

【ご案内】「IJECT2025（国際高校生工学コンピテンシー・テスト）」へのご招待

拝啓

貴校のますますのご発展を心よりお祈り申し上げます。平素より国際教育交流へのご理解・ご協力を賜り、厚く御礼申し上げます。

このたび、弊社 TECH INFINITY INTERNATIONAL SOLUTIONS CO., LTD.（教育イノベーション・能力開発部門：EICD Office）では、タイと日本の**高等学校に在籍する高校生**を対象とした国際教育イベント

「IJECT2025（International Junior Engineering Competency Testing）」を下記の通り開催いたします。

イベント概要：

- **日程**：2025年6月6日（金）
- **時間**：9:00～16:00（予定）
- **会場**：京都国際会館（Kyoto International Conference Center）
- **対象**：高校1～3年生（高等学校在籍者）
- **参加費**：無料（※交通費・宿泊費は各自ご負担ください）
- **実施内容**：
 - ・英語による3MT（Three Minute Thesis）スピーチ ※スライドなし
 - ・学術記事に基づく筆記試験と個別インタビュー
 - ・異文化交流セッション
- **特典**：
 - ・参加者全員に「国際参加証明書」授与
 - ・昼食の提供あり
 - ・**最高得点者に賞金15,000円（約100USD）を授与**

募集要項：

- 貴校より**最大10名の高校生**をご推薦いただけます（先着順）
- プレゼンテーマは、生徒自身が選定した信頼性の高い学術論文（例：ScienceDirect）や自主研究に基づくものとします
- 筆記試験およびインタビューは、主催者が指定する**4本の英語学術記事**に基づき実施されます（事前配布）

添付資料：

1. プログラム概要
2. 申込書（Application Form）
3. 3MT準備ガイドと論文選定の案内
4. 指定学術記事リスト（英文）

つきましては、貴校の生徒様のご参加をご検討いただきたく、何卒よろしくお願い申し上げます。

ご不明な点がございましたら、お気軽にお問い合わせください。

参加をご希望の場合は、**申込書に必要事項をご記入のうえ、2025年5月30日（金）までに本メール宛にご返信ください。**

敬具

2025年5月吉日

TECH INFINITY INTERNATIONAL SOLUTIONS CO., LTD.

教育革新・能力開発部門（EICD Office）

代表取締役社長：Mr. Thanaprad Chantarasena

Email: eicd@th-tiis.com

電話番号: +66-2-686-1202（内線1）

ウェブサイト：www.techeducationth.com

参加申込書 / APPLICATION FORM

国際高校生工学コンピテンシー・テスト (IJECT2025)

International Junior Engineering Competency Testing (IJECT2025)

📅 開催日 : 2025年6月6日 / Date: June 6, 2025

📍 会場 : 京都国際会館 / Venue: Kyoto International Conference Center

生徒情報 / Student Information

項目 / Item	記入内容 / Details
氏名 (英語) / Full Name (in English)	
氏名 (カタカナ) / Name in Katakana	
性別 / Gender	☐ 男 / Male ☐ 女 / Female ☐ その他 / Other
生年月日 / Date of Birth	(日/月/年 / DD/MM/YYYY)
学年 (2025年時点) / Grade (as of 2025)	☐ 高校1年 / Grade 10 ☐ 高校2年 / Grade 11 ☐ 高校3年 / Grade 12
学校名 / School Name	
学校所在地 / School Address	
食事制限 (ある場合) / Dietary Restrictions (if any)	

連絡先 / Contact Information

項目 / Item	記入内容 / Details
生徒メールアドレス / Student Email	
携帯電話 (任意) / Mobile Number (optional)	
保護者氏名 / Parent or Guardian Name	
緊急連絡先電話番号 / Emergency Contact Phone	

発表情報 / Presentation Information

項目 / Item	記入内容 / Details
発表予定テーマ (英語) / Tentative 3MT Topic (in English)	
専門分野 (科学・工学など) / Scientific/Engineering Field	

※ テーマは後日変更可能です。参考資料「論文の選び方ガイド」を添付しています。

Note: The topic may be revised later. A guide to article selection is included.

参加同意 / Declaration

私は上記の内容が正確であることを確認し、学校および主催者の指導のもと、IJECT2025に参加することに同意します。

I certify that the above information is accurate and agree to participate in IJECT2025 under the guidance of my school and the organizer.

