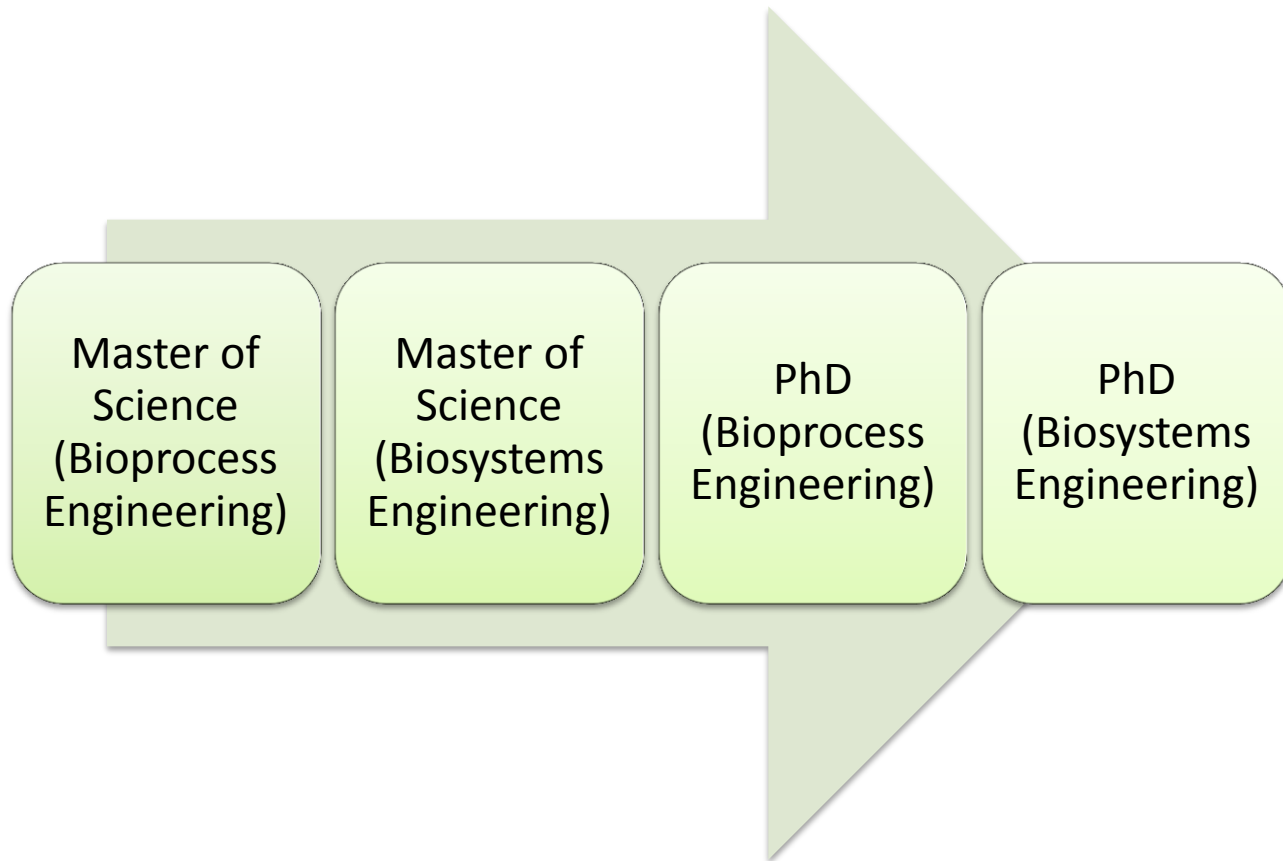


# **1. GENERAL INFORMATION**

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# **FOR POSTGRADUATE STUDIES**

# Postgraduate



# External Examiner



Professor Ir. Dr. Nor Aishah Saidina Amin

Ph. D. (Chemical Engineering) (IIT), Chicago, USA, M.Sc.  
(Chemical Engineering), (UMIST), Manchester, England.  
B.Sc. (Chemical Engineering), California State University at  
Long Beach, USA

