

Curriculum Builder User Documentation

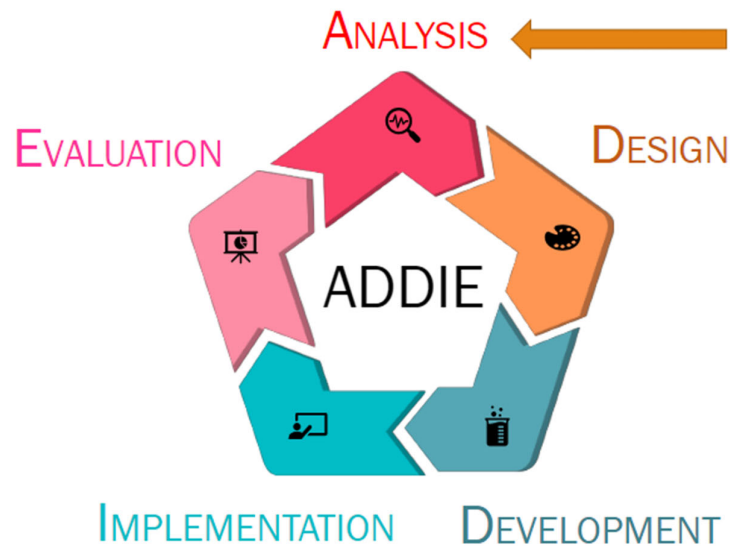
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Introduction

Hello and welcome to the Curriculum Builder Web Application, an ITE CED project in collaboration with Amazon Web Services (AWS).

This Curriculum Builder is an early-stage tool that will assist you in the curriculum design process. Specifically, it fits into the “Analysis” stage of the ADDIE curriculum development model, where it will supplement the needs and task analysis in the context of the job role.



This document will guide you through use of the Curriculum Builder, including customization options and features.

Accessing the Application

Access to the application is blocked by default to prevent unauthorized use. For access request and other related enquiries, please contact the System Administrator.

The Curriculum Builder Web App can be accessed through this link: <https://curr-builder.ite.edu.sg/>

You will be prompted to sign in through your Microsoft 365 ITE account.



You are currently not authenticated. Please click [here](#) to sign in.

Generating Skills Standard from Existing Course

Select a Large Language Model

There are currently 3 models to choose from: Claude 3.5 Sonnet, Claude 3 Sonnet and Claude 3 Haiku.

Claude 3.5 Sonnet is the most performant and cost-effective model, while Claude 3 Haiku is the fastest.

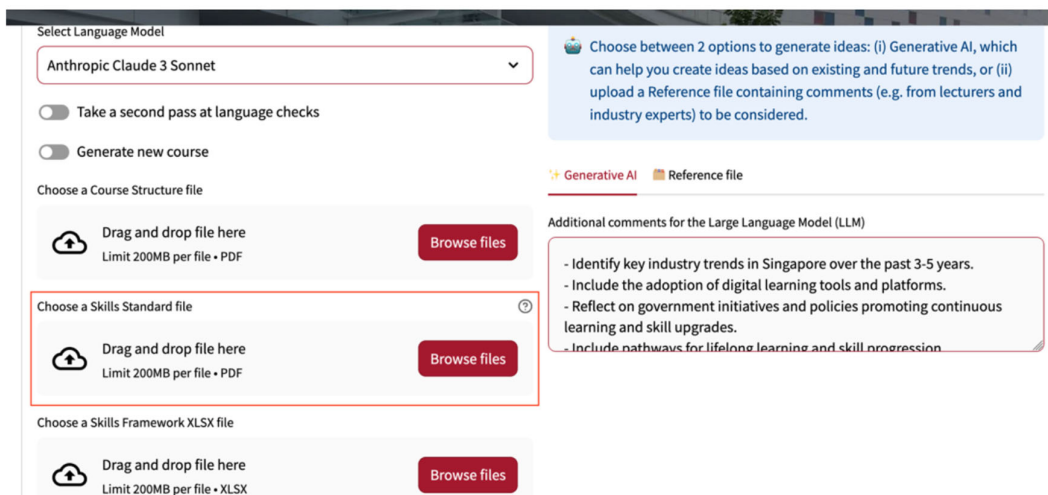


Settings

Select Language Model

Anthropic Claude 3 Sonnet

Upload Skills Standard from Nitec/Higher Nitec or Certificate of Competency course



