DOCTOR OF ENGINEERING

Course Outline

Diploma in Doctorate Studies (DDS) IQY Diploma in Doctorate Studies is an academic award consisting of Research Studies and Writing Thesis Dissertation at 360 Credit points in which 240 Credit points are allocated for Masters Degree level academic qualifications and / or comparable professional experiences.

Subjects

- MAE 601 Research Method (30 Points)
- MAE602 Thesis (30 Points)
- BAE801 Thesis Dissertation Assessment and Defence (60 Points)

The candidates who have completed MAE 601 Research Method (30 Points) and their thesis proposal are accepted will be awarded IQY Master Diploma in Research Studies (270 Credit Points).

The candidates who have completed MAE602 Thesis (30 Points) but have not submitted it to St Clements University OR STC Technological University will be awarded IQY Diploma in Doctorate Studies (300 Credit Points)

Only St Clements University OR STC Technological University will confer the Doctoral Degree while IQY Technical College will provide the facilitation and successful candidates will be issued with BAE801 Thesis Dissertation Assessment and Defence (60 Points) when the success is notified by St Clements University OR STC Technological University .

In the case of failure to meet the quality of dissertation, St Clements University OR STC Technological University 's Diploma in Doctorate Studies or other relevant award can be issued and Doctorate degree award fees will not be charged.

IQY Technical College will issue Letter of Congratulation for having been successful in PhD. Doctoral Research Studies IQY Master Diploma in Research Studies

Dissertation for Doctorate

MAE 601 Research Method (30 Points) MAE602 Thesis (30 Points)).

BAE801 Thesis Dissertation Assessment and Defence (60 Points)

MAE601 Research Method

This course guides the student, step by step, through the research process, from problem selection through writing up results. It provides all of the basics necessary to complete a research project in any discipline. Outline.

The following aspects are reflected in this course:

What is research?

Tools of research

The problem: the heart of the research process

Review of the related literature

Planning your research design

Writing the research proposal Qualitative research Historical research

Descriptive research Experimental and causal - comparative designs Statistical techniques for analyzing quantitative data Technical details: style, format, and organization of the research report

Doctoral Research Proposal Synopsis:

Research students are expected to present a written research proposal within three months after commencement. The proposal is handed in to the study leader.

Assessors of this proposal are selected by the faculty for their understanding of the field and the research involved. The purpose of a research is to set out a plan for conducting the research and writing the dissertation within the available time.

It should take account of the availability and guidance of the study leader. The starting point for a research proposal is the topic, which is the field of interest in which the research is to be carried out. In introducing the topic, the proposal should clarify the field that it falls into and the specific part that field which the research will explore. It should clarify why the topic is of interest and importance, and how the proposed research will contribute to the filed of knowledge or profession. The proposal should clarify the research questions, ensuring that these are specific and answerable. It is important to show how these questions relate to the topic are, and how they will advance the student's contribution. The proposal should detail the research to be carried out, and clarify the research methods, the timeframe and the reasons for selecting particular methods.

Where a period of literature review or research should precede any empirical research, this should be factored in as part of the research. It is important to estimate any periods of field research and to flag their duration and cost in your research proposal.

MAE 602 Thesis

Thesis Dissertation for Doctorate Candidates need to complete a 60000-words dissertation (in Myanmar or English) and a 3000-words executive portfolio (in English).

This program requires the candidates to complete a thesis as part of the assessment for the Doctorate Doing a thesis / dissertation means that instead of knowledge and information being presented and following a prescribed route for answering questions, candidates are thrust into an active role of managing an investigation into a topic area.

This means researching and discovering things for themselves. They will have to set their own targets and parameters, pose their own central research questions and decide on the appropriate sources of information to support the research. It therefore requires the use of the higher-level cognitive skills of analysis, synthesis and evaluation.

Candidates may choose an area of particular interest to them within the scope of course title.