Universiti Teknologi Malaysia

# Industrial Advisory Panel (IAP)



**MOHD FAIZAL BIN HAJI AB JALIL**

B. Sc (Env) (UPM),

Member of Asia-Pacific Chemical, Biological &  
Environmental Engineering Society (APCBEES)

Member of Malaysian Scientific Association (MMSA)

**Senior Deputy Director**

Perlis State Department of Environment

# 2. PROGRAMME OBJECTIVES

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(POs)

# Programme Objectives (PO) Statement

## PhD and MSc

No.	Programme Objectives PhD & MSc
PO1	Graduates who are skilled and have extended knowledge that is profound in areas of specific expertise
PO2	Graduates who think critically and capable of analyzing the results of research in their purpose field of interest.
PO3	Graduates who are highly knowledgeable and capable of knowledge and innovation toward new products and services at national/international level.

# 3. LEARNING OUTCOMES

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# Learning Outcomes PhD

No.	Learning Outcomes PhD
1	Show high degree of scholarship in the field of research
2	Contribute to original research that broadens the boundaries of knowledge through thesis writing or dissertation
3	Conduct critical analysis and evaluate along with synthesize of new ideas
4	Plan and perform independent research professionally, ethically and responsibly and able to lead / supervise research projects
5	Report research findings to peers at a level appropriate for publication in the international stage
6	Recognize the need for continuing professional development



# Domain/Cluster of Learning Outcomes

## MQF

### **5 domain/cluster of Learning Outcome:**

- a) Knowledge and understanding
- b) Cognitive skills
- c) Functional work skills with focus on:
  - i. Practical skills
  - ii. Interpersonal skills
  - iii. Communication skills
  - iv. Digital skills
  - v. Numeracy skills
  - vi. Leadership, autonomy and responsibility
- d) Personal and entrepreneurial skills
- e) Ethics and professionalism

# Mapping LO/MQF

Learning Outcomes (LO)					Domain KKM / MQF						
			a	b			c				d e
					i	ii	iii	iv	v	v	i
	1	Show high degree of scholarship in the field of research	/	/						/	
	2	Contribute to original research that broadens the boundaries of knowledge through thesis writing or dissertation	/	/			/	/	/		
	3	Conduct critical analysis and evaluate along with synthesise of new ideas		/	/			/	/		
	4	Plan and perform independent research professionally, ethically and responsibly and able to lead / supervise research projects			/					/	/
	5	Report research findings to peers at a level appropriate for publication in the international stage	/			/	/	/			/
	6	Recognize the need for continuing professional development								/	/
										/	/

# LO Attainment

Learning Outcomes (LO)			Assessment			
			Proposal Defence	Research Progress Report	Publication	Viva Voce/ Thesis
	1	Show high degree of scholarship in the field of research				/
	2	Contribute to original research that broadens the boundaries of knowledge through thesis writing or dissertation	/			/
	3	Conduct critical analysis and evaluate along with synthesize of new ideas				/
	4	Plan and perform independent research professionally, ethically and responsibly and able to lead / supervise research projects	/	/		
	5	Report research findings to peers at a level appropriate for publication in the international stage			/	
	6	Recognize the need for continuing professional development		/		/

# Learning Outcomes MSc

No.	Learning Outcomes MSc
1	Show advanced and continuous knowledge and has the ability to continue to develop or use this knowledge in new situations or in the context of a multidisciplinary
2	Analyse and evaluate critically problems in disciplines in situations with limited information and to provide solutions through the application of appropriate instruments and techniques
3	Assess existing information and research evidence and apply it in the context of engineering
4	Plan and implement research tasks professionally, ethically and responsibly
5	Report technical findings in writing and verbal forms
6	Recognize the need for continuing professional development.

