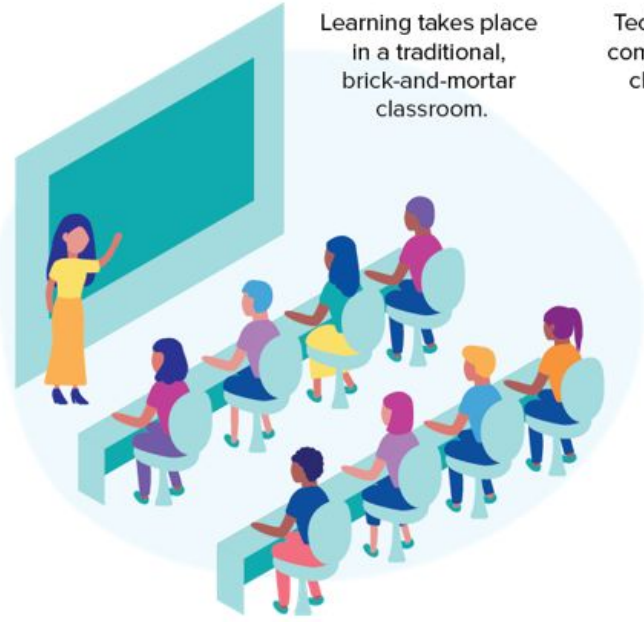




Pembelajaran Teradun Gantian (PTG) & Self-Instructional Materials (SIM) UPM

(Feb 2023)

- 1. Definisi**
- 2. Perbezaan PTS & PTG**
- 3. Julat Item Pelaksanaan PTG**
- 4. SIM**
- 5. Contoh Pelaksanaan**
- 6. Senarai Semak PTG**



Technology is used to complement traditional classroom learning.

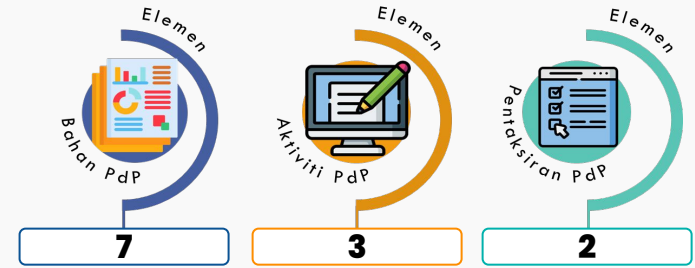
Learning takes place online and offline with online learning replacing some face-to-face instruction.



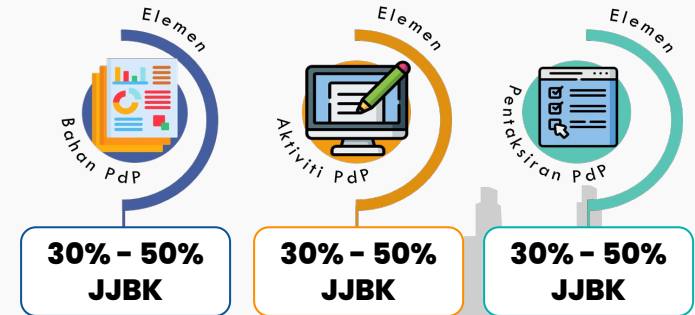
Pembelajaran teradun (*Blended Learning*, BL) merujuk kepada kursus yang mempunyai campuran pendekatan pembelajaran mod dalam talian dan mod pembelajaran bersemuka dengan 30-79% kandungan, aktiviti dan pentaksiran kursus dikendalikan secara dalam talian sama ada **menyokong** atau **menggantikan** pembelajaran bersemuka seperti yang terkandung di dalam Dasar e-Pembelajaran Negara 1.0 (DePAN, 2014) dan (Sloan Consortium, 2010).

Sesuatu program pengajian disifatkan sebagai program ODL jika lebih daripada 60% daripada kursus yang ditawarkan dalam program tersebut dijalankan melalui pembelajaran terbuka dan jarak jauh (COPPA ODL, 2019, Advisory Note No. 1/2023 MQA).