BAE801 Thesis Dissertation Assessment and Defence (60 Points)

Doctoral dissertation A dissertation is an individual effort and the candidate, academic tutor and the course professor will work together on constructing an approved topic (research question) and methodologies. Dissertation Defence for doctorate It is expected of Doctoral candidates to defend their thesis by means of a colloquium (academic discussion). The purpose of the meeting is for the candidates to convince a panel of experts in the field of the dissertation how well they have done in the conducting of their research study and the preparation of their dissertation Candidates need to complete all course assessments with the results of Grade B+ or above

St Clements University (SCPU Business School-Switzerland)
STC Technological University

St Clements University (SCPU Business School-Switzerland)

St Clements University Myanmar College/ IQY Technical College

Doctorate Degree/ Diploma in Doctorate Degree Overview Program Instruction

Name of Candidate	
IQY ID Number	
St Clements University ID Number	
Program	
Field of Study and Research Area	
Start Date	
Expected Completion Date	
International Supervisor of Research/Dissertation	
Immediate Supervisor of Research/Dissertation	
Co- Supervisor of Research/Dissertation	

Time schedule

Total Time Required to complete	3 Years (36 months)
Phase (1) Preliminary Course	8 months
Phase (2) Research Study Course Work	6 months
Phase (3) Research Proposal	4 months
Phase (4)+Phase (5)	18 months
Phase (6)	1 month

(1)General Information about the program

Diploma in Doctorate Studies (DDS)

IQY Diploma in Doctorate Studies is an academic award consisting of Research Studies and Writing Thesis Dissertation at 360 Credit points in which 240 Credit points are allocated for Masters Degree level academic qualifications and / or comparable professional experiences.

The candidates who have completed MAE 601 Research Method (30 Points) and their thesis proposal are accepted will be awarded IQY Master Diploma in Research Studies (270 Credit Points).

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Only St Clements University will confer the Doctoral Degree while IQY Technical College will provide the facilitation and successful candidates will be issued with BAE801 Thesis Dissertation Assessment and Defence (60 Points) when the success is notified by St Clements University.

In the case of failure to meet the quality of dissertation, St Clements University's Diploma in Doctorate Studies or other relevant award can be issued and Doctorate degree award fees will not be charged.

IQY Technical College will issue Letter of Congratulation for having been successful in PhD.

PHASE (1) Preliminary Course

The students will have to write 20 pages study report for each of the subjects advised by the courses coordinator.

The report needs to include -

Book review- Review on each chapter of the book highlighting the key concepts, key formula, key theory & practical application concepts

Own idea on how to apply those concepts in real practical applications.

Examples of engineering designs that use the concepts & knowledge expressed in those books (If any)

Your comment on each book

Your reports should contain the following aspects

Graduates of a Masters Degree (Extended) /
Doctorate Preliminary Level
will have:

- cognitive skills to demonstrate mastery of theoretical knowledge and to reflect critically on theory and professional practice
- cognitive, technical and creative skills to investigate, analyse and synthesise complex information, problems, concepts and theories and to apply established theories to different bodies of knowledge or practice
- cognitive, technical and creative skills to generate and evaluate complex ideas and concepts at an abstract level
- communication and technical research skills to justify and interpret theoretical propositions, methodologies, conclusions and professional decisions to specialist and non-specialist audiences
- technical and communication skills to design, evaluate, implement, analyse and theorise about developments that contribute to

How theories are related to practice

Research and collection of several resources and references

Provide your own ideas

Interpret and justify the information . Submit the decision

You also need to analyse the information And provide the conclusion

professional practice	

To support your critical thinking, the following video and resources are provided.

ED431-Critical Thinking

VIDEOS

To be given

ED431-Reflection& Evaluation

VIDEO

To be given

Specific Instruction

(1) You need to write the reports and submit them to St Clements University Library Academic Journal **Veritas Journals** - **ISSN 2307-2806**

Link- To be given

In the above link which is E-Library of St Clements university, you can find the thesis, dissertations and research papers of the academics and postgraduate students of St Clements University. You need to observe and study the style of presentations.

