

20TH ANNIVERSARY

IMSCC 2026

OFFICIAL ANNOUNCEMENT



Enlightening Imagination

International Mathematical Science Creativity Competition & Conference

4Dframe × Embodied AI: Play, Create, Interact!

October 30-31, 2026 | Korea National University of Education

한국교육대학교
Korea National University of Education

 Foundation for the Advancement of STEAM
융합과학문화재단

English Edition

OVERVIEW

Purpose

The International Mathematical Science Creativity Competition & Conference (IMSCC) brings together scholars, researchers, teachers, students, parents, industry professionals, and other stakeholders in convergence education. Through STEAM projects addressing sustainable development and the future competencies of the next generation, IMSCC provides a forum for collective intelligence, creative and collaborative problem-solving, and the advancement and global dissemination of STEAM culture.

Event at a Glance

Item	Details
Event	20th Anniversary IMSCC 2026 - International Mathematical Science Creativity Competition & Conference
Theme	4Dframe × Embodied AI: Play, Create, Interact!
Day 1	Friday, October 30, 2026 - International STEAM Teacher Award Ceremony, Cheongram Art Hall, KNUE
Day 2	Saturday, October 31, 2026 - Competition, Academic Conference, Student Forum, and International STEAM-EDU FESTA, KNUE campus
Venue	Korea National University of Education (KNUE), 250 Taeseongtabyeon-ro, Gangnae-myeon, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Republic of Korea
Website	www.ngfsteam.org

Hosts and Organizers

Role	Organization
Hosts	Korea National University of Education (KNUE); Foundation for the Advancement of STEAM (FAS)
Teacher Forum Organizer	Korea National University of Education
Competition Organizer	Seoul E&M 4DMS-STEAM-ERA
Academic Conference Organizer	Association for 4Dframe (A4D)
Student Forum Organizer	Mirae High School of Science and Technology
STEAM-EDU FESTA Organizer	Foundation for the Advancement of STEAM (FAS)

Program Summary

Program	Time	Organizer	Venue	Highlights
Day 1 - International STEAM Teacher Award	Oct. 30 19:00-20:00	KNUE	Cheongram Art Hall	Six award categories and welcome ceremony for international teachers
Opening Ceremony	Oct. 31 09:30-10:10	Joint	Teacher Culture Center, Main Auditorium	Official ceremony for delegations and guests
Competition	10:30-12:30	Seoul E&M 4DMS-STEAM-ERA	Education Research Building 2F; Teacher Culture Center	Judging by division
Academic Conference	13:30-13:50	A4D	Teacher Culture Center, Main Auditorium	Keynote address
Breakout Sessions	14:00-16:00	A4D / KNUE	Education Research Building 6F	Track-based sessions
Student Forum	14:00-16:00	Mirae High School of Science and Technology	Education Research Building 5F	Multinational collaborative projects
STEAM-EDU FESTA	09:00-16:00	Joint	Teacher Culture Center Plaza	Hands-on booths by delegations, clubs, companies, and organizations
Awards & Closing	16:00-17:30	Joint	Teacher Culture Center, Main Auditorium	Competition/conference awards and announcement of next year's theme

NOTICE All schedules are subject to change. Please refer to www.ngfsteam.org for the final program.

IMSCC 2026 TENTATIVE DETAILED SCHEDULE

Day 1 | Friday, October 30 - Welcome Night & International STEAM Teacher Award Ceremony

Venue: Korea National University of Education | Official language: English

Time	Program	Details	Notes
By 19:00	Registration	Attendee check-in	Cheongram Art Hall lobby
19:00-19:10	Opening	Opening declaration; introductions of domestic/international guests and participating countries	Cheongram Art Hall
19:10-19:25	Welcome & Congratulatory Remarks	Welcome remarks by President Cha Woo-kyu and Chairman Shin Ki-hyun; 1-2 guest remarks, including a country representative	Korean-English subtitles
19:25-19:50	International STEAM Teacher Award Ceremony	Purpose of the awards; award introduction video and finalist announcement; presentation of awards; photographs; acceptance remarks	Subtitles
19:50-20:00	Celebration & Closing	Group photographs with awardees, VIPs, and international delegations; country photos if needed	Led by MC

Day 2 | Saturday, October 31 - International STEAM-EDU FESTA

Venue: KNUE campus | Official languages: English and Korean

Time	Program	Details	Concurrent Event
09:00-09:30	On-site Registration	Participant registration	STEAM-EDU FESTA
09:30-10:10	Opening Ceremony	Opening remarks; keynote; participant oath; orientation	FESTA at Teacher Culture Center Plaza
10:30-12:30	Competition	Presentations and judging: Creativity I-III; Invention Maker; Analog/Digital Product Maker; Mechatronics I-III; Capstone Project	Country delegations, student clubs, companies and organizations
12:30-13:30	Break	Free time	FESTA continues
13:30-13:50	Academic Conference	Welcome remarks and keynote	FESTA continues
14:00-16:00	Breakout Sessions & Student Forum	Track presentations/workshops and student forum	FESTA continues
16:00-17:20	Awards & Events	Special, recognition, and academic awards; science-magic performance; service awards; competition awards; prize drawing	Main Auditorium
17:20-17:30	Closing	Announcement of the next Enlightening Imagination competition theme and closing declaration	Main Auditorium

NOTICE The program may be revised. The latest schedule will be posted at www.ngfsteam.org.

1. WELCOME NIGHT & INTERNATIONAL STEAM TEACHER AWARD CEREMONY

Day 1 - IMSCC 2026 Welcome Night & International STEAM Teacher Award Ceremony

Overview

Name: Welcome Reception for International Delegations & International STEAM Teacher Award Ceremony

Hosts: Korea National University of Education; Foundation for the Advancement of STEAM

Organizer: Korea National University of Education

Date and Time: Friday, October 30, 2026, 18:00-20:00

Participants: Delegations from 10-15 countries and invited Korean VIPs

Venue: Cheongram Art Hall, KNUE, 250 Taeseongtabyeon-ro, Gangnae-myeon, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Republic of Korea

Welcome Reception, Networking, and Awards

1. A welcome reception will create a warm and inclusive atmosphere for delegations from 10-15 countries.
2. Networking among Korean and international VIPs and delegations will support continued exchanges, including country-level MOUs and reciprocal visits.
3. Legal basis: Under Article 5 of the Articles of Incorporation of the Foundation for the Advancement of STEAM, the Foundation recognizes individuals whose contributions to science, technology, engineering, arts, mathematics, and related fields advance STEAM culture.
4. Scope: Teachers worldwide who have contributed to communication, collaboration, critical thinking, creativity, and collaborative problem-solving in STEAM education may be nominated and selected in accordance with the rules of the awarding authority.
5. Purpose: The awards honor educators' contributions and encourage them to continue leading STEAM education in their respective countries.