Select Language Model

Anthropic Claude 3 Sonnet

☐ Take a second pass at language checks

☐ Generate new course

Choose a Course Structure file

Drag and drop file here
Limit 200MB per file • PDF

Browse files

Choose a Skills Standard file

Drag and drop file here
Limit 200MB per file • PDF

Browse files

Choose a Skills Framework XLSX file

Drag and drop file here
Limit 200MB per file • XLSX

Browse files

Choose between 2 options to generate ideas: (i) Generative AI, which can help you create ideas based on existing and future trends, or (ii) upload a Reference file containing comments (e.g. from lecturers and industry experts) to be considered.

Generative AI Reference file

Additional comments for the Large Language Model (LLM)

- Identify key industry trends in Singapore over the past 3-5 years.
- Include the adoption of digital learning tools and platforms.
- Reflect on government initiatives and policies promoting continuous learning and skill upgrades.
- Include pathways for lifelong learning and skill progression.

Upload Singapore SkillFuture Skills Framework Document (optional)

If you would like the app to reference the SFW document when generating the response, you can upload a copy of the SFW dataset. This dataset can be found through this link:

https://www.skillsfuture.gov.sg/docs/default-source/skills-framework/skillsframework_dataset_2024_06.xlsx?sfvrsn=e99944b6_31 or through the SkillsFuture Singapore website.

Other Input Prompts

There are two methods for further prompting of the LLM: Through User Prompts (Generative AI) or using a Reference File

- a) Generative AI: A default text prompt is provided in the Generative AI section. Feel free to modify this prompt to fit your use case.

Choose between 2 options to generate ideas: (i) Generative AI, which can help you create ideas based on existing and future trends, or (ii) upload a Reference file containing comments (e.g. from lecturers and industry experts) to be considered.

Generative AI **Reference file**

Additional comments for the Large Language Model (LLM)

- Identify key industry trends in Singapore over the past 3-5 years.
- Include the adoption of digital learning tools and platforms.
- Reflect on government initiatives and policies promoting continuous learning and skill upgrades.
- Include pathways for lifelong learning and skill progression.

- b) Reference File: You may also upload a reference file in .pdf format. This can be meeting minutes, DACUM charts, competency profiles, or even your own written notes!

NOTE: The reference file takes precedence over Generative AI. Be sure to delete the reference file upload if you would like to proceed with using Generative AI instead.

Generate Course Outline

You are now ready to generate some content! Under section 2a, you are free to input more guidelines for generating the course outline, such as how many modules you want the output to contain.

Once you are ready, hit the Generate button, which will produce the initial list of modules and competencies for the job role.

2. Content Generation

2a. Generate new Course Outline

Additional comments for generating new Course Outline

- If there are multiple modules in <OUTLINE> tag, you generate up to 8 modules in the <modules> tag; however, if there is only 1 module in <OUTLINE> tag, you update that 1 module in the <modules> tag.
- Each module in the <OUTLINE> tags are existing modules and may have more than 5 competencies now. However, when you generate the updated modules in the <modules> tag, each of the new or updated module must have 4-5 competencies only.

2b. Generate new Performance Criteria

Additional comments for generating new Performance Criteria and Technical Knowledge

- For each competency in the module, generate an updated list of around 3-5
- It is not necessary that the number of performance criteria and technical kn

The output will show the original Modules and Competencies on the left, while the new Course Outline will be provided on the right side.