生徒署名 / Student Signature _____ 日付 / Date: _____

教員または保護者署名 / Teacher or Guardian Signature _____ 日付 / Date: _____

📧 提出先メールアドレス / Submit via Email: eicd@th-tiis.com

📅 提出期限 / Deadline: 2025年5月30日 / May 30, 2025

🚫 ※ 参加費無料。昼食・資料・参加証明書が含まれます。交通・宿泊は各自で手配をお願いします。

Participation is free of charge and includes lunch, materials, and international certificate. Travel and accommodation are self-arranged.

IJECT2025 プログラム概要

TECH INFINITY INTERNATIONAL SOLUTIONS CO., LTD. 教育イノベーション・能力開発部門（EICD Office）は、教育技術およびコンピテンシー（能力）ベースの学習の推進において先進的な役割を果たしている団体です。タイ国内に強い基盤を持ち、EICD Office は数多くの国際的な教育プログラムを成功裡に開催してきました。その中には、

- IMCT-SS (International Medical Competency Testing for Senior Students) 国際医療能力試験
- IEDAT (International Engineering Aptitude Development and Testing) 国際工学適性開発・評価試験

が含まれます。

これらの取り組みにより、国境を越えた学術的な連携が促進され、生徒たちは世界レベルの学術・研究機関との貴重な接点を得ることができています。

コンピテンシー評価プログラムの開催実績



- IMCT-SS 2023

マレーシア・クアラルンプールのマラヤ大学にて開催。アジア各国から優秀な医学生が参加しました。



- IMCT-SS 2024

日本・京都国際会議場にて開催予定。国際的な医療教育と協力関係の強化を継続するイベントとなっています。

今回の開催：「IJECT2025」

これまでの経験をもとに、EICD Office は高校生を対象にSTEM教育の推進と工学分野の人材育成を目的として、

International Junior Engineering Competency Testing (IJECT2025) を主催します。

IJECT2025 は、国際的な視点から高校生の工学的知識とスキルを評価・育成することを目的としたプログラムです。参加者は研究機関や大学と連携した実践的な活動を通じて、国際レベルでの自己能力を高めることが期待されます。

3MTプレゼン準備ガイド (Junior Three Minute Thesis)

目的

限られた3分間で、選んだ学術的なテーマについて、スライドを使わずに口頭のみでわかりやすく発表するプレゼンテーションコンテストです。

研究や論文の内容を、聴衆や審査員が短時間で理解できるように構成力と表現力が求められます。

準備ステップ

1. テーマ選び

- 以下のいずれかから選択できます：

- 学術論文データベース（例：ScienceDirect、SpringerLinkなど）から興味ある論文
- 信頼できる学会誌や公開研究報告書
- 自分が取り組んでいる研究プロジェクトや探究活動

- 選んだテーマが**「なぜ重要か」「どんな応用があるか」**を語れる内容であることが理想です。

2. スクリプト（原稿）の作成

- 難解な専門用語の使用は避け、高校生にも理解できる表現を選びましょう。

- イントロ → 研究の課題 → 解決法 → 社会的意義、の流れで構成すると分かりやすいです。

3. 時間配分の確認

- 発表は3分以内に必ず収めてください。練習時にスマホのタイマーなどを使って調整しましょう。

プレゼンのポイント

- 声のトーン・話すスピードに注意し、抑揚をつけましょう。
- 聴衆を意識して、「なぜこの話が重要なのか」を常に伝える姿勢を持つと好印象です。
- 記憶に残るフレーズや例え話を加えると印象に残ります。

インタビュー準備のヒント（4～5分）

対象セクション：Engineering Research Topic Interview & Discussion

- 3MTで選んだテーマについて、追加の質問を受ける形式です。
- 質問例：
 - 「なぜこのテーマを選びましたか？」
 - 「この研究は将来どのように役立ちますか？」
 - 「あなた自身はこの技術にどう貢献したいですか？」

準備のアドバイス

- 発表テーマに関する背景知識を英語で簡単に説明できるようにしましょう。
- 模擬面接を家族や先生と一緒に練習するのもおすすめです。

 本資料は [IJECT2025] の参加者向けガイドラインに準拠しています。

ご不明点は eicd@th-tiis.com までお問い合わせください。

[公式サイトを見る](#)

学術記事に基づく筆記試験とインタビュー

(IJECT2025 | 2025年6月6日 京都国際会議場)

セクションA：筆記試験（40%）

パート1：工学基礎知識と応用（20%）

- 形式：英文記事に基づく選択式問題（5択）＋理由記述
- 時間：30分
- 問題数：15問
- 内容：工学の基本概念や理論を理解し、応用的な思考力を評価する

 記事①：[スマート製造のためのナレッジグラフの活用：研究テーマと展望](#)