Awarding Authority

6. Under Article 3 of the STEAM Teacher Award Regulations, the awarding authorities are the Foundation for the Advancement of STEAM and the official organizer/institution of the Teacher Forum.
7. The IMSCC 2026 Teacher Forum is co-hosted by FAS and KNUE. Korea National University of Education is the awarding authority for the IMSCC 2026 International STEAM Teacher Awards.

Award Categories

Category	Recognition
STEAM Program	For systematic contributions to the development of STEAM learning, experiential, and assessment activities through combinations of multiple instructional units.
STEAM Project	For leaders or members of team activities who contribute to long- and medium-term inquiry projects through planning, implementation, and evaluation.
STEAM Action Research	For practitioners implementing sustainable-development STEAM education through diverse topics and methods in schools, homes, or organizations.
C-STEAM: Creativity, Collaboration & STEAM	For strengthening learners' future competencies through critical thinking, communication, creativity, collaboration, and collaborative problem-solving.
Next Generation Frontiers of STEAM	For sharing STEAM experiences and reflective accounts across the lifespan, from K-12 learners to adults and seniors. There is no age restriction.
4Dframe Special Award	For contributions to sustainable-development and STEAM education centered on 4Dframe in underserved educational settings in Korea or abroad.

International STEAM Teacher Award - Nominations

How to Apply or Nominate

8. Apply through the IMSCC 2026 official website. Self-applications and third-party nominations are both accepted.

Online application: https://ngfsteam.org/tforum_apply

Required Documents

9. Online application form
10. Curriculum vitae (free format)
11. High-resolution nominee photograph for publication in the nominee list and the final Hall of Fame

Deadline: Wednesday, September 30, 2026, 24:00 (KST)

PRIVACY Submitted materials will not be returned. Personal information will be protected in accordance with the Personal Information Protection Act of the Republic of Korea and the Foundation's IMSCC Operating Regulations.

Key Schedule

Stage	Date	Details	Notes
Candidate registration	Jul. 3-Sep. 30, 2026	Submit the online form at ngfsteam.org/tforum_apply	Finalists must submit presentation materials
Review committee	Oct. 1-6, 2026	Select finalists from among nominees	Per committee regulations
Finalist announcement	Oct. 7, 2026	Final confirmation of application results	www.ngfsteam.org
Award ceremony	Oct. 30, 2026, 19:00	Seven recipients across six categories	Five regular awards: KRW 1,000,000 and plaque; two special awards: KRW 500,000 and plaque
Awardee breakout session	Oct. 31, 2026, 14:00	Presentations in the Teacher Award track	Education Research Building, 6F

Benefits for Award Recipients

12. Certificate and a monetary award
13. Registration and publication in the STEAM Teacher Award Hall of Fame
14. Lifetime regular membership in the STEAM Teacher Forum
15. VIP invitations to events hosted by the Foundation for the Advancement of STEAM
16. Eligibility to serve on the Association for 4Dframe Teacher Committee and as a C-STEAM certification reviewer

2. INTERNATIONAL MATHEMATICAL SCIENCE CREATIVITY COMPETITION

Day 2 - Saturday, October 31, 2026

Purpose

17. To foster creative ideas and entrepreneurship through collaborative planning, design, and expression around STEAM themes integrating science, technology, engineering, arts, and mathematics.
18. To increase young people's interest in science and technology, develop creative-thinking competencies, and expand STEAM culture through participation across generations.

Competition Overview

Competition: Enlightening Imagination - International Mathematical Science Creativity Competition

Theme: 4Dframe × Embodied AI: Play, Create, Interact!

Hosts: Foundation for the Advancement of STEAM; Korea National University of Education

Organizer: Seoul E&M 4DMS-STEAM-ERA

Date and Time: Saturday, October 31, 2026, 10:30-12:30; awards from 16:00

Eligibility: Domestic and international participants: infants, preschoolers, elementary, middle and high school students, university students, and adults

Venue: Korea National University of Education

Entry Fee: Free

Timeline

Stage	Date	Details	Notes
Announcement	May 8, 2026	Competition announcement	www.ngfsteam.org
Registration	Jul. 3-Sep. 30, 2026	Complete the online application	Submission of materials is mandatory
Materials submission	Jul. 3-Sep. 30, 2026	Report template and explanatory video (up to 3 minutes)	See submission details
Participant number announcement	Oct. 7, 2026	Final confirmation	www.ngfsteam.org
Competition	Oct. 31, 2026	Division presentation and/or Q&A and judging	Absence from on-site judging may result in a score deduction
Awards	Oct. 31, 2026	Grand Prize through Encouragement Award	Awards announced across 12 divisions

Operating Regulations

19. Teams generally consist of one or two participants. Check the detailed rules for each division. Play I-II and Capstone Design follow separate team-composition rules.
20. Except for Creativity I, entries are not built at the venue. Teams must complete their work in advance and submit photographs/video and a project report by the published deadline. Submitted materials are used for judging.
21. Works must use 4Dframe, the official material designated by the organizer. Other materials are prohibited unless the division-specific rules expressly allow them. Competition materials are not provided; participants may bring spare parts for minor on-site repairs or adjustments.
22. Registration is complete only after the online application and all required materials have been submitted on time. A participant number is then assigned. Final participation requires bringing the work to the venue and taking part in the presentation/judging session.
23. Submitted documents will not be returned. Personal data are protected under applicable law and the competition rules. Award-winning work may be used in academic publications and competition publicity.