Original Outline

M1: Dementia Care

S/N	Competencies
1	Apply prescribed strategies in managing behaviours
2	Carry out therapies under supervision
3	Conduct prescribed structured / group activities to enhance a purposeful and meaningful life
4	Establish a therapeutic relationship
5	Provide support to caregiver / significant others
6	Assist in end of life issues and Palliative care in the Person with Dementia

New Outline

5 Support caregivers through continuous learning and skill development

Justification: The module name has been updated to reflect the incorporation of lifelong learning concepts. The competencies have been revised to align with current industry trends and best practices in dementia care. The first competency has been updated to emphasize the use of evidence-based strategies, which is crucial in providing effective and appropriate care. The second competency has been added to address the adoption of digital learning tools and platforms, which is a key industry trend in Singapore. This competency will equip learners with the skills to leverage technology in dementia care. The third competency has been modified to focus on facilitating structured activities that enhance the quality of life for persons with dementia, which is a holistic approach to care. The fourth competency has been retained as establishing therapeutic relationships is a fundamental aspect of dementia care. The fifth competency has been updated to include supporting caregivers through continuous learning and skill development, which aligns with government initiatives and policies promoting lifelong learning and skill upgrades. The competency related to end-of-life issues and palliative care has been removed as it is a specialized area that may not be covered in depth in this module.

[Download Course Outline](#)

You may download the new Course Outline (as Markdown with justifications) for your reference.

Generate Performance Criteria

This section will use your generated Course Outline as input to generate a set of accompanying Performance Criteria and Technical Knowledge statements.

You may optionally input further user prompts for this section. For example, the default prompt instructs the LLM that each competency should have 3-5 performance criteria and 3-5 technical knowledge. These values can be modified to fit your use case.

2. Content Generation 🚀

2a. Generate new Course Outline 📄

Additional comments for generating new Course Outline

- If there are multiple modules in <OUTLINE> tag, you generate up to 8 modules in the <modules> tag; however, if there is only 1 module in <OUTLINE> tag, you update that 1 module in the <modules> tag.
- Each module in the <OUTLINE> tags are existing modules and may have more than 5 competencies now. However, when you generate the updated modules in the <modules> tag, each of the new or updated module must have 4-5 competencies only.

2b. Generate new Performance Criteria

Additional comments for generating new Performance Criteria and Technical Knowledge

- For each competency in the module, generate an updated list of around 3-5 performance criteria and 3-5 technical knowledge.
- It is not necessary that the number of performance criteria and technical knowledge are the same for each module.

Once you are ready, hit the Generate button! This may take some time, depending on the length of your course.

In the output, the new outline will be on the left-hand side and the new performance criteria and technical knowledge will be on the right-hand side.

New Outline

M1: Dementia Care and Lifelong Learning

S/N	Competencies
1	Apply evidence-based strategies in managing dementia-related behaviors
2	Utilize digital tools and platforms for dementia care
3	Facilitate structured activities to enhance quality of life
4	Establish therapeutic relationships with persons with dementia
5	Support caregivers through continuous learning and skill development

Justification: The module name has been updated to reflect the incorporation of lifelong learning concepts. The competencies have

New Performance Criteria and Technical Knowledge

M1: Dementia Care and Lifelong Learning

Competency 1: Apply evidence-based strategies in managing dementia-related behaviors

Performance Criteria	Technical Knowledge
Evaluate dementia-related behaviors using standardized assessment tools and observation techniques.	Describe the common dementia-related behaviors and their underlying causes.
Select appropriate evidence-based strategies to manage specific dementia-related behaviors based on assessment findings.	Explain the principles and techniques of evidence-based strategies for managing dementia-related behaviors.

There are 2 downloadable output files for this section: the updated Skills Standard as well as Course Markdown. The Course Markdown contains the justification for each change.

Incremental Refinements

Both Generate Course Outline and Generate Performance Criteria sections can be modified further using the Incremental Refinements feature below the initial text box. This feature allows for regeneration of the output using additional text prompt instructions.

Incremental refinements

What would you like to change about the generated Course Outline?

Remove 1 least relevant competency from each module

Regenerate

Incremental refinements

What would you like to change about the generated Performance Criteria?

