MASSIVE OPEN ONLINE COURSE (MOOC) DEVELOPMENT GUIDELINE FOR POLYTECHNIC MALAYSIA 2018
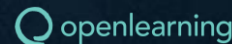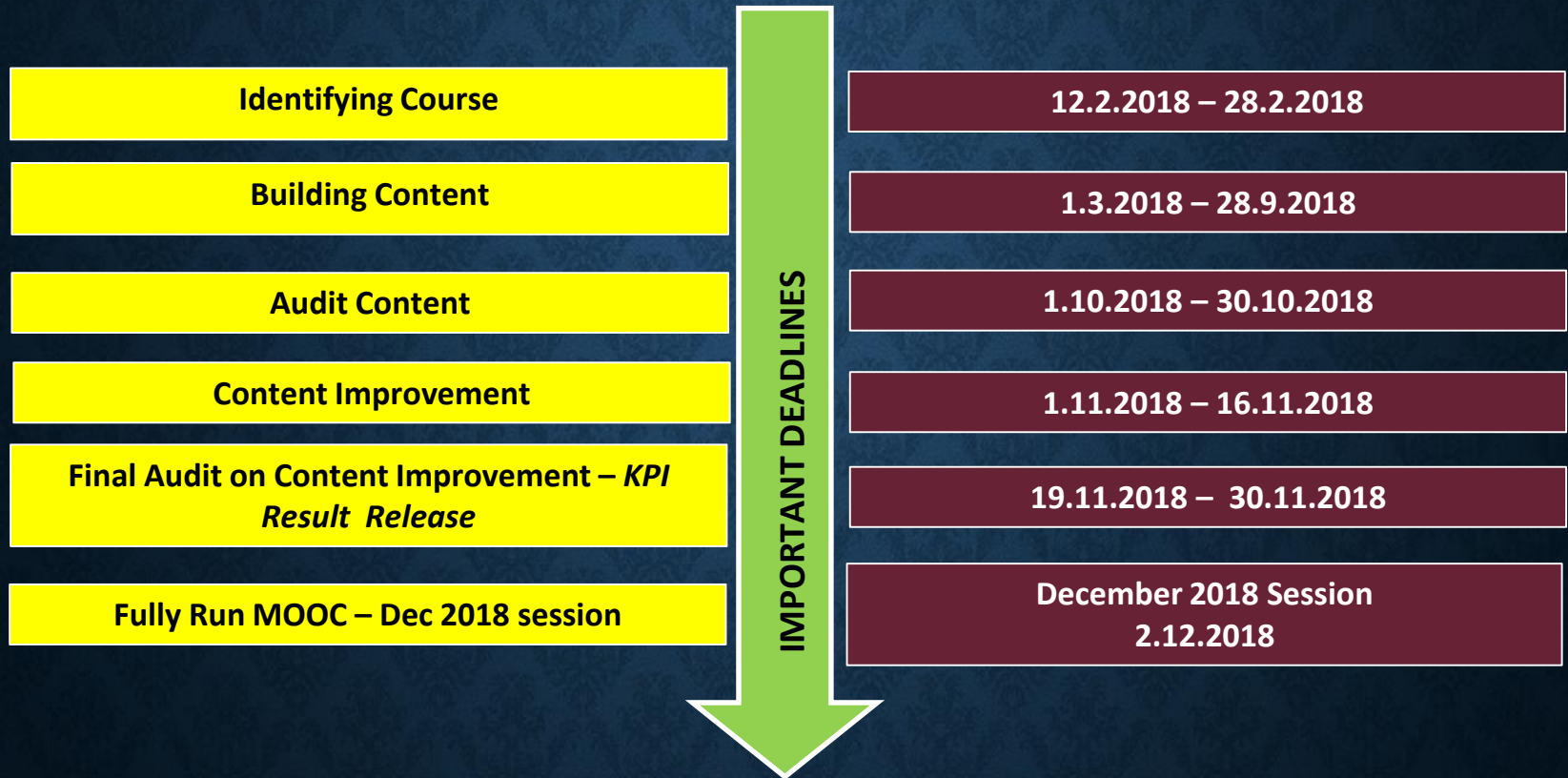
LIST OF CONTENT

INTRODUCTION

• MOOC is one of the initiative carried out to achieve the Shift Nine (9) Globalized online learning of the Pelan Pembangunan Pendidikan Malaysia, Pendidikan Tinggi (PPPM(PT)) and the Dasar ePembelajaran Negara (DePAN).