 記事②：[展開型シザー構造：分類と応用](#)

パート2：工学研究レビュー（20%）

- 形式：英文研究記事に基づく選択式問題（5択）＋理由記述
- 時間：30分
- 問題数：15問
- 内容：工学分野の研究論文を読解し、主要なアイデアとその意義を理解する

 記事③：[組織工学戦略の進化：細胞由来から遺伝子活性化マトリックスへ](#)

 記事④：[再生可能エネルギーを活用した最新の蓄電システムによる水ポンプ応用](#)

セクションB：インタビュー・口頭試問（30%）

- 形式：個人面談（英語）
- 時間：1人4～5分
- 内容：上記4つの中から1つの学術記事を選び、研究の要点や技術的背景、社会的意義を説明する
- 試験官からの質問に口頭で答えることで、理解力と論理的説明力を評価

準備のポイント：

1. 指定された4つの学術記事を事前に精読し、内容を把握する
2. 自分の言葉で要点をまとめる練習をする
3. 研究がどのような課題に役立つかを考え、応用事例も理解しておく
4. 各記事について3～5つのキーポイントをメモする
5. **「なぜこの研究が重要か」「どんな影響があるか」**という質問に答える練習をする
6. 明確で自信のある話し方を意識する

注意事項：

記事の事前読解は必須です。筆記試験でも面接でも、論文内容の理解が高得点に繋がります。

TIIS/EICD-25V05

10 May 2025

Subject Invitation for Participation in the International Junior Engineering Competency Testing (IJECT2025) – June 6, 2025

Dear Sir/Madam,

We are pleased to extend a formal invitation to your school to participate in the International Junior Engineering Competency Testing (IJECT2025), hosted by TECH INFINITY INTERNATIONAL SOLUTIONS CO., LTD., on June 6, 2025, at the Kyoto International Conference Center, Kyoto, Japan.

This one-day international academic event brings together Thai and Japanese high school students to engage in a Three-Minute Thesis (3MT)-style presentation in English. The event also promotes international collaboration, scientific communication, and cross-cultural understanding.

Event Overview:

- **Event:** International Junior Engineering Competency Testing (IJECT2025)
- **Date:** June 6, 2025 (1-Day Participation)
- **Venue:** Kyoto International Conference Center, Kyoto, Japan
- **Time:** 09:00 – 16:00 (JST)
- **Format:**
 - 3-Minute Thesis (3MT) academic presentation in English
 - Peer interaction and international collaboration
 - Lunch provided for all participants
 - Each student will receive an International Certificate of Participation

Participation Details:

- **Quota:** Up to 10 high school students per institution
- **Eligibility:** High school students (Grades 10–12 or equivalent)
- **Language:** English (basic communication; coaching materials provided)
- **Participation Fee:** **Free of charge**
- **Travel:** Self-arranged (students to arrive/depart independently)

Registration: Please submit the completed Application Form by **June 30, 2025**, via reply to this email.

We have included a brief 3MT Preparation Guide and a Reference Guide for Selecting Academic Articles to help students prepare effectively for their presentation.

Should you have any inquiries, we would be happy to provide further information or arrange an online briefing.

We look forward to welcoming your students to this meaningful international experience.

Best Regards



(Mr. Thanaprath Chantarasena)

Director, Educational Innovation & Competency Development Office
TECH INFINITY INTERNATIONAL SOLUTION CO., LTD.

PROJECT SUMMARY

INTERNATIONAL JUNIOR ENGINEERING COMPETENCY TESTING : IJECT2025

09:00 AM – 5:00 PM (GMT+9), 6 June 2025 | Kyoto International Conference Center , Japan

Overview

TECH INFINITY INTERNATIONAL SOLUTIONS CO., LTD. – EDUCATIONAL INNOVATION & COMPETENCY DEVELOPMENT OFFICE (EICD Office) is a leader in advancing education technology and competency-based learning. With a strong presence in Thailand, EICD Office has successfully organized various international educational programs, including IMCT-SS (International Medical Competency Testing for Senior Students) and IEDAT (International Engineering Aptitude Development and Testing). These initiatives have fostered cross-border collaborations and provided students with exposure to world-class academic and research institutions.

History of Our Competency Testing Programs



- **IMCT-SS 2023:** Hosted at the University of Malaya, Kuala Lumpur, Malaysia, bringing together top medical science students from across Asia.