# Mapping LO/MQF (MSc)

Learning Outcomes (LO)			Domain KKM / MQF								
			a	b	c					d	e
					i	ii	ii	i	v		
1	Show advanced and continuous knowledge and has the ability to continue to develop or use this knowledge in new situations or in the context of a multidisciplinary	/	/								
2	Analyse and evaluate critically problems in disciplines in situations with limited information and to provide solutions through the application of appropriate instruments and techniques		/				/	/			
3	Assess existing information and research evidence and apply it in the context of engineering		/	/			/	/			
4	Plan and implement research tasks professionally, ethically and responsibly			/					/	/	
5	Report technical findings in writing and verbal forms				/	/	/		/		
6	Recognize the need for continuing professional development								/	/	

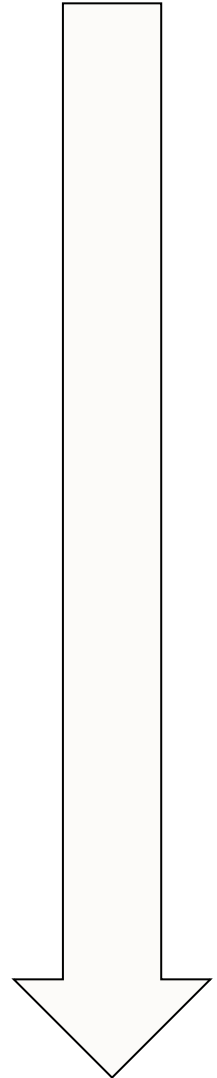
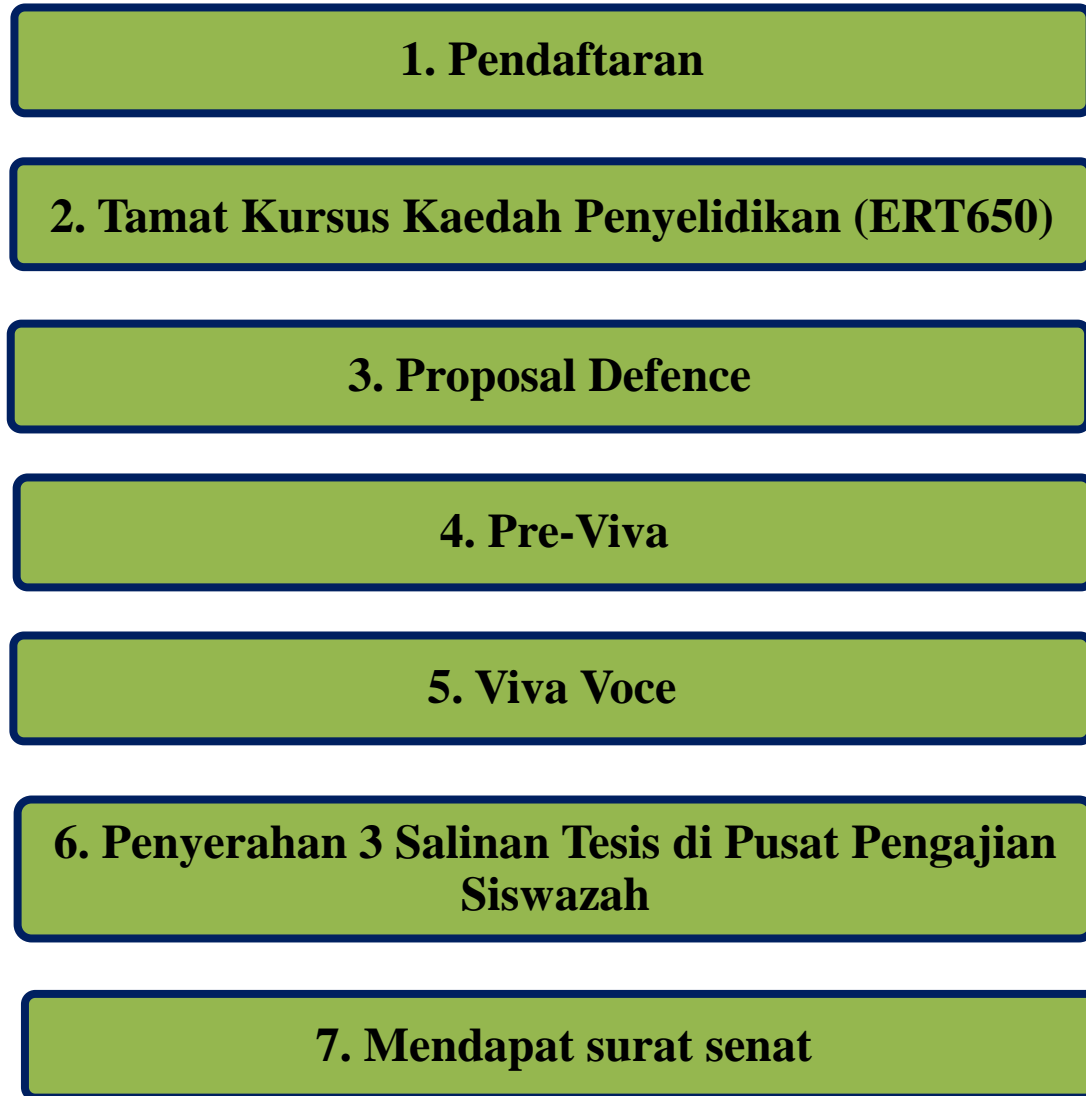
# LO attainment