• This guideline serves as a guide for all Politeknik Malaysia in the process of developing MOOC courses. This comprehensive guide helps to ensure that the development of the MOOC follows the prescribed framework set.

• The development of MOOC stress on the following objectives:

1) Creativity in designing an online teaching and learning package

2) Application of innovative online pedagogies.

3) Creating a socially constructive teaching and learning environment.

4) Increasing Digital Literacy attainment among tutors and students

5) Promoting global online learning

TIMELINE – KPI MOOC 2018

Phase	Deadline
Identifying Course	12.2.2018 – 28.2.2018
Building Content	1.3.2018 – 28.9.2018
Audit Content	1.10.2018 – 30.10.2018
Content Improvement	1.11.2018 – 16.11.2018
Final Audit on Content Improvement – *KPI Result Release*	19.11.2018 – 30.11.2018
Fully Run MOOC – Dec 2018 session	December 2018 Session 2.12.2018

IMPORTANT DEADLINES

IDENTIFYING COURSE

1. Choose a course based on the current curriculum as stipulated in Appendix A.

2. Criteria of choosing the course:

    i) course that are theory based only; or

    ii) course that do not require the use of sources / equipment from

    laboratory/workshop; or

    iii) course that are software based eg: AUTOCAD

    iv) recommended to choose the previous years (2016 & 2017)

    MOOC course as stipulated in Appendix B if condition i,ii and iii are met.

3. MOOC course must be develop as accordance to the current

    curriculum (All topics must be included NOT only one topic).

4. In order to avoid redundancy, please complete the online form in this

    link **https://goo.gl/1rJZXx** for approval by 28th February 2018.

BUILDING CONTENTS

1. Each course should include:

    a. Course Schedule

        - Each MOOC should have course schedule that provides flow of topics, inform learners of the final activity/ major tasks they will required to complete as part of the course completion as stipulated in Appendix C. This course schedule should be insert in the Homepage.

    b. GETTING STARTED

        - Contains information / activity such as:
        - ✓ how to fill-up their OpenLearning profile. (Fasilitator also need to update their profile in OL account.
        - ✓ how to navigate / access useful features on the platform.
        - ✓ brief profile of the facilitators .

    c. VIDEOS

        - ONE promotional video
        - a minimum of SIX content videos of which 3 are self-produced videos and the rest can be obtained from readily available online resources (YouTube, VIMEO etc.)
        - Content video should be upload / embedded in the content page.

BUILDING CONTENTS CONT…

d.   ACTIVITIES

- Each MOOC should have at least THREE to SEVEN combination of learning activities and reflective activities (eg: Quiz, Assignment etc.)

e.   FINAL ASSESSMENT

- Each MOOC should have ONE Final Activity (case study, problem solving etc.) to evaluate the students understanding of the entire course.