Ensure that all Performance Criteria start with only 1 verb from Bloom's Taxonomy, and ensure that each sentence only has 1 verb

Regenerate

Simply type in the instruction and click on Regenerate. The existing output will be modified to incorporate these instructions.

Do note that this will result in a complete regeneration of the output, so it is recommended that you save the existing output for reference. Because of this, it is not recommended to use the Incremental Refinements feature to remove specific lines of text in the output. It is more efficient and cost-effective to make minor alterations to the output manually.

Token Control

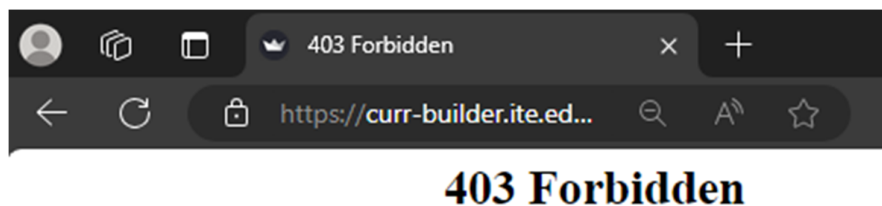
Since the application is hosted on AWS Government Commercial Cloud (GCC), usage charges apply. Users who are granted access are automatically given 1 million tokens monthly, translating to about five full end-to-end course generations. This number will vary depending on the size of input and output. For example, a CoC course will use much fewer credits than a full 3-Year Higher Nitec course.

Once this limit is reached, access to the application will automatically be blocked. You will not be able to access the application until the 1st of the following month, where another 1 million tokens will be allocated to your account.

Note that in this current version, token usage data is tracked and controlled only through the backend dashboard. Token usage data is not visible to users within the UI.

Known Bugs and Issues

403 Forbidden Error



Occasionally, the “403 Forbidden” error will show up when attempting to access the Curriculum Builder. This is due to security settings that block repeated attempts to send requests to the site within a short time frame. While we work to fix this error, the solution is to wait a few minutes and refresh the page.

Keyword not found

Due to the way the app parses input documents, specific keywords are needed to tell the app where certain information is located. As the wording between documents may change from author to author, there is a possibility of encountering a “keyword not found” error, such as the ones shown below.

```
ValueError: This app has encountered an error. The original error message is redacted to prevent data leaks. Full error details have been recorded in the logs (if you're on Streamlit Cloud, click on 'Manage app' in the lower right of your app).

Traceback:
File "/usr/local/lib/python3.9/site-packages/streamlit/runtime/scriptrunner/exec_code.py", line 88, in exec_func_with_error_handling
    result = func()
File "/usr/local/lib/python3.9/site-packages/streamlit/runtime/scriptrunner/script_runner.py", line 579, in code_to_exec
    exec(code, module.__dict__)
File "/app/text_app.py", line 941, in <module>
    current_module_details = extract_details(uploaded_file1, st.session_state.details_start_page, end_keyword)
File "/app/text_app.py", line 324, in extract_details
    raise ValueError("End keyword not found.")
```

```
ValueError: This app has encountered an error. The original error message is redacted to prevent data leaks. Full error details have been recorded in the logs (if you're on Streamlit Cloud, click on 'Manage app' in the lower right of your app).

Traceback:
File "/usr/local/lib/python3.9/site-packages/streamlit/runtime/scriptrunner/exec_code.py", line 88, in exec_func_with_error_handling
    result = func()
File "/usr/local/lib/python3.9/site-packages/streamlit/runtime/scriptrunner/script_runner.py", line 579, in code_to_exec
    exec(code, module.__dict__)
File "/app/text_app.py", line 787, in <module>
    course_structure_outline_pages = extract_table_content(uploaded_file, start_keyword, end_keyword)
File "/app/text_app.py", line 275, in extract_table_content
    raise ValueError("Table start or end keyword not found on the first page.")
```

In this case, please forward the error as well as the file in question to sean_lim@ite.edu.sg so that the app’s keyword registry can be updated to accommodate the file.