Registration and Submission - All Divisions

Application and submission URL: https://ngfsteam.org/competition_apply

Application deadline: Wednesday, September 30, 2026

Required materials: (1) competition report template; (2) video file up to 50 MB. Files over 50 MB must be submitted separately as instructed.

Submission 1 - Report

24. Download the report template from the application page.
25. Explain the project background, objectives, methods, mathematical and scientific principles, project content, and results. Include photographs of the work and participants.
26. Upload the original image files used in the report together with the report in a compressed file.

Submission 2 - Introduction Video (up to 3 minutes)

27. Freely present the team's motivation, purpose, title of the work, preparation process, distinguishing features, explanation, and demonstration.
28. For smartphone recording, 1080p (1920 × 1080) and a maximum duration of 3 minutes are recommended.

Judging

29. Submitted materials (project report, photographs, and video) are reviewed in advance. On-site judging is conducted in real time on competition day. Final ranking is based on 200 points: 100 for submitted materials and 100 for on-site judging.
30. Participants must bring the submitted work, or an improved version, to the venue. Depending on the division, judging may include presentation and discussion, exhibition and demonstration, a mechatronics mission, and Q&A.

Stage	Criterion	Points
Submitted materials	Goals & value	50
Submitted materials	Storytelling	50
On-site	Use of tools/materials	25
On-site	Effectiveness	25
On-site	Creativity	25
On-site	Presentation and/or mission	25
TOTAL		200

JUDGING NOTE On-site presentation/mission scoring varies by division. Refer to the detailed division rules.

Competition Awards (Tentative)

31. Grand Prize and Gold Award certificates are issued by external sponsoring institutions and will be sent later rather than presented on the day.
32. Silver, Bronze, and Encouragement Award recipients receive medals at the ceremony. Upon request, participation or award certificates may later be issued through an official electronic document.

Level	Award	Eligible Divisions	No. of Teams
Grand Prize	Deputy Prime Minister and Minister of Science and ICT Award	Creativity II-III and Mechatronics I-III: 1 team each	5
Grand Prize	Minister of Trade, Industry and Resources Award	Analog and Digital Product Maker: 1 team each	2
Grand Prize	Minister of SMEs and Startups Award	Invention Maker and Capstone Design: 1 team each	2
Grand Prize	Chairman, Foundation for the Advancement of STEAM	Play I-II and Creativity I: 1 team each	3
Gold	Minister of Intellectual Property Award	Creativity II-III; Mechatronics I-III; Invention/Analog/Digital Product Maker: 1 each	7
Gold	President, Institute for Basic Science Award	Creativity I-III; Mechatronics I-III; all four Convergence divisions: 1 each	10
Gold	Chairman, Korea Foundation for the Advancement of Science and Creativity	Creativity I-III; Mechatronics I-III; all four Convergence divisions: 1 each	10
Gold	Chairman, Foundation for the Advancement of STEAM	Play I-II: 1 team each	2
Silver	Chairman, Foundation for the Advancement of STEAM	All 12 divisions: 2 teams each	24
Bronze	Chairman, Foundation for the Advancement of STEAM	All 12 divisions: 3 teams each	36
Encouragement	Director, 4D Mathematical Science Creativity Institute	All 12 divisions: 5 teams each	60
Special	Chairman, Foundation for the Advancement of STEAM	International teams and Special Education teams; online certificates	Participants
Advising Teacher Award	Chairman, Foundation for the Advancement of STEAM	Advising teachers of Grand Prize teams; online certificates	13

NOTICE The awards plan is subject to change

Competition Divisions

Division	Eligibility	Theme	On-site Review
Play I	Under age 3	Let's Build and Play in a Wonderful House!	Online review
Play II	Under age 3	Let's Work Together!	Online review
Creativity I	Ages 3-5 and special-education participants	Plants That Help the Earth	On-site building, judging, and Q&A
Creativity II	Grades 1-3 and special-education participants	Design an Environment Where Earth-Friendly Plants Can Thrive	On-site judging and Q&A
Creativity III	Grades 4-6	Build a Device That Helps Grow Plants to Save the Earth	On-site judging, demonstration, and Q&A

Division	Eligibility	Theme	On-site Review
Mechatronics I	Elementary	Build a Moving System Using Smart Robots - Mission	On-site mission judging
Mechatronics II	Middle school	Build a Moving System Using Smart Robots - Mission	On-site mission judging
Mechatronics III	High school	Build a Disaster-Site Supply Delivery System Using Smart Robots - Mission	On-site mission judging
Analog Product Maker	Elementary-middle school	Convenient Tools for Everyday Life	On-site judging, demonstration, and Q&A
Digital Product Maker	Middle-high school	AI That Enriches Human Life	On-site judging, demonstration, and Q&A
Invention Maker	High school, university, adult	Biomimetic Robot for Disaster Rescue	On-site judging, demonstration, and Q&A
Capstone Design	High school, university, adult	4Dframe × Embodied AI	On-site presentation/judging

PARTICIPATION Complete all advance production and submission requirements and bring the work on event day. Since IMSCC 2024, works are generally not built on site and materials are not provided. **Creativity I is the exception: work is built on site with provided materials in this division only.** Play I-II are judged solely on submitted online materials.

2-1. CREATIVITY I - PLANTS THAT HELP THE EARTH

Review Stage	Scoring Criteria	Points
Submitted materials	Representation of the work 50 + Storytelling 50	100
On-site	Use of tools 30 + Creativity 30 + Effectiveness 20 + Q&A 20	100
TOTAL		200

Basic Requirements

33. Eligibility: Ages 5-7 or special-education participants of any age
34. Team composition: Two participants
35. Materials - Primary: 4Dframe and related components. Secondary: colored paper, string, tape, and other materials needed for the setting.

MATERIALS Other materials used for the work or environment are treated only as aids to understanding and are not reflected in the score. Matters not specified are decided by the judging panel.

Submission Requirements

36. Project report: download the official template from the competition website.
37. Photographs: approximately four completed-work images (no strict numerical limit); submit original image files with the report in a compressed file.
38. Video: freely present the background, work, related story, reflections on preparation, and key points

Required Project Elements

39. Design a realistic, three-dimensional representation of a beneficial plant that helps the Earth.
40. Express the defining features of the theme freely.
41. At the finals, teams rebuild the same work submitted in the preliminary round or create a new work using the materials provided on site.