- **IMCT-SS 2024:** Scheduled at Kyoto International Conference Center, Japan, continuing the mission of enhancing medical education and international collaboration.

Building on this experience, EICD Office is now hosting the **International Junior Engineering Competency Testing (IJECT2025)** to further enhance STEM education and develop engineering talents among high school students. TECH INFINITY INTERNATIONAL SOLUTIONS CO., LTD. – EDUCATIONAL INNOVATION & COMPETENCY DEVELOPMENT OFFICE (EICD Office) is a leader in advancing education technology and competency-based learning. With a strong presence in Thailand, EICD Office has successfully organized various international educational programs, including IMCT-SS (International Medical Competency Testing for Senior Students) and IEDAT (International Engineering Aptitude Development and Testing). These initiatives have fostered cross-border collaborations and provided students with exposure to world-class academic and research institutions.

Building on this experience, EICD Office is now hosting the **International Junior Engineering Competency Testing (IJECT2025)** to further enhance STEM education and develop engineering talents among high school students. The **International Junior Engineering Competency Testing (IJECT2025)** is a global initiative designed to evaluate and develop engineering skills among high school students. The program provides students with opportunities to engage with top engineering institutions, experience real-world engineering challenges, and foster innovation in STEM education.

As part of IJECT2025, our delegation from TECH INFINITY INTERNATIONAL SOLUTIONS CO., LTD. – EDUCATIONAL INNOVATION & COMPETENCY DEVELOPMENT OFFICE (EICD Office) will visit Kobe University, Graduate School of Engineering, to enhance students' understanding of higher education and research in engineering.

International Junior Engineering Competency Testing : IJECT 2025

09:00 AM – 5:00 PM (GMT+9), 6 June 2025 | Kyoto International Conference Center , Japan

Competitions

1. **Junior Three Minute Thesis (J3MT):** An academic competition challenging students to present their research in a clear, concise, and engaging manner within three minutes using one static slide.
2. **International Junior Engineering Competency Testing : IJECT 2025**

For the IJECT, each section of the exam is scored separately and competes in its own section (paper-based test, J3MT, and topic presentation). Participants need to join at least one part of the testing. If a representative enters all three parts, they will receive a certificate of completion for this competency testing.

Event Details:

- **Date & Time :** 09:00 AM – 5:00 PM, 6 June, 2025 (GMT+9)
- **Location:** Kyoto International Conference Center, Kyoto, Japan
An awards ceremony will be held, and certificates will be given to all participants.
Awards Ceremony: Certificates and awards will be given to all participants, including special awards for top performers in each section.



Certificate Ceremony:



- **Top 10 Rankings Overall Highest Score Award:** Awarded to the participant with the highest overall score in the IJECT2025 assessments.
 - **Gold Medal:** Awarded to the participant with the highest overall score.
 - **Silver Medals:** Awarded to the participants with the second and third highest overall scores.
 - **Bronze Medals:** Awarded to the participants with the fourth and fifth highest overall scores.
 - **Certificates of Achievement:** Awarded to the participants with the sixth to tenth highest overall scores.
- **3MT (Three Minute Thesis) Presentation Award:** Awarded to the participant who delivers the most effective and engaging 3MT presentation.



Welcome to International Junior Engineering Competency Testing (IJECT) 2025

We are pleased to announce the upcoming session of the IJECT2025 designed to evaluate and enhance the engineering knowledge, skills, and abilities of junior students. This testing initiative is part of our ongoing commitment to academic excellence and professional development in the engineering field.

Assessment Overview: The IJECT employs the Knowledge, Skills, and Abilities (KSA) framework, a comprehensive model recognized for its effectiveness in identifying essential competencies in Engineering education and practice. Our approach ensures that participants are not only tested for their current knowledge but are also prepared for future challenges in Engineering careers.

Please note: This document contains essential information about the test structure, assessment criteria, and scheduling. Detailed descriptions of each test section and preparation guidelines are provided in subsequent pages.

We are delighted to announce an International Junior Engineering Competency Testing (**IJECT**) that aims to explore the role of the Knowledge, Skills, and Abilities (KSA) model in enhancing assessment and talent management in academia. The KSA model is a widely recognized framework utilized in human resources and job analysis that aims to identify the critical competencies, skills, and knowledge required for a specific role. While extensively applied in industry, its potential in academia remains underexplored.