Pembelajaran Teradun Sokongan



Pembelajaran Teradun Gantian



Pembelajaran Teradun Gantian (PTG)

PTG merupakan **pelaksanaan kuliah maya** menggantikan kuliah bersemuka dengan **tempoh maksimum jam kuliah maya 7 minggu** atau 50% jumlah jam bersemuka kuliah (JJBK).

Bilangan item pembelajaran (kandungan, aktiviti dan pentaksiran) **berdasarkan kepada pilihan peratusan (30% hingga 50%)** daripada JJBK dan **perlu mencapai sekurang-kurangnya satu hasil pembelajaran kursus** (rujuk jadual Julat Item Pelaksanaan PTG di bawah).

JJBK	JULAT ITEM PELAKSANAAN PTG								
	28 JJBK			42 JJBK			56 JJBK		
PERATUSAN PELAKSANAAN PTG	30%	40%	50%	30%	40%	50%	30%	40%	50%
Bahan PdP	2-4	3-6	4-7	4-6	5-8	6-11	5-9	7-11	8-14
Aktiviti PdP	2-4	3-6	4-7	4-6	5-8	6-11	5-9	7-11	8-14
Penaksiran	1-2	1-3	1-4	1-4	2-5	2-6	3-5	4-7	6-8
Min . bilangan Kombinasi item	8	11	14	13	17	21	17	22	28

Tempoh Kuliah Maya (TKM) = 1 – 7 minggu

Pembelajaran Teradun Gantian (PTG)

Kursus yang melaksanakan PTG mempunyai kriteria berikut:

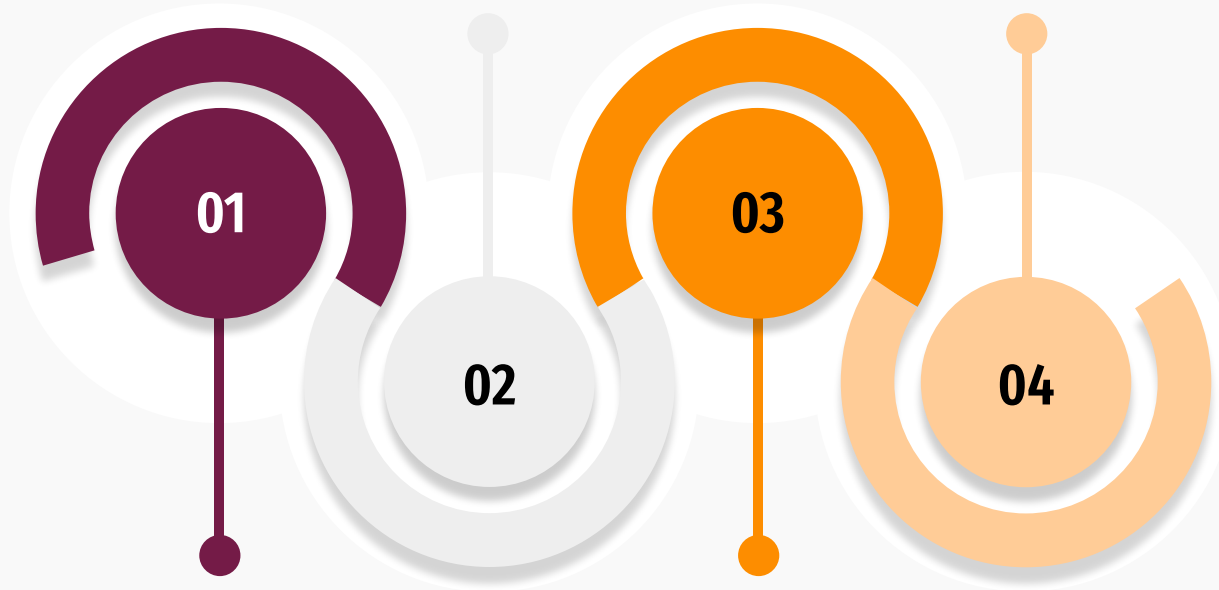
- Pensyarah mempunyai **fleksibiliti bilangan item pembelajaran** di PutraBLAST dengan merujuk julat item pelaksanaan PTG.
- Pelaksanaan PdP dalam talian secara **segerak (synchronous) atau tidak segerak (asynchronous)**.
- Bagi pelaksanaan PdP dalam talian **secara tidak segerak (asynchronous)**, pensyarah **disyorkan menyediakan Self Instructional Material (SIM)** yang lengkap bagi pembelajaran pelajar secara sendiri.
- Rekod kehadiran menggunakan **fungsi Attendance di PutraBLAST** dengan mengambil kira kepelbagaian kaedah akses pelajar ke PutraBLAST.
- Pelaksanaan PTG **tidak terhad kepada satu kursus untuk satu fakulti** atau satu kursus bagi satu pensyarah.