Preliminary Materials Review Criteria

Criterion	Review Questions
Representation of the Work	• Is the work realistically designed? • Are materials used effectively? • Is the composition sufficiently varied? • Does the work show detailed expression?
Storytelling	• Did team members divide responsibilities effectively? • Are the intent and background clearly explained? • Is the production process clearly explained? • Do the report, video, and actual work match? • Is the video presentation clear?

2-1. CREATIVITY II - CREATIVE SPACE DESIGN FOR COEXISTENCE WITH PLANTS

Review Stage	Scoring Criteria	Points
Submitted materials	Representation of the work 50 + Storytelling 50	100
On-site	Use of tools 25 + Creativity 30 + Mathematical/scientific principles 25 + Q&A 20	100
TOTAL		200

Basic Requirements

42. Eligibility: Grades 1-3 or special-education participants of any age
43. Team composition: Two participants (one or two in the special division)
44. Materials - Primary: 4Dframe and related components. Secondary: foam board, polystyrene board, colored paper, string, tape, and materials needed for the setting.

MATERIALS Other materials used for the work or environment are treated only as aids to understanding and are not reflected in the score. Matters not specified are decided by the judging panel.

Submission Requirements

45. Project report: download the official template from the competition website.
46. Photographs: approximately four completed-work images (no strict numerical limit); submit original image files with the report in a compressed file.
47. Video: present the background, work, related story, reflections on preparation, and points to emphasize

Required Project Elements

48. Use mechanical principles to create visible movement, such as drawer-type, mobile, or mounted structures.
49. Use manual power, wind, water, or similar energy and demonstrate the movement in the video.
50. Electronic components such as motors are not permitted.
51. Apply mechanical principles effectively and create a realistic rather than purely abstract setting.

Preliminary Materials Review Criteria

Criterion	Review Questions
Representation of the Work	• Is the work creatively designed? • Are materials used effectively? • Are colors combined effectively? • Are diverse mechanical principles used? • Is movement effectively presented?
Storytelling	• Did team members divide responsibilities effectively? • Are the intent and background clearly explained? • Is the production process clearly explained? • Do the report, video, and actual work match? • Is the video presentation clear?

2-1. CREATIVITY III - DESIGNING AN EFFICIENT PLANT-CULTIVATION DEVICE

Review Stage	Scoring Criteria	Points
Submitted materials	Representation of the work 50 + Design & implementation 50	100
On-site	Use of tools 25 + Creativity 30 + Mathematical/scientific principles 25 + Q&A 20	100
TOTAL		200

Basic Requirements

52. Eligibility: Grades 4-6
53. Team composition: Two participants
54. Materials - Primary: 4Dframe and related components. Secondary: foam board, polystyrene board, colored paper, string, tape, and materials needed for the setting.

MATERIALS Other materials used for the work or environment are treated only as aids to understanding and are not reflected in the score. Matters not specified are decided by the judging panel.

Submission Requirements

55. Project report: download the official template from the competition website.
56. Photographs: approximately four completed-work images (no strict numerical limit); submit original image files with the report in a compressed file.
57. Video: present the background, work, demonstration, reflections on preparation, and points to emphasize

Required Project Elements

58. Apply a range of mechanical principles to create movement.
59. Use manual power, wind, water, or similar energy and demonstrate the movement in the video.
60. Electronic components such as motors are not permitted.
61. The final product may be a component such as a planter or an entire cultivation-process system.

Preliminary Materials Review Criteria

Criterion	Review Questions
Representation of the Work	• Is the work creatively designed? • Are materials used effectively? • Are colors combined effectively? • Are diverse mechanical principles used? • Is movement effectively presented?
Design & Implementation	• Did team members divide responsibilities effectively? • Are the intent and background clearly explained? • Is the production process clearly explained? • Do the report, video, and actual work match?

2-1. MECHATRONICS I-III

Review Stage	Scoring Criteria	Points
Submitted materials	Representation of the work 50 + Design & implementation 50	100
On-site	Mission 50 + Tool use/design 25 + Q&A 25	100
TOTAL		200

Mechatronics I: Perfect-Teamwork Relay Race!

Mechatronics II-III: Design a Mission Robot That Moves Objects Safely

Basic Requirements

62. Eligibility - Mechatronics I: Grades 3-6; Mechatronics II: middle school; Mechatronics III: high school.
63. Team composition: two participants.
64. Primary materials: 4D Mechatronics, 4Dframe, and related components. Secondary materials may include colored paper, string, tape, paper cups, boxes, and setting materials.

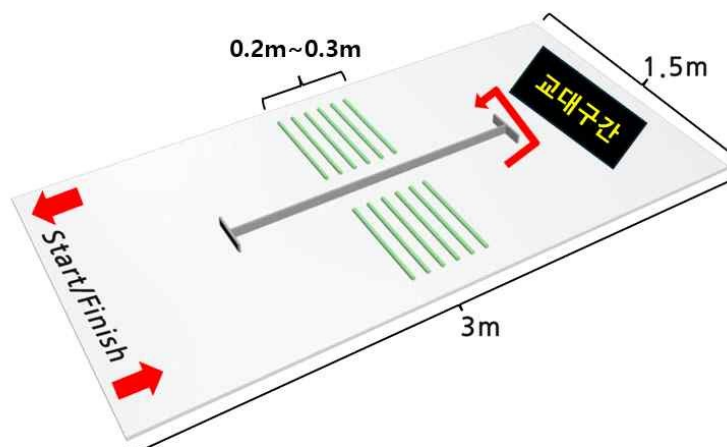
MATERIALS Other materials are treated only as aids to understanding and are not reflected in the score. Unspecified matters are decided by the judging panel.

Submission Requirements

65. Project report using the official template and approximately four completed-work photographs in a compressed file.
66. Video freely presenting the background, work, related story, reflections, and detailed explanations of operation, function, and appearance.

Mechatronics I - Required Elements

67. Build two mobile robots that pass obstacles in a teammate relay.
68. Apply a creative design.
69. Set a straight course of approximately 3 m; it does not need to be a formal map.
70. Provide one arbitrary obstacle section in each direction, 20-30 cm wide. Obstacle material, size, and shape are unrestricted.
71. For submission, record only the run through the entire configured course.