As an educational field, our primary objective is to equip our students with the knowledge, skills, and competencies that enable them to excel in their academic pursuits and future careers. However, identifying and defining these critical competencies can be a complex and arduous task. The KSA model provides a comprehensive and systematic approach to identifying these competencies, making it an invaluable tool for educators seeking to enhance student learning and development.

Similarly, in the Engineering field, it is imperative that practitioners possess the necessary competencies, skills, and knowledge to provide quality patient care and succeed in their careers. The KSA model, as a comprehensive and systematic approach, enables Engineering educators and practitioners to identify and define these critical competencies.

By aligning curricular content and learning outcomes with the KSA model, Engineering educators can ensure that students and practitioners develop the essential competencies, skills, and knowledge to provide quality patient care. This systematic approach can also be used to design effective assessments that evaluate learners' proficiency in these critical areas, leading to better student outcomes and more successful practitioners.

In the context of education, the KSA model can be utilized to identify the competencies, skills, and knowledge that students need to acquire to succeed in their academic pursuits and careers. By aligning curricular content and learning outcomes with the KSA model, educators can ensure that students develop the necessary competencies, skills, and knowledge to succeed in their future professions. Furthermore, the KSA model can also be employed in faculty recruitment and selection processes to ensure that educators possess the required competencies, skills, and knowledge to effectively teach and mentor students.

Overall, the KSA model offers a systematic approach to identifying the critical competencies, skills, and knowledge required for success in various fields, including academia and the Engineering profession. Its application in these areas can significantly enhance assessment and talent management, leading to better student outcomes and more successful practitioners.

The KSA model is a well-established framework utilized in job analysis to delineate the essential competencies, skills, and knowledge requisite for a particular role. In the realm of Engineering practice and education, the KSA model holds significant value as it helps to identify the key competencies, skills, and knowledge that Engineering students and practitioners need to acquire to achieve excellence in their profession.

K – KNOWLEDGE

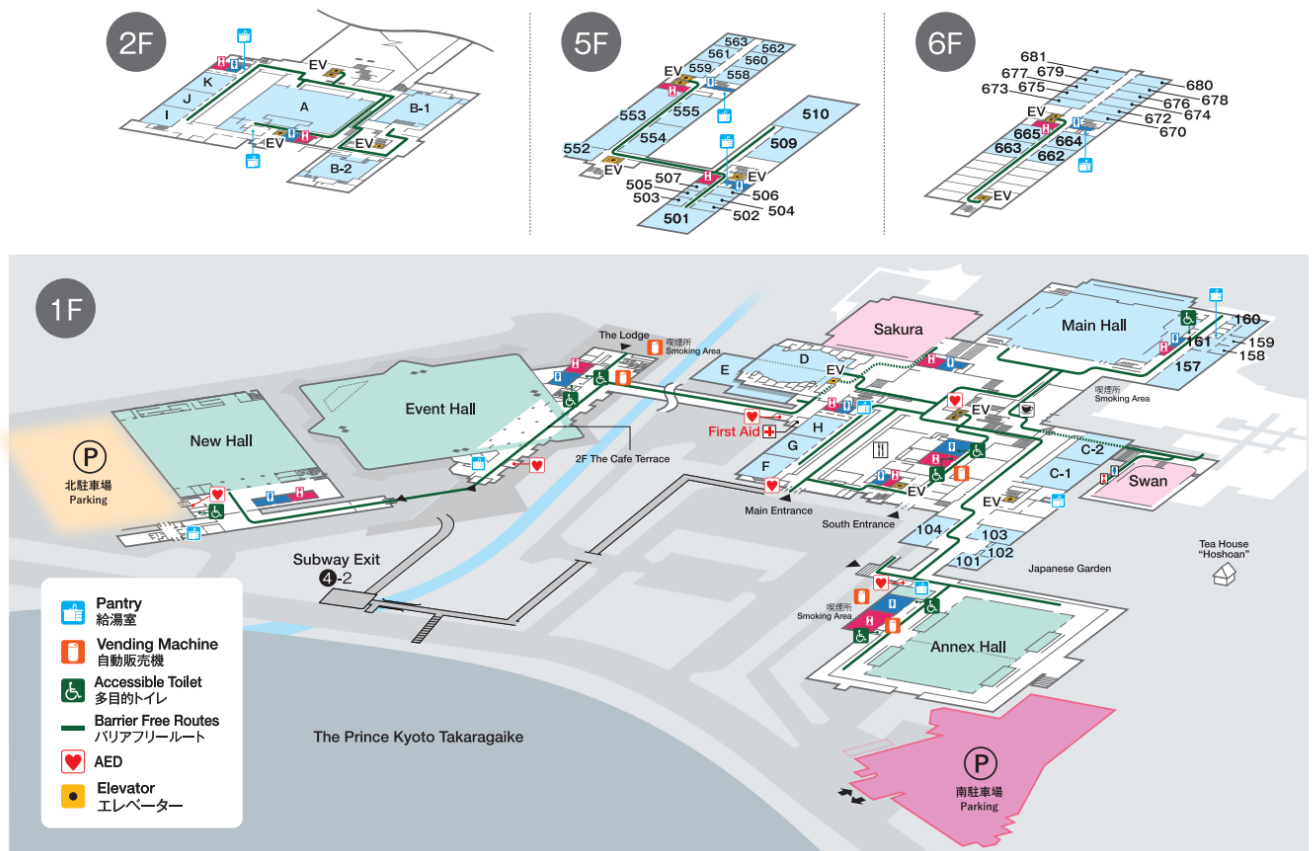
The knowledge component of the KSA model refers to the factual and procedural information required for effective performance in a specific domain. In the Engineering field, this includes knowledge of physics, chemistry, biology, mathematics, and Engineering ethics. Engineering professionals must possess a strong foundation of knowledge to diagnose and treat patients effectively.