Objektif pelaksanaan PTG di UPM

Menggalakkan pensyarah
mempertingkatkan
kompetensi digital bagi PdP.

Menyediakan pelajar tersedia kemahiran
masa hadapan dengan penglibatan aktif
semasa kuliah bersemuka fizikal dan
maya bagi memupuk minat pembelajaran
sepanjang hayat.



Menyokong fleksibiliti pensyarah dalam
melaksanakan pembelajaran di dalam
kelas dan secara maya.

Menyediakan alternatif dari segi lokasi,
masa dan kaedah bersemuka di antara
pelajar dan pensyarah.

Perbandingan Kriteria Pelaksanaan Pembelajaran Teradun

Mod Sokongan (PTS)



Kriteria



Mod Gantian (PTG) Senat 664/8

30% hingga 79%
daripada JJPP kursus

**Peratusan
pelaksanaann**

30% hingga 79%
daripada JJPP kursus

Disamaratakan dengan jam
kredit kursus

**Implikasi kepada
jam kredit**

30% hingga 50%
dari JJBK

Menyokong penyampaian
pembelajaran bersemuka

**Kaedah
pelaksanaan**

Menggantikan penyampaian
pembelajaran bersemuka

13 item - 7 kandungan, 3
aktiviti, 2 penaksiran & 1
sinopsis kursus

**Item
pembelajaran**
























Minimum 8 item-kursus 28 JJBK
Minimum 13 item-42 JJBK
Minimum 17 item-56 JJBK

Kuliah maya menyokong
kuliah fizikal

Kuliah Maya

Kuliah maya menggantikan
kuliah fizikal dengan
tempoh 1 – 7 minggu

Elemen/Fungsian di dalam PutraBLAST

Kandungan/Sumber		Aktiviti				Penaksiran	
File		BigBlueButtonBN*		Wiki		Quiz	
Folder		Chat*		Database		Assignment	
Page		H5P		Feedback		Workshop	
URL		Forum		External Tool			
SCORM		Choice		Glossary			
IMS content package		Game- Crossword, Game-Cryptex, Game- Hangman, Game- Hidden Picture, Game- Millionaire, Game-Snake & Ladders, Game-Sudoku		Lesson			
	Questionnaire						
	Survey						
						* Serentak	

Penerangan elemen PTG

BAHAN

BAHAN PdP (Secara umum, pembangunan bagi bahan pembelajaran yang berbentuk video, **sepuluh (10) minit video bersamaan dengan 1 jam** bagi JPP)

- Rakaman video (recorded video)
- Rakaman audio (podcast, narration)
- Rakaman skrin (screencast)
- Persembahan berbentuk penceritaan (narrated presentation)
- Animasi dan Perisian Web 2.0 seperti Powtoon, Prezi, Ispring, Adobe After Effect
- Simulasi atau Realiti Maya, Virtual Reality (VR) atau Realiti Luasan, Augmented Reality (AR) atau Realiti Tergabung, Mixed Reality (MR)
- Syarahan dalam/luar kelas (classroom lecture)
- Kandungan interaktif (interactive content) seperti ThingLink, Perisian Multimedia
- Video temu bual (interview video)
- Video praktikal/makmal (practical/laboratory video)
- Rakaman lawatan industri (industry visit video)
- Slaid pembentangan dan infografik
- Dan lain-lain yang bersesuaian