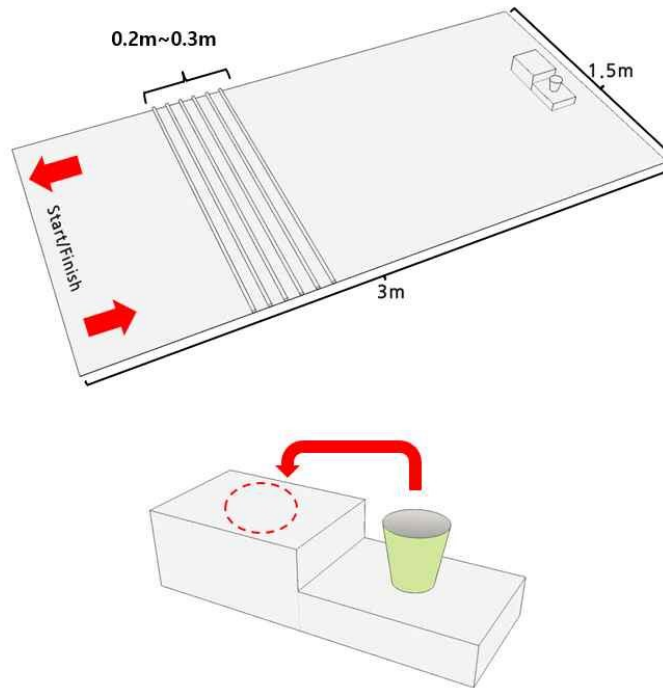
Example course configuration for Mechatronics I

FINAL ROUND

Final specifications for the on-site course will be announced on the competition website.

Mechatronics II-III - Required Elements

72. Build one functional robot capable of passing an obstacle and completing the designated mission.
73. Apply a creative design.
74. Set a straight or curved course of approximately 2-3 m; it does not need to be a formal map.
75. Provide an arbitrary obstacle section 20-30 cm wide. Obstacle material, size, and shape are unrestricted.
76. Mission section: move an object from the bottom to the top of a stair-shaped structure. The object must be grasped and lifted.
77. For submission, record only the configured run and mission. Final-round performance will be timed.



Example course and object-transfer configuration for Mechatronics II-III

FINAL ROUND

Final specifications for the on-site course will be announced on the competition website.

Preliminary Materials Review Criteria

Criterion	Review Questions
Representation of the Work	• Is the work creatively designed? • Are materials used effectively? • Is the work robustly constructed? • Are diverse mechanical principles used?
Design & Implementation	• Did team members divide responsibilities effectively? • Are the intent and background clearly explained? • Is the production process clearly explained? • Do the report, video, and actual work match? • Can the robot complete the mission?

2-1. ANALOG PRODUCT MAKER - CONVENIENT TOOLS FOR EVERYDAY LIFE

Review Stage	Scoring Criteria	Points
Submitted materials	Representation of the work 50 + Storytelling 50	100
On-site	Use of tools 25 + Creativity 30 + Effectiveness 25 + Q&A 20	100
TOTAL		200

Basic Requirements

78. Eligibility: Elementary through middle school
79. Team composition: Two participants
80. Materials - Primary: 4Dframe and related components. Secondary: foam board, polystyrene board, colored paper, string, tape, and setting materials.

MATERIALS

Other materials used for the work or environment are treated only as aids to understanding and are not reflected in the score. Matters not specified are decided by the judging panel.

Submission Requirements

81. Project report: download the official template from the competition website.
82. Photographs: approximately four completed-work images (no strict numerical limit); submit original image files with the report in a compressed file.
83. Video: present the background, work, story, reflections, and detailed explanations of operation, function, and appearance

Required Project Elements

84. Explain the function and purpose of the work.
85. If manual operation is used, explain and show it in the video.
86. Demonstrate operation in accordance with the intended purpose.

Preliminary Materials Review Criteria

Criterion	Review Questions
Representation of the Work	• Is the work creatively designed? • Are materials used effectively? • Is the work complete and polished? • Is it realistic? • Can it perform the intended purpose?
Storytelling	• Did team members divide responsibilities effectively? • Are the intent and background clearly explained? • Is the production process clearly explained? • Do the report, video, and actual work match? • Is the video presentation clear?

2-1. DIGITAL PRODUCT MAKER - AI THAT ENRICHES HUMAN LIFE

Review Stage	Scoring Criteria	Points
Submitted materials	Representation of the work 50 + Storytelling 50	100
On-site	Tool use/coding 25 + Creativity 25 + Effectiveness 25 + Q&A 25	100
TOTAL		200

UPDATED THEME The theme 'AI That Enriches Human Life' takes a broad perspective on challenges facing humanity. Eligible secondary students (middle and high school) may therefore explore a wide range of interests related to future competencies, career exploration, sustainable development, and advanced technologies. Examples include in-depth inquiry into space exploration, environmental issues, renewable energy, and other topics that can improve the quality of human life.

Basic Requirements

87. Eligibility: Middle through high school
88. Team composition: Two participants
89. Materials - Primary: 4Dframe and related components, plus boards and electronic components capable of coding and AI applications. Secondary: foam board, polystyrene board, colored paper, string, tape, and setting materials.

MATERIALS

Other materials used for the work or environment are treated only as aids to understanding and are not reflected in the score. Matters not specified are decided by the judging panel.

Submission Requirements

90. Project report: download the official template from the competition website.
91. Photographs: approximately four completed-work images (no strict numerical limit); submit original image files with the report in a compressed file.
92. Video: present the background, work, story, reflections, and detailed explanations of operation, function, and appearance

Required Project Elements

93. Explain the function and purpose of the completed work.
94. Coding, AI technology, and linked electronic components may be used.
95. Explain any manual-action sections in the video.
96. Demonstrate operation according to the intended purpose.
97. The story and detailed subtheme are unrestricted.
98. Explain the programming structure and operating principles.