f.   FEEDBACK PAGE

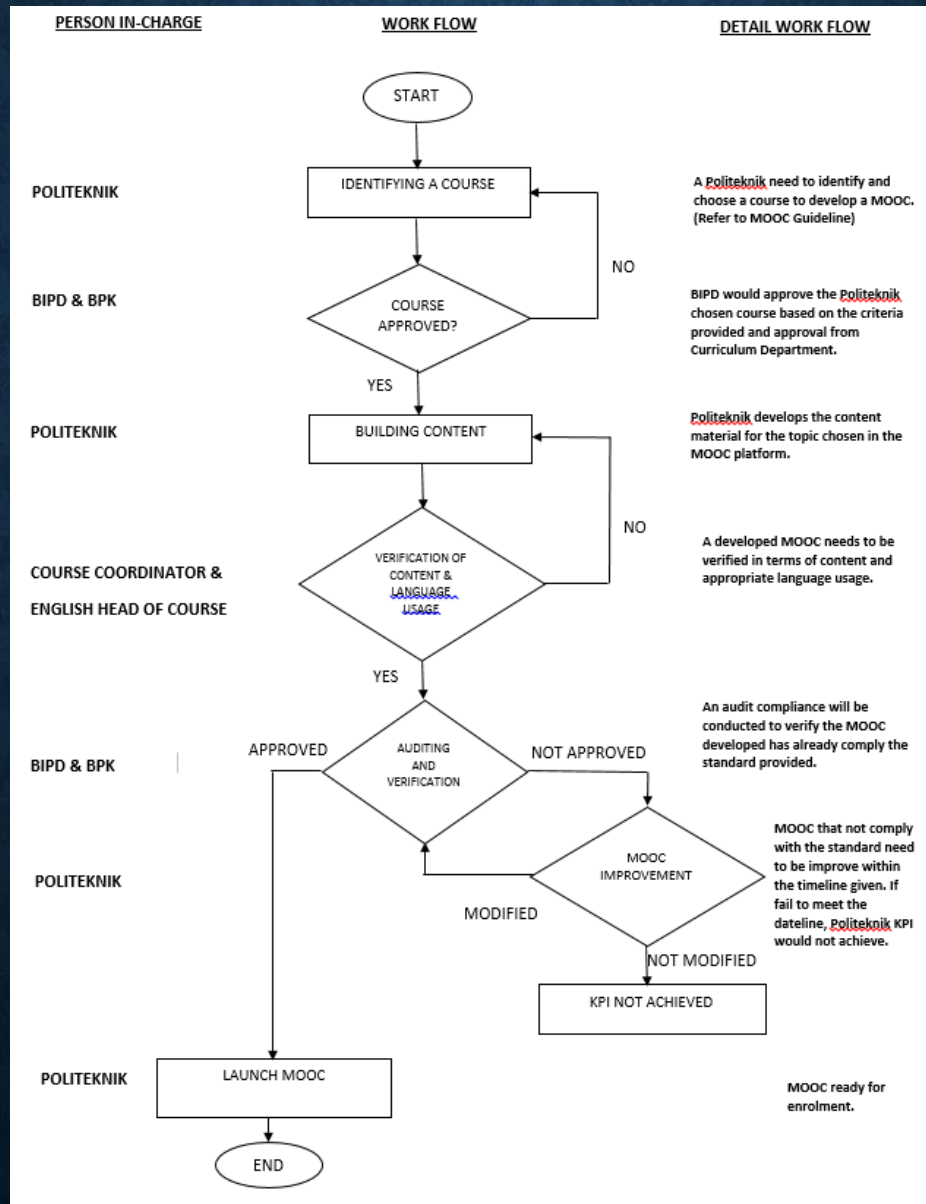- a feedback page to evaluate the MOOC from user point of view. (student and other lecturer)

g.   LANGUAGE

- Use English as the medium of instruction for the course. (this also applies to courses taught in Malay). Eg: Kursus Pengajian Islam.

h.   VERIFICATION

- The MOOC content and language must be verified by Head of Department / Head of Programme and English Lecturer in VERIFICATION FORM as stipulated in Appandix D. This form should be insert in the Homepage.

MOOC DEVELOPMENT FLOWCHART

AUDIT RUBRIC

NO	ITEMS	CRITERIA
A: COURSE LISTINGS PAGE		
1	Course thumbnail	- Inviting image - Relevant to course title
B: PROMOTIONAL PAGE		
1	Course banner	Includes course title and MOOC official institution logo
2	Promotional video	- Self-produced video. - Approx. 3 minutes - Relevant to the topics in the course - Contains information on how the course will be useful for those interested
3	Course synopsis	Contains general information of the course such as: - target audience's learning level, job level, key competencies - estimated time of completion (in hourly format) - how the course will be useful for those interested - information on certification upon completion.
4	Course title	- Inviting title, - Aligned to course objective, - Gives an overview of what the course is about e.g. English for Self-Expression, Introduction to Cyber Security - Sometimes also include level of targeted learners like beginners or advanced e.g. Digital Media Design for Non-Designers
5	Course objectives	Broad statements that describe the results of learning which focus on specified competencies
6	Learning outcomes	Specific statements that describe the measureable objective(s) that learners will attain, using Bloom's Taxonomy and the SMART (Specific, Measurable, Achievable, Relevant, Timely) goal model. - Use active verbs such as describe, identify, analyse - Avoid using words like know and understand - Start with lower level of learning and move towards a deeper level - Visible throughout the course
7	Content outline	- Flow of topics which logically reflects the learning outcomes - Arranged in a logical and meaningful sequence

AUDIT RUBRIC CONT..