- (2) The number of reports will need to be negotiated. In my view, your report should be
 - Report (1)-Same Discipline Engineering
 - Report (2)- Same Discipline Engineering
 - Report (3)-General Engineering
 - Report (4)-Specialized Discipline

You should spend 8 months to complete 4 reports and should submit 1 report per every 2 months during this time you should think about topic and title of your dissertation and also discuss with supervisors. If field data are required, you should collect them.

Outcome

Certificate of Completion- Diploma in Doctoral Studies Preliminary Course
(IQY Technical College) will be issued together with transcript and will be submitted

to St Clements University /STC Technological University Academic Committee.

PHASE (2) Doctoral Research Study

Doctoral Research Studies

IQY Master Diploma in Research Studies

Dissertation for Doctorate

MAE 601 Research Method (30 Points)

MAE602 Thesis (30 Points)

BAE801 Thesis Dissertation Assessment and Defence (60 Points)

MAE601 Research Method

This course guides the student, step by step, through the research process, from problem selection through writing up results. It provides all of the basics necessary to complete a research project in any discipline.

Outline. The following aspects are reflected in this course:

What is research?

Tools of research

The problem: the heart of the research process

Review of the related literature

Planning your research design

Writing the research proposal

Qualitative research

Historical research

Descriptive research

Experimental and causal - comparative designs

Statistical techniques for analyzing quantitative data

Technical details: style, format, and organization of the research report

Lecture Video

To be given

Lecture Slides

Introduction to Research

To be given

Meaning of Research & Research Proposal

To be given

Research Preparation & planning

To be given

Research Practice

To be given

Textbook

Higher Education: Handbook of Theory and Research

Published under the Sponsorship of the Association for Institutional Research (AIR) and the Association for the Study of Higher Education (ASHE)

To be given

ACTION RESEARCH

The title should be brief and accurately describe the nature of the project.

Context of the study

Discuss the background to the central problem. Explain why the problem is significant to your teaching or professional activities and educational research.

Selection of instrument

Briefly describe the development of the questionnaire and your reasons for its selection.

Data sources

Describe the target population (i.e., the class or other group).

Role of participants

Describe your role in the action research and any other persons involved the study (e.g., other teachers, principal, students).

Data collection

Describe and explain the types of data you collected, and how they were obtained and recorded.

Data analysis & interpretation

Present your results and explain the methods you used to analyse and interpret the data. Use tabular and graphical forms to enhance your presentation.

Significance

Explain your results and reflect on what they mean. Discuss the importance of both the results and the process.

ED 404 Educational Research / Engineering and Technology Research / Business Management Research

Resources Download Link

To be given

Objective-

This unit describes the performance outcomes, skills and knowledge required to undertake research into educational/ engineering/ technological/ management theory and apply this research to improve current training and assessment practice.

This unit typically applies to those who need to develop skills in research in order to apply educational theory to improve current and future training and assessment practice

Outcomes

- Prepare research brief relating to training and assessment practice / educational/ engineering/ technological/ management theory
- Conduct research in training and assessment practice / educational/ engineering/ technological/ management
- Investigate and apply educational theory/ educational/ engineering/ technological/ management theory to the research

- Report on application of educational theory/ educational/ engineering/ technological/ management theory to practice
- Review entire process

Contents

Qualitative Research and Public Policy

- Multilevel Analysis in Higher Education Research: A Multidisciplinary Approach .
- ConductingMulti-paradigm Inquiry in the Study of Higher Education Organization and Governance: Transforming
- Research Perspectives on Colleges and Universities
- Examining Pathways to and Through the Community College for Youth and Adults
- Review of the Theories Developed to Describe the Process of College Persistence and Attainment

Specific Instruction

- You need to read the resources provided above which explain about the features and components of research in details
- Then submit the following assignment.

Assessment

Assignment 1

Locate the name of books, power point slides in which you have learnt the followings. If you can not find them in given resources, you need to do online research and express the URL

Fill in the table then submit the written report. Number of words is not specified.