Preliminary Materials Review Criteria

Criterion	Review Questions
Representation of the Work	• Is the work creatively designed? • Are materials used effectively? • Are diverse mechanical principles used? • Is the work realistic? • Are coding and AI applied efficiently?
Storytelling	• Did team members divide responsibilities effectively? • Are the intent, background, and production process clear? • Do the report, video, and actual work match? • Are software understanding and application evident? • Is the video presentation clear?

2-1. INVENTION MAKER - BIOMIMETIC ROBOT FOR DISASTER RESCUE

Review Stage	Scoring Criteria	Points
Submitted materials	Representation of the work 50 + Storytelling 50	100
On-site	Use of tools 25 + Creativity 25 + Effectiveness 25 + Presentation 25	100
TOTAL		200

Basic Requirements

99. Eligibility: High school, university, and adult
100. Team composition: Two participants
101. Materials - Primary: 4Dframe and related components; boards and electronic components capable of coding and AI applications may be used. Secondary: foam board, polystyrene board, colored paper, string, tape, and setting materials.

MATERIALS

Other materials used for the work or environment are treated only as aids to understanding and are not reflected in the score. Matters not specified are decided by the judging panel.

Submission Requirements

102. Project report: download the official template from the competition website.
103. Photographs: approximately four completed-work images (no strict numerical limit); submit original image files with the report in a compressed file.
104. Video: present the background, work, story, reflections, and detailed explanations of operation, function, and appearance

Required Project Elements

105. Explain the work's function and purpose.
106. Explain any manually implemented motion in the video.
107. Demonstrate operation according to the intended purpose.
108. Coding, AI, and linked components are permitted but not mandatory. If coding is used, line-by-line code interpretation is not required.

Preliminary Materials Review Criteria

Criterion	Review Questions
Representation of the Work	• Is the work creatively designed? • Are materials used effectively? • Is the work complete and polished? • Are diverse mechanical principles used? • Is the work realistic? • Can it perform the intended purpose?
Storytelling	• Did team members divide responsibilities effectively? • Are the intent and background clearly explained? • Is the production process clearly explained? • Do the report, video, and actual work match? • Is the video presentation clear?

2-2. PLAY I-II GUIDELINES

ONLINE REVIEW Play I and Play II are judged exclusively through online submissions.

Review Stage	Criteria	Points
Submitted materials	Representation 50 + Storytelling 50 + Playfulness 50 + Cooperation 25 + Interaction 25	200
TOTAL		200

Basic Requirements

109. Eligibility: infants under age 3.
110. Team composition: a whole class or a group within a class, including the teacher in charge.

Submission Requirements

111. Photographs: approximately four freely selected images showing the activity process. Compress and upload them in the report-submission field of the application page.
112. Video: freely present the team, play or work-formation process, activity process, and final outcome.
113. Video limit: up to 50 MB and 3 minutes. Files over 50 MB should be sent to 4dedu@hanmail.net.
114. Do not use third-party music or video that may infringe copyright. The participating team bears responsibility for any violation.

Application deadline: Wednesday, September 30, 2026, at <https://www.ngfsteam.org>

Division Details

Item	Play I	Play II
Theme	Let's Build and Play in a Wonderful House!	Let's Work Together!
Primary materials	4D Block and 4D Big Block	Super 4Dframe (Play, Kids)
Secondary materials	May be used freely in class; treated only as aids to understanding and not included in scoring	May be used freely in class; treated only as aids to understanding and not included in scoring
Required elements	Process and play consistent with the theme; teacher-infant interaction; participation and self-direction; Plan-Do-See; creative play	Process and play consistent with the theme; teacher-infant interaction; participation and self-direction; Plan-Do-See; creative play

2-3. CAPSTONE DESIGN DIVISION

1. Purpose

- 115. Build a foundation for STEAM culture and develop and disseminate STEAM-related content.
- 116. Generate and demonstrate convergent product ideas using 4Dframe, a STEAM education modeling tool.
- 117. Discover and disseminate 4Dframe-STEAM educational content, programs, and works.
- 118. Recognize and activate original STEAM content that advances STEAM culture.

2. Official Name

Event: 2026 International Mathematical Science Creativity Competition & Conference (IMSCC & Conference)

Division: Capstone Design - Capstone Project for the Advancement of STEAM

3. Eligibility

- 119. University or graduate students; high school students and adults interested in STEAM education.
- 120. Teams must have 2-5 participants. Advising teachers/professors are not included in the team size.
- 121. Adult teams must include at least one prospective university student or current university/graduate student. One adviser may supervise multiple teams.

4. Theme and Scope

Theme: 4Dframe × Embodied AI: Play, Create, Interact!

Scope: Major-based STEAM activities, works, programs, thematic inquiry, proof-of-concept projects, and related outcomes

- 122. Choose one of two kits: Mathematical Science Kit or Mechatronics Kit.
- 123. Content may be a single activity/work, an educational program, or thematic inquiry/research.
- 124. All entries must use a 4Dframe kit.

5. Official Kit

- 125. Each team of 2-5 uses one official 4Dframe kit: Mathematical Science or Mechatronics.
- 126. For domestic teams, a kit will be sent to the application address after registration and project approval by the competition office.
- 127. The appropriate kit will be selected according to the approved project theme. One kit per team is provided free of charge in principle; teams should separately purchase additional materials if needed.

Kit support inquiries: +82-31-553-7774, FAS Secretariat

Capstone Design - Schedule and Submissions

Stage	Required Item / Activity	Deadline / Venue
Registration and submission	Online application after account registration; final report; summary video up to 3 minutes / 50 MB	By Sep. 30, 2026, 24:00 (KST) ngfsteam.org/competition_apply
Participant-number announcement	Announcement of on-site presenters	Oct. 7, 2026 ngfsteam.org notices
Final presentation slides	PPT for on-site presentation; free format	By Oct. 21, 2026, 18:00 ngfsteam.org/competition_apply
Competition	Demonstration and presentation	Oct. 31, 2026, from 10:00 KNUE Teacher Culture Center
Awards	Award ceremony	Oct. 31, 2026, 16:00
Publication	Materials for publication in the Foundation's journal - award-winning teams only	Within one year after the award, by Oct. 31, 2027

128. Preliminary/final materials submission: https://ngfsteam.org/imscs_submit
129. International presenters participating online submit a presentation video of up to 5 minutes and are judged on site under the same conditions as in-person presenters.
130. Reports of finalist teams will be published sequentially in The Next Generation of STEAM, subject to the Association for 4Dframe Editorial Board's guidance.