NO	ITEMS	CRITERIA
C: HOMEPAGE		
1	Welcoming message for learners	- Message sounds inviting and has a welcoming tone - Attract learners' attention using relevant examples, analogies, anecdotes, quotations, comics, etc. - Recall learners' prior knowledge - Explain learners' and instructors' role
2	Introduction activity (to encourage learners to introduce themselves to the instructor and to one another in order to begin building a 'community of learners'	The activity should enable learners to establish relationship with other learners and the instructor. It should be: - simple enough so as not to demotivate learners at the start of the course - allow learners to share something about them – experience, opinion, prior knowledge of the topic, - gage their motivation for joining the course / wanting to learn the topics in the course
D: GETTING STARTED / BEFORE YOU START / PRE-COURSE KICK OFF		
1	Course orientation / Guide for learners	Contains information / activity that learners need to know / do before starting the course. For example: - how to fill-up their OpenLearning profile - how to navigate / access useful features on the platform. For example, chat, progress page - where to access and download OpenLearning app - information on copyright, disclaimer or view on plagiarism (if necessary)
2	Meet the facilitators	Contains brief profile of the facilitators that will be facilitating the course

AUDIT RUBRIC CONT..

NO	ITEMS	CRITERIA
E: CONTENT		
1	Introduction	- Appears at the start of every topic - Not too lengthy - Relevant to the body of content that follows
2	Detailed content	- Detailed explanation / elaboration / steps / calculations / solutions to explain concepts, where relevant - Arranged in a logical and meaningful sequence - Original (non-plagiarised), accurate, relevant and up-to-date - Adequate coverage of content on each page - Scope of content is specific to the learning objectives (not long-winded) - Cover what would be assessed in activities / final activity / major tasks
3	Visual aids	Relevant graphics / diagrams / pictures where applicable including its original source
4	Learning activities (3 – 7 activities: Combination of learning activities and reflective activities)	Relevant and engaging activities for each module. Activities should be: - aligned to the particular module's learning objectives - application oriented - develop the skills/knowledge needed to complete the final activity / major task - activities are contextual, engaging and student-centred; - require learners to respond to each other and build on one another's thoughts - allow learner to be creative in their choice and implementation of the activity In an online learning environment, it is important for course creators to give specific and clear instructions in order for learners to complete the activities. Instructions should: - inform the learners of the purpose of the activity - inform learners of the skills they will gain at the end of this activity - ensure that learners clearly understood the criteria they will be evaluated - ensure that learners are aware of the materials/product that they need to produce (if applicable) - contain encouraging remarks like "good luck", "have fun" etc.

AUDIT RUBRIC CONT..

NO	ITEMS	CRITERIA
E: CONTENT CONT…		
5	Reflective Activities (3 – 7 activities: Combination of learning activities and reflective activities)	Activities that enable the learners to analyse, reconsider and question their learning experiences e.g. through group discussions, journal writing, portfolios, book or article review. Reflective activities usually: - ask for a synthesis of the learning experience - provide questions that direct the reflection towards understanding of concepts, creative ways to reflect on the lessons and deep reflection on what learners have learnt - open-ended, insightful and non-threatening to the learners - completed over several days or weeks in the course
6	Content Videos	- Minimum 3 self-produced content videos - Minimum 3 existing videos from open sources - (Approx. 3 mins)
7	eNotes	- Embedded slide for eNotes - eNotes can be in a form of pdf, power point or etc. - eNotes can be 1 page or more. - eNotes cannot be a website page. - 5 - 7 relevant enotes
F: FINAL ACTIVITY		
1.	Final activity / major tasks / core activities	Inform learners of the final activity / major tasks they will be required to complete as part of the course completion. It should be: - aligned to course outcomes - consist of more than just questions and answers - apply all knowledge and skills gained from the previous activities learners did in the course - allow learners to learn from the experience of completing this activity - application oriented (focusing on learning by doing) - enable learners to produce a synthesized response or end product -

AUDIT RUBRIC CONT..