Topics	Name of Book Name of Powerpoint Slides	Page Number Slide	URL if any
	or rower point shaes	Number	
What is research?			
Tools of research			
The problem: the heart of the research process			
Review of the related literature			
Planning your research design			
Writing the research proposal			

Qualitative research		
Historical research		
Descriptive research		
Experimental and causal - comparative designs		
Statistical techniques for analyzing quantitative data		
Technical details: style, format, and organization of the research report		
Context of the study		
Selection of instrument		
Data sources		
Role of participants		
Data collection		
Data analysis & interpretation		
Significance		

Outcome

Master Diploma in Research Studies (IQY Technical College will be issued together with transcript MAE 601 Research Method (30 Points) + ED 404 Educational Research / Engineering and Technology Research/Business Management Research and it will be submitted to St Clements University Academic Committee

PHASE (3) Research Proposal + Article Contribution

MAE602 Thesis (30 Points)

Doctoral Research Proposal

Synopsis: Research students are expected to present a written research proposal within three months after commencement. The proposal is handed in to the study leader.

Assessors of this proposal are selected by the faculty for their understanding of the field and the research involved. The purpose of a research is to set out a plan for conducting the research and writing the dissertation within the available time. It should take account of the availability and guidance of the study leader.

The starting point for a research proposal is the topic, which is the field of interest in which the research is to be carried out. In introducing the topic, the proposal should clarify the field that it falls into and the specific part that field which the research will explore.

It should clarify why the topic is of interest and importance, and how the proposed research will contribute to the filed of knowledge or profession.

It needs to write the research questions and outline the way to demonstrate to answer those research questions.

The proposal should clarify the research questions, ensuring that these are specific and answerable.

It is important to show how these questions relate to the topic are, and how they will advance the student's contribution. The proposal should detail the research to be carried out, and clarify the research methods, the timeframe and the reasons for selecting particular methods.

Where a period of literature review or research should precede any empirical research, this should be factored in as part of the research. It is important to estimate any periods of field research and to flag their duration and cost in your research proposal.

Specific Instruction

You need to submit the following assignment.

Assignment 2

Prepare & submit one proposal for research paper.

The candidates will also required to do the followings

- · Writing Articles related to the field of study OR
- Doing the seminar presentations OR
- Presenting the lectures

They need to attend the conventions, seminars, presentations and workshops

Outcome

The candidates who have completed MAE 601 Research Method (30 Points)

and their thesis proposal are accepted will be awarded IQY Master Diploma in Research Studies (270 Credit Points). After completion of Phase (3), Candidature for Doctoral Study will be admitted.

PHASE (4) Thesis Data Collection and Literature Review

Then the candidates will need to

- (1) Review the references to be used in thesis regarding their relevancy and location to refer and use in thesis
- (2) Collect the quantitative and qualitative data for thesis

Specific Instruction

Before you write, you firstly need to do the following exercise your self

Practice

Read the following literatures and indicate which part of writing and components are relevant to the Phase 6 Thesis Defence-Sample of Assessment Criteria .

To be given

Research Data Analysis Tools

To be given

Sample Paper

To be given

Literature Review Sample

To be given

Sample Textbook

To be given

It is also the beginning of thesis writing. Candidates need to complete a 60000-words dissertation. You should plan the main chapters of your dissertation, determine the topics, allocate the data and reference into each topic and start writing of the chapters. Your completed chapters need to be submitted to your supervisors, receive the advice and edit them as appropriate.

References

To be given

PHASE (5) Thesis Writing

MAE 602 Thesis

Thesis Dissertation for Doctorate

Candidates need to complete a 60000-words dissertation (in Myanmar or English) and a 3000-words executive portfolio (in English).

This program requires the candidates to complete a thesis as part of the assessment for the Doctorate

Doing a thesis / dissertation means that instead of knowledge and information being presented and following a prescribed route for answering questions, candidates are thrust into an active role of managing an investigation into a topic area. This means researching and discovering things for themselves.

They will have to set their own targets and parameters, pose their own central research questions and decide on the appropriate sources of information to support the research. It therefore requires the use of the higher-level cognitive skills of analysis, synthesis and evaluation. Candidates may choose an area of particular interest to them within the scope of course title.