Previous winners' papers: https://ngfsteam.org/the_steam

Milestones at a Glance

Application	Project / Final Report	Preliminary Review	Finalists	Final Slides	Presentation	Awards	Journal
Sep. 30 24:00	Sep. 30 24:00	Oct. 1-6	Oct. 7	Oct. 21	Oct. 31 10:00-12:00	Oct. 31 16:00	Within 1 year

7. Judging

131. Eligible teams are reviewed under the Capstone Project criteria by three experts appointed by the Foundation.
132. The ten highest-scoring teams (out of 100) are selected from applicants in each area.
133. Final ranking is based on 200 points: 100 for the project report and 100 for the final presentation.

Stage	Goals & Value	Storytelling	Tool Use	Effectiveness	Creativity	Presentation	Total
Report / Final	50	50	25	25	25	25	200

JUDGING

Absence from the final presentation results in a presentation-score deduction. Teams registered in advance for video presentation are judged using their submitted online video.

Capstone Design - Awards and Contact

Level	Award	Benefits	No.
Grand Prize	Minister of Trade, Industry and Resources Award	KRW 1,000,000 team prize, benefits, and certificate	1
Gold	Chairman, Foundation for the Advancement of STEAM	KRW 500,000 team prize, benefits, and certificate	1
Silver	Chairman, Foundation for the Advancement of STEAM	KRW 200,000 team prize, benefits, and certificate	2
Bronze	Director, 4D Mathematical Science Creativity Institute	Individual certificates and benefits	3

134. Final-round award recipients are added to the Association for 4Dframe Hall of Fame and granted regular membership.
135. Award-winning teams are expected to publish in the Association for 4Dframe journal following the required procedures.

Inquiries

Capstone coordinator: +82-31-553-7774; admin@ngfsteam.org

Application and submission: https://ngfsteam.org/competition_apply

Detailed information: <https://ngfsteam.org/capstone2026>

3. ACADEMIC CONFERENCE & TEACHER AWARDEE PRESENTATIONS

Day 2 - NGF Talks & Posters

Purpose

The Association for 4Dframe hosts NGF Talks & Posters as an open forum for anyone interested in STEAM culture using 4Dframe. Participants share their approaches and communicate toward the advancement of STEAM culture for the next generation.

Overview

Event: IMSCC 2026 Academic Conference - NGF Talks & Posters

Hosts: Korea National University of Education (KNUE); Foundation for the Advancement of STEAM (FAS)

Organizer: Association for 4Dframe (A4D)

Sponsors: 4D Land, Inc.; 4D Mathematical Science Creativity Institute

Date and Time: Saturday, October 31, 2026, 14:00-16:00

Venue: Korea National University of Education

Call for Presenters

136. Open to everyone from children to adults, with no age restriction: researchers, scholars, practitioners, students, children, and parents interested in 4Dframe projects.

Main Theme: Interdisciplinary learning for future competencies

137. Teacher tracks (5): Science, Teaching, Engineering, Creative Experiential Activities, and Mathematics.
138. Student workshops (5): Mechanics, Architecture, Geometry, Maker, and Robotics.
139. Pre-service teacher track: students from KNUE and international colleges/universities of education may participate.
140. Other freely chosen 4Dframe-related topics are welcome.

Illustrative Topics (Examples)

4Dframe philosophy and teaching-learning principles
Introducing manipulatives and understanding dimensions
What can we do with triangles?
Teaching 4Dframe in schools
Gifted-education practice
Orderly Tangles
School and regional mathematics festivals
Elementary mathematics applications
Dynamic structures
Creative products using mechanical principles
Creative experiential activities
Pythagorean theorem and the Great Pyramid
Archimedean solids
Art Math
Regular polyhedra
The world of geometry
Trigonometric ratios and functions

Presentation Formats

141. NGF Talks: oral presentation of up to 5 minutes on the day of the conference.
142. NGF Posters: poster displayed in the lobby on the day of the conference.
143. Visit www.ngfsteam.org for more details

Academic Conference - Key Schedule

Stage	Documents / Activity	Deadline / Venue
Registration	Online application after account registration	By Sep. 30, 2026, 24:00 ngfsteam.org/conference_apply
Materials submission	Download template; submit final report and summary video up to 3 minutes	By Sep. 30, 2026, 24:00; attach to online application
Review	Review submitted documents	Oct. 1-6, 2026
Presenter announcement	On-site presenter announcement	Oct. 7, 2026; website notice board
Presentation slides	Free-format PPT	By Oct. 18, 2026, 24:00; korea_kocef@naver.com
On-site review	Demonstration and presentation	Oct. 31, 2026, 14:00-15:30; KNUE
Awards	Outstanding Talk and Outstanding Poster	Oct. 31, 2026, 16:00; Teacher Culture Center
Publication	Journal materials for award recipients	Within one year; by Oct. 18, 2027

4. IMSCC 2026 INTERNATIONAL STUDENT FORUM

Day 2 - Multinational Student Collaborative Project

Purpose

144. Enable IMSCC 2026 students from around the world to visit a Korean STEAM education setting and experience a multinational team project.
145. Promote joint efforts on social justice, economic development, and environmental conservation based on the Sustainable Development Goals (SDGs).
146. Help students exercise collective intelligence and collaborative problem-solving through mutual respect, exchange, and negotiation as future global leaders.

Overview

Theme: Creativity-based multinational problem-solving project for international exchange in STEAM culture

Date and Time: Saturday, October 31, 2026, 14:00-16:00

Venue: Korea National University of Education

Participants: Students in international IMSCC delegations and elementary, middle, and high school students/groups from the Republic of Korea

Hosts: Korea National University of Education; Foundation for the Advancement of STEAM

Organizer: Mirae High School of Science and Technology

Application: https://ngfsteam.org/sforum_apply

Teams, country delegations, and individuals may register.