Learning Outcomes (LO)			Assessment			
			Proposal Defence	Research Progress Report	Publication	Viva Voce / Thesis
	1	Show advanced and continuous knowledge and has the ability to continue to develop or use this knowledge in new situations or in the context of a multidisciplinary		/		/
	2	Analyse and evaluate critically problems in disciplines in situations with limited information and to provide solutions through the application of appropriate instruments and techniques	/		/	
	3	Assess existing information and research evidence and apply it in the context of engineering	/			/
	4	Plan and implement research tasks professionally, ethically and responsibly	/	/		
	5	Report technical findings in writing and verbal forms			/	/
	6	Recognize the need for continuing professional development		/		/

# 4. MSc and PhD process flow

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## **PROSES KEMASUKAN SEHINGGA BERGRDUAT BAGI PELAJAR SARJANA SAINS DAN DOKTOR FALSAFAH**





## **PROSES KEMASUKAN PELAJAR BAGI PROGRAM SARJANA SAINS DAN DOKTOR FALSAFAH**

**1. Permohonan di dalam sistem  
<https://opa.unimap.edu.my/OPAVer2/>**

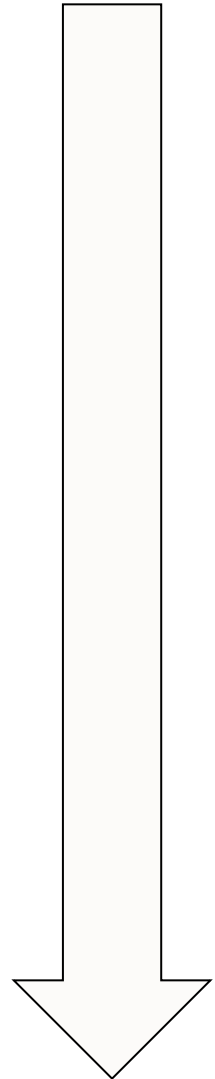
**2. Tapisan/pengesahan peringkat pertama oleh  
Pusat Pengajian Siswah (PPS) UniMAP**

**3. Permohonan dimajukan ke pusat pengajian**

**4. Semua permohonan baru akan dibentangkan  
dalam mesyuarat Jawatankuasa Kecil Ijazah  
Tinggi (JKIT) PPIPT  
- Rujuk lampiran C1**

**5. Semua permohonan yang berjaya dan tidak  
berjaya akan dimajukan ke PPS**

**6. PPS akan mengeluarkan surat tawaran bagi  
permohonan yang berjaya**



# PROPOSAL DEFENCE

## 8.7 Proposal Defence for PhD and MSc

8.7.1 All PhD and MSc students are compulsory to defend their proposal by the following periods:

- **PhD student**

A **Full-Time PhD** student must defend his/her proposal by a period of **1 year** after the main registration.