AKTIVITI

AKTIVITI PdP Segerak/Tidak segerak (Secara umum, **1 item bersamaan 1 hingga 1.5 jam** bagi JPP)

- Telesidang seperti webinar
- Portfolio, task, wiki, perbincangan, forum, emel dan chat, feedback, peta minda
- Pelaksanaan aktiviti secara dalam talian menggunakan web 2.0 tool (cth: Kahoot, Padlet) dan menggunakan LMS (cth: forum, chat, dsb).
- Aktiviti boleh dilaksanakan secara fleksibel pada minggu kuliah yang telah dipilih mengikut rancangan mengajar/Proforma/Skema Kerja.
- Dicadangkan aktiviti ini dilaksanakan sebelum/selepas bahan pengajaran disampaikan kepada pelajar

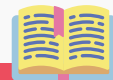
PENAKSIRAN

PENAKSIRAN (Secara umum, **1 item bersamaan 0.5 jam** bagi JPP)

- Dijalankan sepenuhnya dalam talian seperti kuiz, penilaian, tugasan, refleksi, jurnal, portfolio, kajian kes, projek

PTG boleh dilaksanakan secara segerak atau tidak segerak

Segerak	VS	Tidak Segerak
<p>Kuliah maya segerak berlaku pada masa nyata Pensyarah menggunakan bahan pengajaran yang disampaikan secara interaktif dan masa-nyata</p>	Definisi	<p>Kuliah maya segerak berlaku pada masa nyata Bahan pengajaran dibangunkan lebih awal dan interaksi pembelajaran tidak secara masa-nyata</p>
<p>Pembelajaran maya berdurasi 1 jam dan penyampaian kuliah boleh menggunakan telesidang, audio masa-nyata dan lain-lain yang bersesuaian. Contoh: menggunakan webinar dan lain-lain.</p>	Bahan PdP (bagi 1 jam kuliah pembelajaran)	<p>Bahan pembelajaran yang berdurasi 1 jam atau video berdurasi 10 minit. Contoh: rakaman video, animasi, kandungan multimedia dan lain-lain yang bersesuaian.</p>
<p>Aktiviti segerak boleh melibatkan alatan interaksi masa-nyata termasuk perbincangan, pembentangan, forum, konsultansi dan seumpamanya. Contoh: Pick and answer, open ended consultation, perbahasan, pembentangan, perbincangan</p>	Aktiviti PdP	<p>Aktiviti secara dalam talian untuk 1 minggu. Contoh: penggunaan alatan web 2.0, forum, perbincangan, kaji selidik, maklum balas</p>
<p>Menggunakan aplikasi web 2.0 teaching tools atau aplikasi lain yang bersesuaian. Contoh: Quizziz, Kahoot, Google attendance, Padlet, Edpuzzle, Poll Everywhere, Safe Exam Browser dan lain-lain yang bersesuaian</p>	Penaksiran	<p>Pentaksiran berterusan dalam tempoh 1 minggu. Contoh: Kuiz dalam talian, penilaian dalam talian, tugas dalam talian</p>



SIM?

*A Self-Instructional Materials (SIM) is an **educational tool that allows learners to study and learn independently at their own pace.***

*It's designed to provide self-contained and self-directed learning experiences that allows **learners to study and learn new skills or knowledge independently at their own pace** without the need for a teacher or instructor.*

SIMs typically include various components such as texts, illustrations, videos, quizzes, and other interactive elements that help learners to understand the material and assess their understanding.

