

AI CENTRE FOR EDUCATIONAL TECHNOLOGIES (AICET)

REQUEST FOR PROPOSALS

I. BACKGROUND

Artificial Intelligence (AI) is rapidly transforming various industries. The field of education is no exception as it is also poised for significant disruptions and advancements.

NUS recognises the potential for AI to enhance our educators' capabilities and to provide new opportunities for impactful and effective teaching and learning. To this end, AICET has been tasked to support NUS educators in making full use of these advances to drive pedagogical innovation within the higher education landscape. The long-term goal is for NUS to become a global thought leader in pedagogical and EdTech innovation.

AICET will provide consultancy services to allow our educators to take full advantage of AI to develop groundbreaking approaches in education – not as a substitute to what educators do best, but as an augmentative tool to enhance both the learner's ability to learn effectively, and to teach better.

AICET's pedagogical consultancy services are meant to fulfil the following two aims:

1. **Assist faculty members to apply AI to enhance teaching:** This involves providing both pedagogical and technical guidance to help faculty develop new and creative solutions to address existing challenges they face in teaching and learning.
2. **Discovery of innovative applications of Generative AI (GenAI):** This involves identifying new uses of GenAI that can either enhance existing teaching and learning practices, or that can lead to the development of new teaching and learning practices and activities that were previously not possible.

II. CONSULTANCY SERVICES

AICET will be providing consultancy services aimed at empowering our NUS community of educators to fulfil the above-mentioned aims. Our consultancy services include:

1. **Pedagogical Guidance:** Providing expert pedagogical guidance to aid with the development of new teaching and learning practices, as well as guiding the implementation of AI that best support student learning.

2. **AI and Technical Support:** Offering technical assistance and advice to ensure effective integration and use of AI technologies.
3. **Software Engineering Assistance:** Providing support for the development of new educational tools, if required.
4. **Student Support:** Facilitating student involvement in the design, implementation, and evaluation phases to ensure practical relevance and effectiveness.

Note: Support is provided in the form of expertise and technical resources from specialists, not financial support.

Based on the submitted proposals, AICET will select a number of applications to work with in each round. Some proposals might not be selected because of resource constraints and is not only a matter of quality or merit.

III. **ELIGIBILITY**

Application is open to all faculty teaching members of NUS, working either individually or in small groups.

IV. **THEMES**

Effective innovations in teaching and learning are rooted in efforts to address existing problems in one's teaching practice. To help applicants identify potential directions for possible educational innovations, we have categorised problems around six themes. These themes revolve around common challenges in education, and they serve to clarify and scope the objectives of the project.

Applicants are invited to submit proposals based on at least one of the themes below, demonstrating how they intend to use AI to address an issue that may fall under the selected themes.

Theme	Description
1. Metacognition	Students may have difficulty understanding their own thought processes and approaches to learning, they may lack self-awareness regarding their strengths and weaknesses, struggle with self-assessment, and have trouble monitoring and adjusting their learning strategies.
2. Self-Regulation & Self-Directed Learning	Students may struggle with setting goals, tracking their progress, and managing themselves when tasked to learn independently. They may also struggle to maintain their motivation amidst challenges, setbacks, or when they feel too overwhelmed.
3. Critical Thinking & Problem Solving	Students may find it challenging to analyse information critically, decompose complex problems into manageable components, and apply appropriate problem-solving strategies.
4. Communication Skills	Students may not be able to communicate and cooperate effectively with their peers during discussions. They may struggle to articulate their thoughts clearly or are anxious with public speaking or participating in class discussions. They may also struggle with expressing their needs clearly to access the support they require.
5. Efficiency	Some tasks consume excessive time for teachers and students without contributing to meaningful learning objectives. Educators may be weighed down by routine administrative duties, while students face time-consuming tasks that add to their stress and frustration. Could AI help to streamline these processes or alleviate some of these challenges?
6. New Opportunities for Teaching & Learning	Traditional teaching methods may not fully address the diverse needs and preferences of students in how they learn. There may be gaps or even limits in how effectively these methods engage and support different types of learners.

V. EVALUATION CRITERIA

The following criteria will be considered in the evaluation and selection of proposals:

Criteria	Description
Clarity	<ul style="list-style-type: none">• The purpose and need are clearly stated and justified throughout the application.
Feasibility	<ul style="list-style-type: none">• The project activities and methods involving students should be able to be carried out within one semester and appropriate to the project's intended learning outcomes.• The proposal demonstrates how the project would enhance student learning.
Evidence-Based	<ul style="list-style-type: none">• Proposal should be grounded in current education research and/or empirical evidence.
Impact	<ul style="list-style-type: none">• Indicates potential impact for a significant number of students or the potential to support a group of students with specific needs.• The enhancement or impact on teaching and learning can be clearly documented.
Outcomes/ Assessment	<ul style="list-style-type: none">• The proposal defines the goals and specific aims of the project, outlines the learning outcomes, and demonstrates how these outcomes will be assessed and shared with the wider NUS community.• The proposal articulates the deliverables to be produced by the end of the project, and what one will do to share project findings and insights with other faculty members in the NUS community and beyond.
Transferability or Scalability	<ul style="list-style-type: none">• Describes how the project might benefit or serve as a model for other courses or sections, ideally supported by empirical data or pedagogical research.• The activity or tool could potentially be adapted to benefit other disciplines, programs, or target student groups.
Plan for long-term sustainability	<ul style="list-style-type: none">• The support from AICET will be for a limited period. If the project is successful, the applicant should have a plan of how the project can be self-sustaining beyond the period of the approved project.

Note: AICET is limited by our available resources and can only support a certain number of projects at any given time. If your project is not selected, it does not necessarily reflect the quality of the proposal.

VI. **SUBMISSION OF PROPOSALS**

Proposals are to be prepared using the form at Annex A. There will be two calls for proposals each academic year.

All proposals are to be submitted to AICET at ask-aicet@nus.edu.sg by **3 Oct 2024 (1st Call)** or by **3 Feb 2025 (2nd Call)**.

VII. **TIMELINE**

There will be two calls during the academic year:

1st Call (Semester 1)

Early Sep 2024	Call for Proposals opens
Sep 2024	Evaluation of proposals. Applicants might be contacted for more information.
Early Oct 2024	Call for Proposals closes
Nov 2024	Outcome from call for proposals announced
Nov 2024	Consultation sessions with shortlisted applicants for refinements to the project, scoping of consultation needs, and guidance on developing the project
Nov 2024	Project commencement
15 Jan 2025	Start of AY24/25 Sem 2

2nd Call (Semester 2)

Early Feb 2025	Call for Proposals opens
Feb 2025	Evaluation of proposals. Applicants might be contacted for more information.
Early Mar 2025	Call for Proposals closes
Apr 2025	Outcome from call for proposals announced
Apr 2025	Consultation sessions with shortlisted applicants for refinements to the project, scoping of consultation needs, and guidance on developing the project
May 2025	Project commencement
11 Aug 2025	Start of AY25/26 Sem 1

Important Notes:

- For projects involving NUS courses, AICET will generally support the development and implementation of the project within one semester. To ensure adequate time for planning and integration into your course, we highly recommend starting the project at least a month before the semester begins.
- Projects that are not tied to NUS courses can have a longer period of support. Applicants can choose to propose projects that are not tied to implementation during the semester and propose a suitable duration up to a maximum of one year.