A **Part-Time PhD** student needs to do so by **a period of 2 years** after the main registration.

- **MSc student**

A **Full-Time MSc student** must defend his/her proposal by a period of **9 months after the main registration**.

A **Part-Time MSc** student needs to do so by a period of **18 months** after the main registration.

# Minimum and maximum period for proposal defence for PhD and MSc after the main (initial) registration

Programme	Mode	Minimum Period	Maximum Period
PhD	Full-Time	6 months	12 months
	Part-Time	12 months	24 months
PhD by Publication (PhD. Pub.)	Full-Time	6 months	12 months
	Part-Time	12 months	24 months
MSc	Full-Time	4 months	9 months
	Part-Time	9 months	18 months

- 8.7.3 Student who **fails** in the proposal defence will be given an interval period of :
  - **6 months for PhD**
  - **3 months for MSc to do a re-defence;**
  - a maximum of **two (2)** re-defence session is allowed.
- \*Implementation of PD is effective for student intake **July 2012** onwards.



# WHERE TO GET PROPOSAL DEFENCE REQUEST FORM?





## Admission

1. PIT27 - Deferment of Registration
2. PIT01 - Postgraduate Application Form RETRACE
3. PIT02- Referee Form
4. PIT03 - Acceptance of Offer As A Postgraduate Student
5. PIT 10 Guidelines To Fill In Health Examination Report
6. PIT25-Student Information Form
7. PIT28-A - Checklist for students registration
8. D-CGS01 (Discount Form - Register January & July)
9. D-CGS02 (Discount Form - Register April & October)

**+ Proposal Defence Notice  
from En. Faizal**

## Candidature Matters

1. PIT04 - Application for Leave, Extension of candidature, Change of Status
2. PIT05A -Evaluation Application For Master-PhD (MSc / PhD)
3. PIT13 - Change of Topic, Change of Research Area,Change of Programme
4. PIT16- Change of Address
5. PIT19 – Change of Supervisor, Appointment of Supervisor, Removal of Supervisor
6. PIT24 - Application for Official Letter
7. PIT26A - Thesis Evaluation Report (Change of Status MSc to PhD)
8. PIT28 - Acknowledgement of Evaluation Panel Conversion From MSc to PhD
9. PIT26C - Recommendation of Evaluation Panel For Research Proposal Defence of MSc or PhD
10. PIT-29-Proposal Defence Result Slip
11. Proposal Defence Request Form
12. Withdrawal Clearance Form
13. Pre-viva Form

## Registration

1. PIT27-A - Late Registration Form



## **PROSES SEBELUM PROPOSAL DEFENSE BAGI PROGRAM SARJANA SAINS DAN DOKTOR FALSAFAH**

**1. Pelajar menghantar borang permohonan proposal defense (proposal defence request form) dan proposal defence notice**

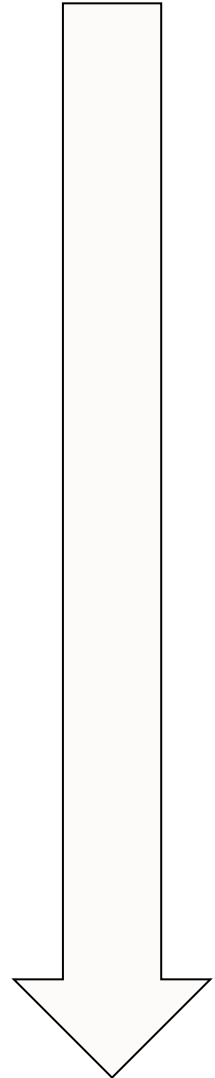
**2. Permohonan dibentangkan dalam mesyuarat JKIT bagi pelantikan pengerusi dan penilai**