S – SKILLS

The skills component of the KSA model refers to the ability to apply knowledge and basic skills in the Engineering field. Such as critical thinking, problem-solving, decision-making, and communicating effectively with patients and other Engineering professionals. These skills are essential for providing high-quality patient care.

A – ATTITUDE

The attitude component of the KSA model refers to the underlying traits or aptitudes required for successful performance, such as the ability to work well under pressure, to demonstrate empathy and compassion towards patients, and to be willing to learn and adapt to new situations. A positive attitude and a willingness to collaborate with others are essential for providing effective patient care.



Concept

Networking space in a favorable location surrounded
by a bountiful natural environment

ICC Kyoto is located in Kyoto city, the cultural center of Japan, at a convenient location about 15 minutes from the city center. Since its opening in 1966, it has formed a dedicated conference complex area with its expansive grounds of 156,000 m², containing the Main Hall, Event Hall, New Hall, Annex Hall, and Japanese garden, as well as adjacent hotels. ICC Kyoto was designed under the concept of “humans gathering and conversing within nature”, and it has a Japanese garden that borrows the scenery of the picturesque Lake Takaragaike. It is beloved by many as a symbolic structure. The banquet halls facing the garden for enjoyment of the seasonal scenery, the centrally-located, open, and expansive lobby and lounges that welcome all our guests, and over 70 meeting rooms all unite to become a space for human interaction. ICC Kyoto has welcomed 12,000,000 guests since our opening, and we are moving into a new stage in 2018 to continue being a valued site for interactions between people.



A space for networking moving into a new stage
– realizing large-scale events for over 10,000 attendees

A space for networking moving into a new stage – realizing large-scale events for over 10,000 attendees

In autumn 2018, our multi-purpose New Hall opened, becoming our 3rd independent building. The design concepts are “innovation and harmony with existing structures” and “design that harmonizes with the abundant natural environment”. The public spaces have “only-in-Kyoto” furnishings and equipment, giving birth to a whole new spatial experience. Adding this Kyoto-themed interaction space to our venue lineup allows us to respond to diversifying client needs. Main Building and the three separate buildings, including New Hall, are all connected by indoor passageways, forming organic connections as a composite facility. A fiber-optic digital network system can be constructed between all the buildings and adjacent hotels to create an environment for easy live broadcast or and data transmission. This allows smooth operations for large-scale events of over 10,000 attendees.



A space designed as a Convention Park

We have actively incorporated the latest developing technologies to improve our basic functionality as an international conference center, as well as taking special care to create even more pleasant and comfortable spaces, and also improving convenience. We have created an environment that allows you to focus on your conference or event whenever you visit. We also have spaces to encourage conversation and provide relaxation after the stress of main meetings, allowing guests to spend long periods of time here comfortably. We will continue to aim to create an unparalleled atmosphere that gives guests first-hand experiences of Japan and Kyoto, and provide optimal communication spaces and services.