Template:

1. Title for the lesson
2. Learning outcomes of the lesson
3. Describe the key concepts of the topics in the lesson and relate to real world example
4. Prepare the materials (eg videos, slides, texts, manuals, tutorials) by providing a clear and comprehensive content (include labeled diagrams, steps, examples) and sorted in a logical order
5. Upload the materials and provide instructions on how the students can benefit from each materials. Recommend them to take notes while going through the materials.
6. Explain the activities for the lesson (eg exercise problems to solve with example answers, forum for students to discuss based on the provided materials or links to other resources), and instructions on what the students need to complete, actions they need to perform, how long, and when to complete it
7. Provide an assessment (can be in the form of self-reflection) for the students to give a feedback, or to evaluate how much knowledge they have obtained
8. Conclude the lesson and list the references for the lesson
9. Thank the learner and encourage them to explore the topic further

SIM?

Section title to indicate about the lesson


Week 8-Dynamic programming


In this chapter you are going to cover the following:

1. concepts of dynamic programming
2. difference between DAC and DP
3. optimal solution with and without constraint using DP (example problems as below)


Learning outcome for the lesson

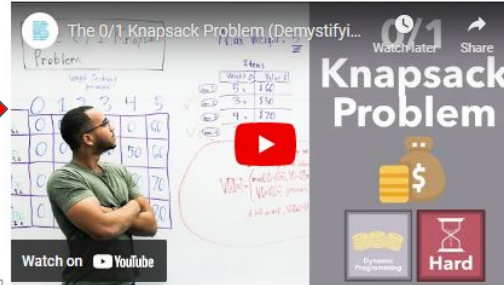
Activity completion setting to track learners 

Instructions to guide learning and key concepts 

 Ch4_Assembly Line Scheduling and 0-1 knapsack

Assembly line scheduling and 0-1 knapsack are examples of an optimization problems that can be solved by dynamic programming. Go through the **slides** on the steps for computing the optimal solution. Then, run the code from <https://www.geeksforgeeks.org/0-1-knapsack-problem-dp-10/> as an example of 0-1 knapsack problem-solving.

Materials can be in the form of **slides** that have **clear and comprehensive explanations** (with steps, numbered, figures), **videos**, texts, url, games or anything suitable 



Extra materials to guide learners 

Begin the lab activity in Week 5 by watching the following video on 0-1 knapsack problem.

 Discussion about optimal solutions using FILA


Hi everyone!

Check out https://docs.google.com/presentation/d/1VzhthFcqClkBeSwaMY5n0TEFc1L1xzzUAxTifXAxY_A/edit?usp=sharing for a self-exercise to assess your understanding on 0-1 knapsack. Then, EACH OF YOU SHOULD share your answers in the forum, and let's discuss how your and your friend's answers are different from yours. I will upload a

Your reply to this forum will be regarded as your attendance on 16th Dec 2022.

Thank you in advance for your commitment.

Rgds

Asynchronous activity through forum for self-reflection 



SELF-INSTRUCTIONAL MATERIALS CRITERIA

Self-Learning

Self-learning refers to the process of acquiring knowledge and skills without the guidance or assistance of a teacher or instructor.

Self-explanatory

Self-explanatory refers to something that is clear and understandable without the need for additional explanation.

Self-contained

Self-contained refers to something that is complete or self-sufficient, and does not require external input or support.



Self-motivating

Self-motivating refers to the ability to generate motivation from within oneself, without relying on external rewards or incentives.

Self-directed

Self-directed refers to the ability to take charge of one's own learning or decision-making process.

Self-evaluating

Self-evaluating refers to the process of assessing one's own performance or progress, often in relation to a specific goal or standard.



Contoh arahan dan penerangan bagi bahan pembelajaran

contoh
1

Take a look at the video explaining the concept of [topic name] and don't forget to take your notes!

contoh
2

Learn about [topic name] by watching this video. Prepare your notes in concept maps and then upload it in the forum. Comments to your friends' sketches.

contoh
3

Discover how [topic name] work and their applications by watching this video. I recommend you to take your notes and compare the characteristics of each algorithms in a table.

contoh
4

Get a better understanding of [topic name] by watching this informative video.



contoh
5

Dive into the world of [topic name] with this insightful video.