**3. Pelajar menghantar 3 salinan tesis yang mengandungi bab 1 ( Introduction) – bab 3 (Research Methodology)**

**4. Penolong pegawai tadbir mengedarkan salinan tesis beserta borang penilaian (PIT26-C) kepada penilai dan borang keputusan proposal defence (PIT 29) kepada pengerusi**

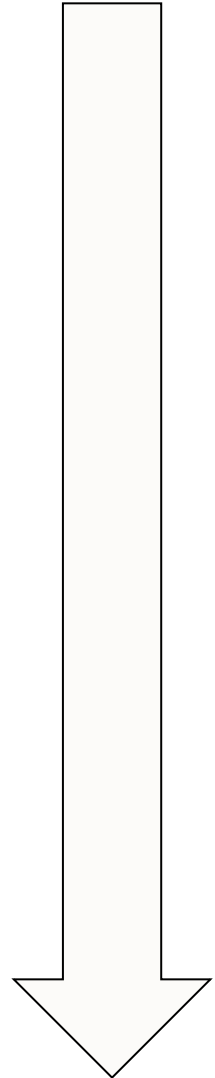
**5. Sesi proposal defense akan dilakukan dalam tempoh 3 – 4 minggu selepas pelajar menyerahkan tesis kepada penolong pegawai tadbir**

**6. Penolong pegawai tadbir akan mengeluarkan emel rasmi makluman proposal defence kepada pelajar, pengerusi dan penilai**



## **PROSES SEMASA PROPOSAL DEFENSE BAGI PROGRAM SARJANA SAINS DAN DOKTOR FALSAFAH**

- 1. Pengerusi akan memulakan sesi dengan memperkenalkan penilai dan pelajar.**
- 2. Pelajar diberikan masa 30 minit untuk membuat pembentangan**
- 3. Sesi soal jawab oleh penilai dan pengerusi akan dijalankan selepas pembentangan**
- 4. Pelajar diminta untuk meninggalkan bilik proposal defence sementara pengerusi, penilai, dan penyelia berbincang tentang keputusan proposal defense**
- 5. Pengerusi menjemput pelajar masuk dan mengumumkan keputusan proposal defense serta melantik PIC untuk menyemak pembetulan tesis**
- 6. Penolong pegawai tadbir akan menyerahkan salinan borang PIT29 & PIT26-C kepada pelajar**



## **PROSES SELEPAS PROPOSAL DEFENSE BAGI PROGRAM SARJANA SAINS DAN DOKTOR FALSAFAH**

**1. Pelajar membuat pembetulan seperti yang dicadangkan oleh pengerusi dan penilai**

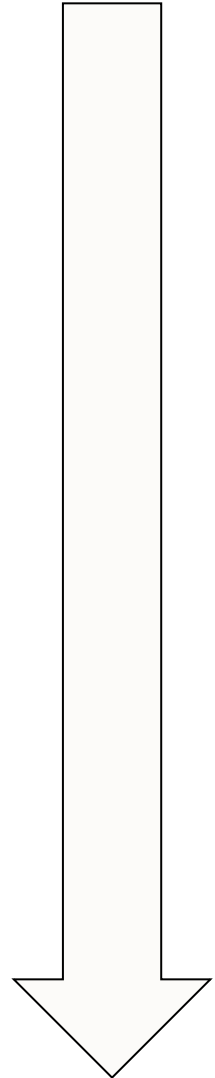
**2. Pelajar menyediakan 'table of correction'**

**3. Bagi keputusan minor correction, pembetulan akan disemak & disahkan oleh pengerusi rancangan atau penyelia**

**Bagi keputusan 'major correction', pembetulan akan disemak dan disahkan oleh salah seorang penilai yang diputuskan semasa proposal defence**

**4. Setelah pengesahan pembetulan dibuat, Pengerusi Rancangan akan menghantar salinan asal borang PIT 29 & PIT 26-C beserta 'table of correction' ke PPS**

**5. PPS akan mengeluarkan surat rasmi keputusan proposal defence kepada pelajar**



## 8.8 MSc / PhD Proposal Defence

8.8.1 While it is compulsory for MSc / PhD student to defend his/her proposal by the period of 1 year after the main registration, s/he may apply through the Centre for Graduate Studies to do so by the period of **6 months** after the main registration.