NO	ITEMS	CRITERIA
G: OVERALL COURSE DESIGN		
1	Language	- accuracy and appropriacy - written in simple language - written in conversational style (use "I", "We", "You")
2	Feedback Page	- enable learner to provide helpful feedback to the instructor for future course development.
3	Creativity	- using relevant and attractive visuals. - able to grab attention and create interest. - arrangement of content as a whole.
H: OVERALL LEARNING EXPERIENCE		
1	Design of the course will ensure that learners are actively involved in their learning	
2	The learning environment is democratic and not authoritarian	
3	The instructor/ facilitator acts as a facilitator of learning discovery and experience and guide learners' reflection	
4	Learners are encouraged to collaboratively complete a task, to ask questions and engage in inquiry, as well as express, create and share their learning in a variety of ways	

REFERENCES MOOC

- https://online.sunway.edu.my/courses/a-beginner-s-guide-to-coffee

- https://www.openlearning.com/uts/courses/measuring-social-impact

- https://www.openlearning.com/uts/courses/internet-of-things

- https://online.sunway.edu.my/courses/augmented-and-virtual-reality

- Buku Garis Panduan Pembangunan & Penyampaian MOOC Malaysia telah dimuat naik di laman web Jabatan Pendidikan Tinggi dan boleh diakses melalui https://goo.gl/rhTn96

Appendix A

SUGGESTED MOOC COURSES ACCORDING TO POLYTECHNICS

	POLY	PROGRAMS INVOLVED
1	PUO	MARINE ENG; AIR CONDITIONING; BANKING AND FINANCE; ARCHITECTURE (SEM 2 - 3); INFORMATION SECURITY; ENGLISH/MATHEMATICS/SCIENCE
2	PSA	MEDICAL ELECTRONICS; FACILITY MANAGEMENT; INSURANCE ; BUILDING SERVICES; PACKAGING; GSMS
3	PIS	FASHION DESIGN; GRAPHIC DESIGN; INDUSTRIAL DESIGN; MECHATRONIC ENG (SEM 3 – 6); MECH (MATERIALS); ENGLISH/MATHEMATICS/SCIENCE
4	POLIMAS	TOWN PLANNING; MARKETING (SEM 3 – 6); MECH (AUTOMOTIVE); MECH PLASTIC (SEM 1 – 2); MATHEMATICS/ SCIENCE
5	POLISAS	FOOD TECH; SECRETARIAL SC. (SEM 3 – 6); e COMMERCE; ELECTRONIC COMPUTER (SEM 3 – 6); ENGLISH/MATHEMATICS/SCIENCE
6	PKB	QUANTITY SURVEYING (SEM 3 – 6); ELECTRICAL ENG (SEM 3 – 6); MECH (AGRICULTURE); ELEC AND ELECTRONIC ENG (SEM 3 -6); MATHEMATICS/SCIENCE
7	PKS	PETROCHEMICAL; BUSINESS STUDIES (3 - 6); LAND SURVEY (SEM 3 – 6); ACCOUNTANCY (SEM 3 – 6); ENGLISH/MATHEMATICS/SCIENCE
8	PPD	ARCHITECTURE (SEM 5 -6); CIVIL ENGINEERING (SEM 5 – 6); ELECTRONIC ENG COMPUTER (SEM 1 – 2); MARKETING (SEM 1 – 2); ENGLISH/MATHEMATICS/SCIENCE
9	PSP	LOGISTICS ; TEXTILE; MECH MANUFACTURING (SEM 3 – 6); ELECTRONIC COMM (SEM 2 - 3); MECH (PLANT)
10	PKT	ELECTRONIC COMM (2 OR 3 LOs) (SEM 5 – 6); PROGRAMMING (2 OR 3 LOs) (SEM 3 – 6);
11	PKK	WOOD BASED TECH (2 LOs); TOURISM (SEM 2 – 3); BUSINESS STUDIES (SEM 1- 2); QUANTITY SURVEYING (SEM 1 – 2);
12	PMK	INDUSTRIAL BUILDING SYSTEM (2 LOs); INTERNATIONAL STUDIES; MECHANICAL ENGINEERING (SEM 1 -2); ELEC ENG CONTROL
13	PSMZA	MECHANICAL ENGINEERING (SEM 3 – 6); CIVIL ENGINEERING (SEM 2 – 3); ELECTRICAL ENG (SEM 1 – 2); MECH PLACTIC (SEM 3 – 6)
14	PMM	HOSPITALITY/TOURISM (SEM 5 -6); HALAL FOOD PRACTICE; EVENT MANAGEMENT; ENGLISH/MATHEMATICS/SCIENCE