Specific Instruction

It is the main process of thesis writing. You need to write each chapters. Care should be taken for appropriate sequence and relevancy between each chapters. It is important to make sure that all of your writings and presentations must be relevant to the title of your dissertation.

You need to submit the draft of your thesis.

You need to make sure to correct all grammar and spellings mistakes

You need to provide all lists of references in APA Formatting.

Outcome

The candidates who have completed MAE602 Thesis (30 Points) but have not submitted it to St Clements University will be awarded IQY Diploma in Doctorate Studies (300 Credit Points)

PHASE (6) Thesis Defence

BAE801 Thesis Dissertation Assessment and Defence (60 Points)

Doctoral dissertation

A dissertation is an individual effort and the candidate, academic tutor and the course professor will work together on constructing an approved topic (research question) and methodologies.

Dissertation Defence for doctorate

It is expected of Doctoral candidates to defend their thesis by means of a colloquium (academic discussion). The purpose of the meeting is for the candidates to convince a panel of experts in the field of the dissertation how well they have done in the conducting of their research study and the preparation of their dissertation

Candidates need to complete all course assessments with the results of Grade B+ or above.

SAMPLE OF ASSESSMENT

St Clements University Myanmar College PhD degree candidate assessment record

Name of Candidate	
Degree	
Enrolment date	

PART (1) Documentation Assessment (Doctorate Preliminary Level + Phase 1 Study

Purpose	Description	Evidences	Remark
Knowledge			Your subject area study reports will satisfy this aspect

	Graduates of a Masters Degree (Extended) / Doctorate Preliminary Level will have: • a body of knowledge that includes the extended understanding of recent developments in a discipline and its professional practice • knowledge of research principles and methods applicable to the discipline and its professional practice	
Skills	Graduates of a Masters Degree (Extended) / Doctorate Preliminary Level will have: • cognitive skills to demonstrate mastery of theoretical knowledge and to reflect critically on theory and professional practice • cognitive, technical and creative skills to investigate, analyse and synthesise complex information, problems, concepts and theories and to apply established theories to different bodies of knowledge or practice • cognitive, technical and creative skills to generate and evaluate complex ideas and concepts at an abstract level • communication and technical research skills to justify and interpret theoretical propositions, methodologies, conclusions and	Your subject area study reports will satisfy this aspect provided that in your reports, you need to provide your thinking, critical reflection, analysis, justification, decision, review and conclusion

	professional decisions to specialist and non-specialist audiences • technical and communication skills to design, evaluate, implement, analyse and theorise about developments that contribute to professional practice	
Application of knowledge and skills	Phase (2) Research Study Assessment Masters Degree (Extended) / Doctorate Preliminary will demonstrate the application of knowledge and skills:	Completion of Phase 2 Assignment 1

Overall comments for Part 1-Documentation Assessment for Doctorate degree PART (2) Publication Assessment

Phase (3) Research Proposal and Article Contributions Demonstrate the ability to carry out research	Your articles for St Clements University Library Academic Journal Veritas Journals - ISSN 2307-2806 Your research proposal and approval
Phase (4) Thesis Data Collection and Literature Review Organize results	Your Collection of the quantitative and qualitative data for thesis
Literature Review An exhaustive review of work	Your review on the references to be used in thesis regarding their relevancy and location to refer and use in thesis
Defend the approach	In this aspect, your successful action on any question why you choose a particular reference, approach and data.

Criteria	Required Evidence	Remark
Part 1-Features of Thesis		
The Doctoral Degree qualifies individuals who apply a substantial body of knowledge to research, investigate and develop new knowledge, in one or more fields of investigation, scholarship or professional practice	Thesis include Investigation New knowledge Scholarly style writing Relation to Professional Practice	Chapter (1) Introduction and main body of dissertation
Part 2- Research Questions		
Graduates at this level will have systemic and critical understanding of a substantial and complex body of knowledge at the frontier of a discipline or area of professional practice	Ability to write the research questions and demonstrate to achieve the solution for the research questions.	Chapter (2) Why research is to be done and Chapter (3) Determination of research questions.
Part 3-Solution Model		
 expert skills to design, implement, analyse, theorise and communicate research that makes a significant and original contribution to knowledge and/or professional practice 	 Design the solution model Data analysis Reference of theories Knowledge contribution 	Appropriate chapters are to be inserted for fulfilling those tasks.
Part 4-Data Collection and Literature Evidence related to solution	Demonstrate the understanding of the subject Demonstrate the ability to do the research (Qualitative data	Appropriate chapters are to be inserted for fulfilling those tasks.