*Source : Academic Regulations Postgraduate Degree Programmes by Research, CGS, 2016*

Below are the requirements to apply for the defence:

a) Completion of the MSc / PhD evaluation application form **PIT05A**.

b) Submission of the MSc / PhD report which covers:

- The results of the research work
- Research activities such as a publication in journal/ proceeding/article, participation in exhibition and presentation of the research works.

8.8.2 **Failure to apply for the defence within 1 month** after the period of 1 year will cause failure to continue with the PhD, and be demoted to MSc.

8.8.3 Students who **fail** in the defence will be given the period of **3 months** to do a re-defence.

*Source : Academic Regulations Postgraduate Degree Programmes by Research, CGS, 2016*

**PRE- VIVA**

## 10.2 Pre-viva Presentation for PhD and MSc

- 10.2.1 MSc and PhD students are **required to do pre-viva** presentation to present their research outcomes before the submission of eight (8) copies of their theses.
- 10.2.2 Pre-viva presentation is conducted by the school under the arrangement of Postgraduate Programme Coordinator.
- 10.2.3 There is **no assessment** in the pre-viva presentation; however, it will provide the student some relevant experience before attending the final viva-voce.

# IMPORTANT: Thesis Submission Requirement

10.3.1 Students are required to fulfill these criteria before submitting **eight (8) copies** of their thesis:

- ✓ Attend **Postgraduate Studies Orientation** Programme.
- ✓ Attend **Thesis Writing Workshop**.
- ✓ Pass **English Placement Test** (for international students) for those who do not meet English entry requirement.
- ✓ **Pass proposal defence**.
- ✓ **Meet publication requirement** as stated in Section 8.3.
- ✓ Undergone **pre-viva presentation** as stated in Section 10.2.



## **PROSES SEBELUM PRE-VIVA BAGI PROGRAM SARJANA SAINS DAN DOKTOR FALSAFAH**

**1. Pelajar menghantar notis penyerahan tesis PIT 12 (notice of thesis submission)**

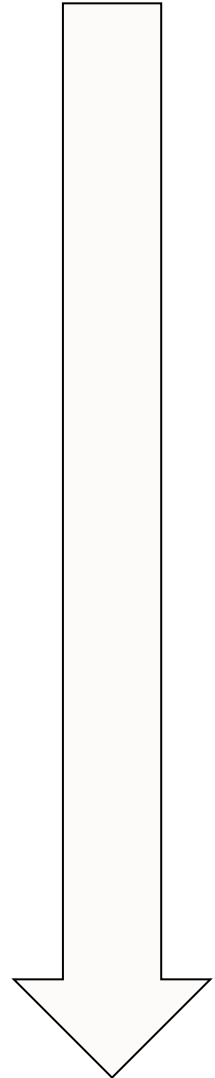
**2. Permohonan dibentangkan dalam mesyuarat JKIT bagi pelantikan pengerusi dan penilai bagi sesi pre-viva serta pengerusi, penilai dalaman dan penilai luar bagi sesi viva-voce**