Appendix A cont...

SUGGESTED MOOC COURSES ACCORDING TO POLYTECHNICS

	POLYs	PROGRAMS INVOLVED
15	PTSS	VIDEO AND FILM; DIGITAL ARTS; ELEC OPTOELECTRONIC; GAME TECHONOLOGY
16	PSAS	AUTOMOTIVE DESIGN AND MANUFACTURING ENG (2 LO); RETAIL MANAGEMENT (2 LOs)
17	PTSB	ENGINEERING SURVEY (SEM 1 – 2); MECHATRONIC (SEM 1 – 2); ACCOUNTANCY (SEM 1 – 2); MECH MANUFACTURING (SEM 1-2)
18	PSIS	ENVIROMENTAL SCIENCE (2 LOs); SECRETARIAL SCIENCE (SEM 1 – 2); ARCHITECTURE (SEM 1)
19	PMU	CIVIL ENGINEERING (SEM 1); ELECTRONIC ENG COMM (SEM 1); IT NETWORKING (2LO s) (SEM 3 – 6)
20	PMS	GRAPHIC DESIGN (PRINTING); MECH ENG (AUTOMATION); MECH ENG (PRODUCT DESIGN)
21	PJK	AQUACULTURE; AGRO TECH
22	PNS	HORTICULTURE LANDSCAPE; BIOTECHNOLOGY
23	PBS	AIRCRAFT ENG. MAINTENANCE; ENGLISH/MATHEMATICS/SCIENCE
24	PMJ	IT NETWORKING (SEM 1 – 2) ; ENGLISH/MATHEMATICS/SCIENCE
25	PHT	TOURISM (SEM 1) (2LOs)
26	PSS	AQUACULTURE; AGROTECH
27	PBU	PROGRAMMING (SEM 1 – 2)
28	ALL METrOS	ANY COURSE (ONE PER POLYTECHNIC)

* PTSN – CHEMICAL ENG.; CHEMICAL TECHNOLOGY (FAT & OIL)

LIST OF POLITEKNIK MALAYSIA 2016 MOOC

NO.	INSTITUTION	MOOC TITLE
1	POLITEKNIK IBRAHIM SULTAN (PIS)	EFFECTIVE ORAL PRESENTATION SKILLS
2	POLITEKNIK UNGKU OMAR (PUO)	ENGLISH FOR TVET: HOW TO ACE JOB INTERVIEW
3	POLITEKNIK KOTA KINABALU (PKK)	AUTOCAD
4	POLITEKNIK SULTAN SALAHUDDIN ABDUL AZIZ SHAH (PSA)	FLUID MECHANICS (BERNOULLIS THEOREM)
5	POLITEKNIK MERLIMAU (PMM)	HALAL FOOD STANDARD
6	POLITEKNIK KUCHING SARAWAK (PKS)	PETROCHEMICAL PRODUCTION PROCESS
7	POLITEKNIK PORT DICKSON (PPD)	INTERNAL COMBUSTION ENGINE
8	POLITEKNIK KOTA BHARU (PKB)	PARTIAL FRACTION
9	POLITEKNIK MUKAH (PMU)	ELECTRICAL WIRING
10	POLITEKNIK SULTAN IDRIS SHAH (PSIS)	MULTIMEDIA TECHNOLOGY - VIDEO
11	POLITEKNIK SULTAN HAJI AHMAD SHAH (POLISAS)	DATABASE APPLICATION – TABLE
12	POLITEKNIK SULTAN AZLAN SHAH (PSAS)	OCCUPATIONAL SAFETY AND HEALTH
13	POLITEKNIK TUANKU SULTANAH BAHIYAH (PTSB)	WATER SUPPLLY AND WASTE WATER ENGINEERING
14	POLITEKNIK BALIK PULAU (PBU)	PROBLEM SOLVING AND PROGRAM DESIGN
15	POLITEKNIK SULTAN ABDUL HALIM MU'ADZAM SHAH (POLIMAS)	CONSUMER BEHAVIOR
16	POLITEKNIK SULTAN MIZAN ZAINAL ABIDIN (PSMZA)	PNEUMATIC AND HYDRAULIC
17	POLITEKNIK SEBERANG PERAI (PSP)	WAREHOUSE MANAGEMENT AND OPERATION
18	POLITEKNIK TUANKU SYED SIRAJUDDIN (PTSS)	PREPARING INTERFACE DESIGN