Competitions

1. **Junior Three Minute Thesis (J3MT):** An academic competition challenging students to present their research in a clear, concise, and engaging manner within three minutes using one static slide.
2. **International Junior Engineering Competency Testing : IJECT 2025**

Junior Three Minute Thesis (J3MT)

Present : 3 Minute | Q&A : – minute

6 June 2025 (GMT+9)

The Three Minute Thesis (3MT) is an academic competition that challenges graduate students to present their research in a clear, concise, and engaging manner, using only three minutes and one static slide. The competition was developed in 2008 by the University of Queensland, and has since become a global phenomenon, with thousands of participants from over 600 universities across more than 65 countries.

The competition requires participants to distill research into a short, engaging presentation that is accessible to a general audience. Participants must be able to clearly articulate the problem they are addressing, explain the significance of their research, and communicate their findings in a way that is both engaging and informative.

Competition Rules

1. **Presentation Duration:** Each participant has 3 minutes to present their chosen thesis.
2. **Topic Selection:** Participants are to present a thesis or research project that they admire or find inspiring from another researcher or academic.
3. **Visual Aid:** No slides or visual aids are permitted.
4. **Props:** No additional props (including pointers, musical instruments, laboratory equipment) are permitted.
5. **Speech:** Presentations are to be spoken word (e.g., no poems, raps, or songs).
6. **Quotations:** A maximum of one quote or short reference can be used.
7. **Language:** Presentations must be given in English.
8. **Original Work:** The presentation must be the original work of the participant in terms of preparation and delivery, even though the content is based on another person's research.

Judging Criteria

Participants will be judged on the following criteria:

1. **Comprehension and Content:**
 - Did the presentation help the audience understand the research?
 - Was the significance of the research communicated clearly?
2. **Engagement and Communication:**
 - Was the thesis topic and its significance communicated in language appropriate to a non-specialist audience?
 - Did the presenter capture and maintain the audience's attention?
 - Did the speaker convey enthusiasm for the chosen research?

Preparation Tips

- **Clarity:** Ensure your presentation is clear and concise. Avoid jargon and explain complex ideas simply.
- **Engagement:** Practice engaging your audience with a compelling narrative.
- **Rehearsal:** Time your presentation to ensure it fits within the 3-minute limit.
- **Knowledge:** Thoroughly understand the chosen research to answer any questions that may arise during or after the presentation.

Preparation for Junior three-minute thesis (J3MT)

1. Select a Engineering research project of interest, regardless of whether it is the candidate's own research, and ensure that the chosen work is publicly available. (Open access)
2. Oral presentation within a strict time constraint of three minutes.
3. Visual aids, such as images or slides, DECEMBER be employed to complement the oral presentation

International Junior Engineering Competency Testing : IJECT 2025

Section A: Paper-based Test (40%)

Part 1: Basic Engineering Knowledge and Application (20%)

- **Format:** Semi-Objective, English, 15 items, 30 minutes
- **Content:** Fundamental engineering concepts and theory across various disciplines.

Part 2: Engineering Research Review (20%)

- **Format:** Semi-Objective, English, 15 items, 30 minutes
- **Content:** Reading comprehension within the context of engineering research.

Section B: Skills and Abilities Test (60%)

Part 1: Engineering Research Topic Interview & Discussion (30%)

- **Format:** Interview and discussion, 4-5 minutes
- **Content:** Presentation and explanation of a chosen engineering research topic.

Part 2: Junior Three Minute Thesis (J3MT) (30%)

- **Format:** Oral presentation, 3 minutes
- **Content:** Concise presentation of a research project using one static slide.

Section A: Knowledge Paper-based test (40%)

The paper-based test is comprised of two distinct parts.

20% | Part 1 : Basic Engineering Knowledge and Application 15 items (5 options : Time 30 minutes)

6 June 2025 (GMT+9) (Article-Based MCQs with Reasoning : English)

on understanding of fundamental Engineering concepts and Engineering theory, part 1 cover a diverse range of topics related to the Engineering field foundational aspects of Engineering practice, which are critical for effective communication, clinical decision-making, and patient care. The test questions will be designed to evaluate ability to comprehension and apply basic Engineering concepts.

Article 1 | Making knowledge graphs work for smart manufacturing: Research topics, applications and prospects

(Link : <https://shorturl.asia/WClrN>)

Article 2 | Deployable scissor structures: Classification of modifications and applications

(Link : <https://shorturl.asia/5VL8G>)

Focus on reading comprehension, specifically within the context of the Engineering field. Participants will be presented with a research paper on a topic relevant to the Engineering field and assessed on their ability to comprehend the information contained therein. The selected research paper will be chosen with care, in order to reflect the type of academic and professional literature commonly encountered by Engineering students and practitioners.