**3. Pelajar menghantar 4 salinan tesis yang mengandungi bab 1 ( Introduction) – bab 5 (Discussion and Conclusion)**

**4. Penolong pegawai tadbir mengedarkan salinan tesis beserta borang penilaian (PIT26-D) kepada pengerusi dan penilai**

**5. Sesi pre-viva akan dijalankan dalam 3 – 4 minggu selepas pelajar menyerahkan tesis kepada pembantu pegawai tadbir**

**6. Penolong pegawai tadbir akan mengeluarkan emel rasmi makluman pre-viva kepada pelajar, pengerusi dan penilai**



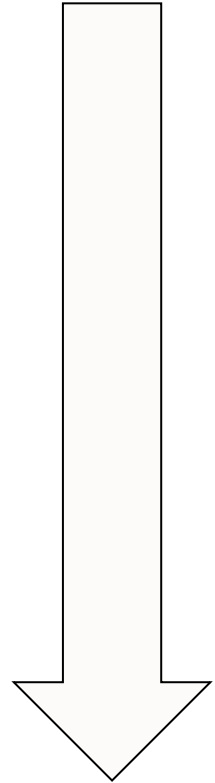
## **PROSES SEMASA PRE-VIVA BAGI PROGRAM SARJANA SAINS DAN DOKTOR FALSAFAH**

**1. Pengerusi akan memulakan sesi dengan memperkenalkan penilai dan pelajar.**

**2. Pelajar diberikan masa 30 minit untuk membuat pembentangan**

**3. Penilai dan pengerusi akan memberikan cadangan penambahbaikan selepas sesi pembentangan**

**4. Penolong pegawai tadbir akan menyerahkan salinan borang PIT26-D dan surat makluman pre-viva kepada pelajar**



## **PROSES SELEPAS PRE-VIVA BAGI PROGRAM SARJANA SAINS DAN DOKTOR FALSAFAH**

**1. Pelajar menghantar satu salinan tesis ke PPS untuk semakan format**

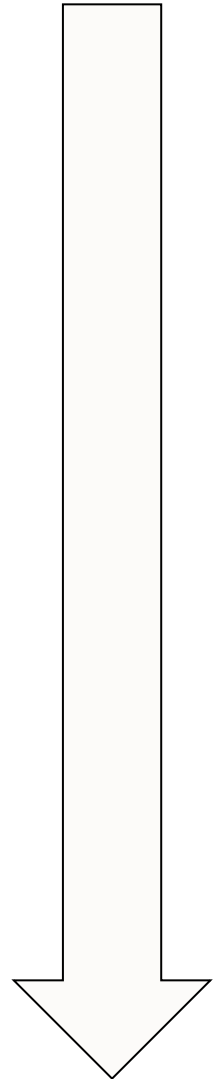
**2. Pelajar membuat pembetulan seperti yang dicadangkan oleh pengerusi dan penilai semasa sesi pre viva**

**3. Pelajar menyediakan 'table of correction'**

**4. Pelajar menyerahkan tesis kepada penilai atau penyelia untuk disemak dan disahkan**

**5. Setelah pengesahan pembetulan dan semakan format telah dibuat, pelajar akan menyediakan 8 salinan tesis**

**6. Pelajar akan menghantar 8 salinan tesis dengan borang PIT17 (thesis submission form), PIT 17 B (similarity index form) dan PIT17 C (publication form) beserta surat makluman pre-viva ke PPS**



# AFTER PRE-VIVA PROCEDURE

- A student has to improve his/her draft of thesis according to comment made by the panels (with an agreement by his/her Supervisor(s)) and also feedback of format checking from CGS.
- Student must do **Table of Correction**, checked by the SUPERVISOR.
- One of the appointed Examiners will check and endorse/approve the Thesis corrections. Upon verification of correction, he/she must **sign Table of Correction**.
- Once completed, a student has to get a memo from Programme Chairperson with a signature of Dean. Memo MUST be attached together with endorsed Table of Correction.  
***Note: without a memo, CGS will not accept 8 copies of final draft of thesis from a student.***
- MEMO will be submitted by **SBE PG Administrative Staff** to CGS.
- A student also has to complete **PIT17** form (similarity, clearance, etc).
- Submit 8 copies of final draft of thesis to CGS.

The background of the slide features a complex, abstract circuit-like pattern. It consists of numerous thin, grey lines that intersect and branch out, resembling a network or a circuit board. Scattered throughout this network are several small, colored squares: red, blue, orange, and purple. Some of these squares are surrounded by small circles, further enhancing the circuit-like appearance. The overall effect is a technical and modern aesthetic.

# THANK YOU