------------------|
| Module Title | Thesis Evaluation and Viva-Voce |
| Module Code  | PhD609                          |
| Course       | Doctoral Programme              |

**I. Module Summary****1. Aim and Summary**

This module deals with the evaluation of the doctoral thesis by a panel of Examiners and Viva Voce examination. The thesis evaluation and Viva Voce involve the assessment of quality and quantum of research work presented in the doctoral thesis. This module covers the examination of written submission as well as oral discussion of the aims, objectives, critical analysis of adopted approaches chosen for the solution of research objectives,

context of breadth and scope of literature survey to define its relevance and completeness, critical review of research findings and original contributions, analysis of derived conclusions and appropriateness of recommendations for future work. Student will demonstrate the advanced research skill acquired through the research programme to fulfill the requirement for the award of Doctor of Philosophy

**2. Module Size and Credits:**

|                   |   |
|-------------------|---|
| Number of credits | 150   |
| Total Study Hours |   |
| Number of Weeks   | 17 weeks Full-time or 26 weeks Part-time.                               |
| Pass requirement  | Affirmative decision by Thesis Examiners as well as Viva Voce Examiners |

**II. Teaching , Learning and Assessment****1. Intended Learning Outcomes (ILO)**

After undergoing this module students will be able to:

1. Demonstrate advanced research and written communication skills through a well compiled thesis emphasizing in it the scope of research, discussion on research objectives in the context of prevalent academic gap in literature, novelty of chosen solution procedure and validation of the research findings
2. Demonstrate the advanced presentation skills and the technical grasp in the chosen research topic by defending the research work presented in the thesis dissertation at an oral examination

3. Appraise and defend the measure of originality in the research findings of the presented thesis

## 2. **Module Contents**

Thesis Evaluation: Examination of the aim, Objectives, Literature survey, the rationale for the choice of solution for stated objectives, Relevance, validity and completeness of research findings, discussion on measure of research success, structure and composition of thesis chapter, and appropriateness of recommendations for future work

Viva Voce - Discussion on topic of research, Relevance and value addition by the proposed research, critical review of existing literature, critical analysis on choice of research methods, statement of original contribution to the knowledge in the research topic, identification of potential shortcomings of the thesis and the consequent recommendations for future work.

Examination preparation - Critical review of thesis, identification of potential questions and answers, overview of the examination process and, if possible, a mock examination and discussion of the potential outcomes.

## 3. **Method of Assessment**

1. Thesis Evaluation
2. Oral examination (Viva-Voce)

## 4. **Reassessment**

As per the Thesis Examiners and Viva Voce Examiners as well as PRP decision

## III. **Module Resources**

### a. **Essential Reading**

1. Thesis submitted, Books, Journals, Magazines, Internet, Software, hardware

### b. **Recommended Reading**

- 1.

### c. **Magazines and Journals**

- 1.

### d. **Websites**

- 1.

### e. **Other Electronic Resources**

- 1.

**IV. Module Organization**

|  |                                 |              |
|--|---------------------------------|--------------|
| <b>Module Code</b>                             | PhD609                          |              |
| <b>Module Title</b>                            | Thesis Evaluation and Viva-Voce |              |
| <b>Module Teacher/s Name</b>                   |                                 |              |
| <b>Module Teacher Contact Details</b>          | <b>Phone:</b>                   | 0804906 5555 |
|  | <b>E-mail:</b>                  |              |
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