Appendix B cont.. LIST OF POLITEKNIK MALAYSIA 2017 MOOC

NO.	INSTITUTION	MOOC TITLE
1	PUO	MONEY & PROFIT IN ISLAM
2	PSA	PROPERTY INSURANCE
3	PIS	THE EARLY CIVILIZATION AND MEDIEVAL ART
4	POLISAS	MATTER
5	PSMZA	CAN DIESEL CREATE ELECTRICITY?
6	PKB	SCHEDULING MANAGEMENT
7	PTSS	SECTOR OF TOURISM AND HOSPITALITY INDUSTRY
8	POLIMAS	PLANNING PRINCIPLE 1 : TOWN & REGIONAL PLANNING
9	PTSB	NETWORK TROUBLESHOOTING
10	PSP	GEARING REAL STEEL:ROBOT APPLICATIONS
11	PPD	PRODUCE 3D SURFACE MODEL
12	PMM	CAUTION: GOOD FOOD AHEAD
13	PSAS	ENGINE CONSTRUCTION AND VEHICLE CLASSIFICATION
14	PSIS	IBS TECHNOLOGY
15	PKK	EMBEDDED ROBOTIC
16	PKS	SYSTEM ANALYSIS
17	PMU	RECTIFIER
18	PMS	MOTION GRAPHICS PRODUCTION PROCESS
19	PJK	NURSING TECHNIQUE
20	PHT	TOURISM AND HOSPITALITY CAREER OPPORTUNITIES
21	PKT	MOBILE DEVICE OPERATING SYSTEM
22	PNS	HARDY-WEINBERG PRINCIPLE MADE SIMPLE
23	PMK	IBS: CONSTRUCTION THROUGH PREFABRICATION
24	PMJ	HARDWARE INTERFACING
25	PBS	AICRAFT ENGINES
26	PSS	PREPARATIONS FOR GROW OUT CULTURE
27	PMBS	BILL OF EXCHANGE, CHEQUES AND PROMISSORY NOTES
28	PMKU	HALAL SLAUGHTERING
29	PMTG	TYPES OF FILM
30	PMJB	ISLAMIC BUSINESS ETHICS
31	PMKL	A GUIDE TO RETAILERS' WORLD