Self-Instructional Materials Checklist

- ✓ Educator and contact information
- ✓ Module title, learning outcomes, outline
- ✓ Module comprising learning materials, activities and assessment should align with learning outcome
- ✓ Module description and learning instruction
- ✓ Labeled diagram with explanation
- ✓ Reflection/Self-assessment/Self-review
- ✓ Summary and conclusion
- ✓ List of reference materials
- ✓ Consistent design style
- ✓ Learning materials are well organized

SIM Contents

	Notes
	Video
	Powerpoint Slide
	Text
	Articles
	Audio
	Pictures
	Infographics





Senarai Semak Pelaksanaan PTG

Langkah 1 : Perancangan

1. Fakulti mendaftarkan permohonan kursus PTG ke dalam sistem OSCAR
2. Pensyarah menyediakan rancangan pengajaran dan bahan pembelajaran
3. Pensyarah mengenal pasti jumlah jam kuliah maya yang akan dilaksanakan
4. Pensyarah menghadiri latihan kaedah penyampaian terbaik bagi pengajaran dalam talian
5. Pelajar dimaklumkan berkenaan maklumat minggu kuliah maya dan arahan bagi penglibatan di dalam aktiviti PdP.

Langkah 2 : Semasa Pelaksanaan

1. Pensyarah melaksanakan PTG dengan kaedah penyampaian terbaik bagi pengajaran dalam talian.
2. Pelajar menjalani kuliah maya (segerak atau tidak segerak). Kehadiran direkodkan menggunakan fungsi *Attendance*, atau dianalisis menggunakan fungsi *Log*.
3. Pentadbir, CADe dan IDEC menyediakan sokongan pelaksanaan

Langkah 3: Selepas Pelaksanaan

1. Pensyarah melaporkan cadangan penambahbaikan berterusan bagi pengajaran kursus (*course assessment summary*)

Paparan Pembelajaran Teradun di sistem OSCaR

(learninghub.upm.edu.my -> OSCaR -> Blended Learning)

The screenshot displays the OSCaR system interface. At the top, there is a navigation bar with the URL <https://oscar.upm.edu.my/ta/action.do?do=2HX2oR4sMTSeDMybtZEV4fHQMq3XsKtUljRw8+ON2M=&tab=bl> and a welcome message for NURFADHLINA BINTI MOHD SHAREF. The main content area is divided into several sections:

- REPORTS** (left sidebar): Includes links for "Archive - Teaching Assessment" and "LOG OUT". It also contains contact information for inquiries regarding Teaching Assessment and Online Lab/Practical Survey.
- TEACHING ASSESSMENT** (top navigation): Includes tabs for "BLENDED LEARNING", "ONLINE LAB SURVEY", and "ONLINE PRACTICAL SURVEY".
- Mode Selection** (top navigation): Includes buttons for "IN-CAMPUS", "DIPLOMA", "MEDIC", "FOUNDATION STUDIES", and "MBA".
- Faculty Achievement** (main content): A table showing academic performance for the semester session 2022/2023-1. A dropdown menu is open over the "BL MODE" column, showing options: "PTS", "PTG", and "ALL".
- Course-Group** (main content): A table showing details for a specific course and lecturer.

Faculty Achievement Table:

NO.	ACADEMIC PTJ	TOTAL COURSE-GROUP	BL STATUS COURSE	BL STATUS (%)
1	FAKULTI SAINS KOMPUTER DAN TEKNOLOGI MAKLUMAT	96	91	94.79%

Course-Group Table:

NO.	COURSE & LECTURER INFO	MODE	JJBK	INFO	CONTENT / RESOURCES	ACTIVITIES	ASSESSMENT	%	STATUS
1	SSK4106-1 REKA BENTUK DAN ANALISIS ALGORITMA/DESIGN AND ANALYSIS OF ALGORITHMS PROF. MADYA DR. NURFADHLINA BINTI MOHD SHAREF	PTG	42	(1)*	(7)*	(3)*	(2)*	0%	✓

Terima kasih dan sila hubungi kami