Article 3 | Exploring the evolution of tissue engineering strategies over the past decade:

From cell-based strategies to gene-activated matrix

(Link : <https://shorturl.asia/BoOYw>)

Article 4 | Modern advancements of energy storage systems integrated with hybrid renewable energy sources for water pumping application

(Link : <https://shorturl.asia/ky5Nw>)

Preparing for the Knowledge Paper-based test in the IJECT

1. Reviewing Lessons: Read textbooks and study materials, focusing on key points and fundamental concepts.
2. Practicing Past Papers: Attempt practice tests related to the topics studied to improve answering skills.
3. Studying Engineering Research: Read research articles related to the field of medicine to enhance understanding of relevant topics.
4. Summarizing Key Points: Summarize and take notes on key Engineering concepts and important information.
5. Practicing Reading and Answering Questions: Practice reading and understanding questions well to answer them correctly in the exam.
6. Seeking Help: If there are doubts or difficulties, learn from teachers or experts in the field.

Section B: Skills and abilities test

(60%)

30% | Engineering Research Topic Interview & Discussion

Interview : 4-5 minute

6 June 2025 (GMT+9)

In the IJECT examination, the exam center will determine the research topics used in the interview and discussion about Engineering research topics. These topics may be selected from reputable Engineering research articles or from credible research works in the field of Engineering research. Candidates will be required to present their research topics and explain the rationale and significance of their chosen topics. There may be additional questions about the research topic to ensure a clear understanding of the candidate's selection and understanding of the research topic. Therefore, preparation for explaining and discussing one's research topic is crucial for the examination.

Use content from academic articles either selected for presentation in the 3MT or from the scope of the Knowledge Paper-based test topics.

To prepare for the Engineering Research Topic Interview & Discussion in the IJECT, it is crucial to thoroughly review the literature and information related to your research topic. You should be able to clearly and logically present your research topic, explain its rationale and significance, and be prepared to answer additional questions that may arise during the interview. Practice explaining your research topic concisely and clearly within the allocated time. Additionally, anticipate possible questions and scenarios related to your research topic and prepare systematic and coherent responses.

The Three Minute Thesis (3MT) is an academic competition that challenges graduate students to present their research in a clear, concise, and engaging manner, using only three minutes and one static slide. The competition was developed in 2008 by the University of Queensland, and has since become a global phenomenon, with thousands of participants from over 600 universities across more than 65 countries.

The competition requires participants to distill research into a short, engaging presentation that is accessible to a general audience. Participants must be able to clearly articulate the problem they are addressing, explain the significance of their research, and communicate their findings in a way that is both engaging and informative.

Preparation for Junior three-minute thesis (J3MT)

1. Select a Engineering research project of interest, regardless of whether it is the candidate's own research, and ensure that the chosen work is publicly available. (Open access)
2. Oral presentation within a strict time constraint of three minutes.
3. Visual aids, such as images or slides, DECEMBER be employed to complement the oral presentation

For the IJECT, each section of the exam is scored separately and competes in its own section (paper-based test, J3MT). Participants need to join in at least one part of the testing. If the representative enters all three parts, they will receive a certificate of completion for this competency testing.

Key Schedule

6 June 2025 | Kyoto International Conference Center, Kyoto, Japan

Time		Activity	Location
09.00 - 09.20	20 minutes	Preparation and Project Introduction Session	Room D Kyoto International Conference Center
09.20 - 10.20	1 hours	International Junior Engineering Competency Testing Section A : Knowledge Paper-based test PART 1 : Basic Engineering knowledge and application (20%) PART 2 : Engineering research review (20%)	
10.20 - 10.30	10 minutes	Break Time	
10.30 - 12.00	1 hours 30 minutes	International Junior Engineering Competency Testing Section B : Skills and Abilities Test Engineering Research Topic Interview & Discussion (30%)	
12.00 - 13.00	1 hours	Networking Lunch	The Grill Restaurant
13.00 - 13.30	30 minutes	Opening Ceremony	Room D Kyoto International Conference Center
13.30 - 15.30	2 hours	Junior Three Minute Thesis (J3MT) International Junior Engineering Competency Testing	
15.30 - 16.00	30 minutes	Break Time	
16.00 - 17.00	1 hours	Certificate ceremony ● Top 10 Rankings Overall Highest Score Award: Awarded to the participant with the highest overall score in the IJECT2025 assessments. ● 3MT (Three Minute Thesis) Presentation Award: Awarded to the participant who delivers the most effective and engaging 3MT presentation.	
17.30		Special Dinner	Kyoto