Graduates of a Doctoral Degree will have: • a substantial body of knowledge at the frontier of a field of work or learning, including knowledge that constitutes an original contribution • substantial knowledge of research principles and methods applicable to the field of work or learning Part 5- Thesis Writing -Plan for writing	 Evidence of substantial knowledge Research knowledge Research Principles Application to field of work Application to learning 	Appropriate chapters are to be inserted for fulfilling those tasks.
communication skills to explain and critique theoretical propositions,		
communication skills to present cogently a complex investigation of originality or original research for external examination against international standards and to communicate results to peers and the community	 Step by step explanation Use the methodologies Apply investigation Refer the relevant standards and references Communicate the results to peers and community 	Your style of writing in all chapters are to be assessed with those criterias.

develop, adapt and implement research methodologies to extend and redefine existing knowledge or professional practice	Write how those facts are related to practical practice, how to improve the current practice, how to develop the skills and knowledge.	Appropriate chapters are to be inserted for fulfilling those tasks.
disseminate and promote new insights to peers and the community	How those methods/ practice are useful to industry and community	Appropriate chapters are to be inserted for fulfilling those tasks.
Part 5B- Thesis Writing -Application of References Graduates at this level will have expert, specialised cognitive, technical and research skills in a discipline area to independently and systematically:	Systematic and scholarly writing in the thesis by quoting the relevant references and how those facts contribute to achieve the answer for the research questions	Your style of writing in all chapters are to be assessed with those criterias.
engage in critical reflection, synthesis and evaluation	Relating the relevant theory to answer the steps of the solutions, construct the solution model and evaluate the each outcomes in the steps	Your style of writing in all chapters are to be assessed with those criterias.
cognitive skills to demonstrate expert understanding of theoretical knowledge and to reflect critically on that theory and practice	Prove that how theory is related to practice	
cognitive skills and use of intellectual independence to think critically, evaluate existing knowledge and ideas, undertake systematic investigation and reflect on theory and practice to generate original knowledge	Usage of intellectual skills Evidence of critical thinking Evaluation of existing knowledge Reflection on theory & practice Systematic Investigation	Your style of writing in all chapters are to be assessed with those criterias.

 expert technical and creative skills applicable to the field of work or learning 	Demonstrate the expert knowledge and creation	Your style of writing in all chapters are to be assessed with those criterias.
Part 5D- Thesis Writing -Finding and Conclusion/ Judgement		
generate original knowledge and understanding to make a substantial contribution to a discipline or area of professional practice	How you can use your knowledge and findings in professional practice.	In final chapter, conclusion and judgements is to be included.
Graduates at this level will apply knowledge and skills to demonstrate autonomy, authoritative judgement, adaptability and responsibility as an expert and leading practitioner or scholar	Evidence of judgement in thesis Evidence of responsibility in data and facts	In final chapter, conclusion and judgements is to be included.

OVERALL ASSESSMENT	
Conclusions in a scholarly manner according to disciplinary norms Graduates at this level will have systematic and critical understanding of a complex field of learning and specialised research skills for the advancement of learning and/or for professional practice	Your study reports and thesis will satisfy this requirement.

The following title format must be used to submit the thesis.

Your name

A dissertation submitted in partial fulfillment of the requirement for the degree of Doctor of XXXX

St Clements University

Year

(Synposis)

ABSTRACT

OBJECTIVE

DECLARATION

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person where due reference is not made in the text.

Overall comments for Part 2-Publication Assessment (SAMPLE)

To be given