Appendix C

EXAMPLE OF COURSE SCHEDULE

TOPIC: EFFECTIVE ORAL PRESENTATION SKILLS				
EFFECTIVE ORAL PRESENTATION SKILLS	TOPIC	SUBTOPIC	CONTENT	ACTIVITY
ICE-BREAKING	Introductory Video			**ACTIVITY 1** Let's break the ice!
UNIT 1 GENERATING PRESENTATION IDEAS	1.0 Brainstorming ideas for presentation topics	1.1 Brainstorming is as easy as 123!	**E-NOTES 1** How to brainstorm ideas	**ACTIVITY 2** Draw and post your mind-map here!
		1.2 From topic to Thesis	**CONTENT VIDEO 1** How to construct a good thesis for your speech.	**ACTIVITY 3** Draft and post the thesis of your speech here!
UNIT 2 DEVELOPMENT OF PRESENTATION IDEAS	2.1 Preparing an Effective Opening	2.1.1 General Tips on how to begin your presentation	**CONTENT VIDEO 2** General tips to begin your presentation.	**ACTIVITY 4** Explore and choose a good *YouTube* video *that demonstrates how a speech is delivered.* Explain how the speaker has actually used the tips discussed in Content Video 2 to begin his/ her presentation.
		2.1.2 What is an Effective Opening?	**CONTENT VIDEO 3** Effective Speech Opening	**ACTIVITY 5** **Explore and choose a YouTube video** *that demonstrates an ineffective speech opening.* Explain WHY the speech opening is not effective.
		2.1.3 Introduction to different types of attention grabber	**E-NOTES 2** Using an effective introduction	**ACTIVITY 6** Explore and choose a video that shows how an attention grabber is used effectively by a speaker to introduce his/ her topic. Identify and state the attention grabber used by the speaker.
		2.1.4 The Grand Finale- Draft your speech opening	**CONTENT VIDEO 4** How to start a presentation using an attention grabbing question/statement?	**ACTIVITY 7** Draft your speech opening to show how you will use the chosen strategy to grab your audience's attention!
	QUIZ 1		5 MCQs: Effective Opening	**ACTIVITY 8** MY PERFECT 5!

Appendix C cont..

EXAMPLE OF COURSE SCHEDULE

	2.2 Expressing ideas clearly through elaboration of main points and supporting details	2.2.1 The big E!	**E-NOTES 3** Strategies on how to elaborate points	**ACTIVITY 9** Post at least one (1) main point and three (3) supporting details for your chosen Oral Presentation topic here.
		2.3.1 What is a powerful conclusion?	**CONTENT VIDEO 5** Effective Conclusion	**ACTIVITY 10** Prepare a 50- word conclusion on one of the given speech topics. *Note: Use the tips which have been highlighted in Content Video 5.*
	2.3 Preparing a powerful conclusion	2.3.2 Call2action!	**CONTENT VIDEO 6** CALLING-TO-ACTION	**ACTIVITY 11** Choose one of the given speech topics. Prepare a 50- word conclusion using calling-to-action technique.
		2.3.3 The Grand Finale! - Draft your own conclusion	**E-NOTES 4** How to prepare the conclusion of your speech!	**ACTIVITY 12** Choose one of the techniques that you have learnt, prepare a 50-word powerful conclusion for your speech and post your draft here!
	QUIZ 2!		5 MCQs: Development of points and preparing a powerful conclusion	**ACTIVITY 13** MY PERFECT 5!
UNIT 3 MAKING PROPER TRANSITION BETWEEN THE IDEAS	3.0 Using sign-posting / transition markers	3.1 What do you mean by transitions, really?	**E-NOTES 5** Introduction to signposting/ transition markers	**ACTIVITY 14** **Compare and contrast** the selected TWO (2) videos. Identify the speaker/presenter who has used transitions in the most effective way. Justify your answers.
		3.2 String your ideas!	**CONTENT VIDEO 7** Create powerful links with appropriate transition markers	**ACTIVITY 15** Post your script here and highlight the transition markers that you have used to create the powerful links.
FINAL ACTIVITY				**ACTIVITY 16** MY BIG DAY!
FINAL TEST			40 questions	**ACTIVITY 17** MY PERFECT 40!
A FEEDBACK PAGE			20 MCQs 3 open-ended Qs	**ACTIVITY 18** TELL US WHAT YOU THINK!
TOTAL			**18 ACTIVITIES:** **7 videos, 5 e-notes, 2 quizzes, 1 final test, 1 Final Activity, 1 introductory video, 1 feedback page**	

* Estimation Time for each Content and Activity must be included.

Appendix D

Put Official MOOC Institution Logo

MOOC Title

This MOOC has been verified by:

Course Coordinator	:	_____
Signature	:	_____
Date	:	_____

English Course Coordinator :		_____
Signature	:	_____
Date	:	_____

- Developed by:

- **Center for eLearning and Teaching (CeLT)**

- **Instructional and Digital Learning Division**

- **Department of Polytechnic Education**