Application Schedule

Stage	Date	Details	Notes
Applications - groups/individuals	Jul. 3-Oct. 11, 2026	Complete online form and submit participant list	Country adviser may register all students, or students may apply individually
Confirmation	Oct. 14, 2026, 16:00	Final confirmation of participation	www.ngfsteam.org
Forum attendance	Oct. 31, 2026, 14:00	Group/individual on-site participation	KNUE
Presentation & completion	Oct. 31, 2026, 15:30	Presentation and completion ceremony	KNUE

NOTICE The schedule may change. Please refer to www.ngfsteam.org for the final schedule.

Academic Conference + Student Forum Schedule

Education Research Building, 5F and 6F

Time	Conf. 1 Rm 603	Conf. 2 Rm 604	Conf. 3 Rm 605	Conf. 4 Rm 607	Conf. 5 Rm 609	Forum Rms 505/506	Forum Rms 507/509
14:00-14:20	Elementary Gifted	Elementary Math 1	Middle School Club Activities	High School Math	Middle School Science	Elementary	Middle/High
14:30-14:50	Elementary Creative Exp. 1	Elementary Math 2	Middle School Robotics	All Math	High School Science	Elementary	Middle/High
15:00-15:20	Elementary Creative Exp. 2	Elementary After-school	All Coding & AI	Secondary Math	All Science	Elementary	Middle/High
15:20-15:50	Networking and Photo Session					Completion & networking (Gift Exchange and Photo Session)	

5. IMSCC 2026 INTERNATIONAL STEAM-EDU FESTA

Day 2 - Outdoor Exhibition, Experience, Promotion, and Cultural Exchange

Purpose

The FESTA is an exhibition where Korean and international STEAM stakeholders, teachers, scholars, parents, students, industry representatives, and the local community participate together as part of IMSCC 2026.

Overview

Event: International STEAM-EDU FESTA

Date and Time: Saturday, October 31, 2026, 09:00-16:00

Venue: Outdoor booths at Teacher Culture Center Plaza, KNU

Organizer: Foundation for the Advancement of STEAM (FAS)

Format: Outdoor exhibition, hands-on activities, promotion, and cultural exchange

Scale: Approximately 30-50 booths based on 3 m × 3 m canopy tents

Official Languages: English and Korean

Participants: STEAM companies, country delegations, student and teacher clubs, educational institutions, and related organizations

Operating Direction

147. An outdoor STEAM festival combining exhibition, hands-on experience, presentation, cultural exchange, and promotion/sales.
148. All booths should be open for visitors to experience freely. Participatory and interactive programs are encouraged over display-only booths.
149. Companies, students, teachers, and international delegations share one space connecting education, industry, culture, and international exchange.

Booth Categories

The standard unit is one 3 m × 3 m canopy tent. Applicants may request multiple units if needed.

Category	Eligible Participants	Activities	Fee	Target Booths
Company	STEAM, education, EdTech, learning-materials, and content companies	Product display, hands-on experiences, promotion, consultation, on-site sales	Voluntary sponsorship	20-30
Student Club	Elementary, middle, high school, and university STEAM clubs/teams	Project presentations, maker outputs, demonstrations, experiences	Free	10
Teacher Club	Teacher research groups, learning communities, STEAM clubs	Lesson cases, educational materials, hands-on programs	Free	5
International Delegation	International schools, institutions, and country delegations	Culture-and-STEAM integrated exhibitions and experiences	Free	10-15

International STEAM-EDU FESTA - Participation Details

Main Activities

150. Company booths: STEAM products, hands-on operation, brand promotion, and on-site promotion/sales.
151. Student booths: creative project outcomes, maker outputs, and demonstrations.
152. Teacher booths: teaching materials, program cases, and STEAM lesson models.
153. International booths: hands-on content integrating each country's culture and STEAM.
154. Common activities may include visitor missions, stamp tours, on-site interviews, and photographic records.

Application and Selection

155. Apply online through the IMSCC 2026 official website.
156. Submit a booth introduction, operating plan, number of units requested, electricity needs, and hands-on activity description.
157. Selection may consider alignment with event purpose, plan quality, experiential value, safety, international relevance, and sustainability.
158. If demand exceeds capacity, the organizer may adjust booth size and location.

Schedule

Stage	Date	Details	Notes
FESTA application	Jun. 1-Oct. 11, 2026	Complete online form; URL to be announced	Companies may reserve up to four booths depending on sponsorship
Approval & allocation	Within one month after submission	Final participation confirmation	Individual notice
Exhibition/activity plan	Sep. 4, 2026, 16:00	Submit website-publication material and final plan	www.ngfsteam.org
On-site setup	Oct. 30, 2026, from 17:00	Participating institutions and groups set up booths	KNUE
FESTA operation	Oct. 31, 2026, 09:00-16:00	On-site participation	KNUE

Participation Fees

159. Companies: voluntary sponsorship.
160. Student clubs, teacher clubs, and international delegations: free.
161. Detailed sponsorship levels, benefits, and additional-unit fees will be announced separately.

Tentative Provisions

162. Basic: one 3 m × 3 m canopy tent, table, chairs, and participant name sign.
163. Optional or by separate arrangement: electricity, additional furnishings, promotional-material space, and extra booth units.
164. Company booths may receive promotional benefits according to sponsorship level.

Operating Principles

165. The FESTA pursues educational value, international exchange, cultural convergence, and sustainability.
166. Participants must provide content consistent with the event's purpose and maintain mutual respect and cooperation.
167. Even where on-site sales are permitted, excessive commercial activity or sales inconsistent with the event's purpose may be restricted.
168. All booths must comply with the organizer's safety-management and on-site operating guidelines.

Expected Outcomes

169. A practical international STEAM festival connecting companies, schools, teachers, students, and country delegations.
170. A blended fair model combining educational outcomes, industry links, and international cultural exchange.
171. An international STEAM education platform reflecting sustainable development, future competencies, and cultural diversity.

NOTICE All schedules are subject to change. Please refer to www.ngfsteam.org for the final notice.

IMSCC 2026

Official Announcement - English Edition

2026 Enlightening Imagination

International Mathematical Science Creativity Competition & Conference



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Foundation for the Advancement of STEAM

5F, 82-9 Jangjadaero 1beon-gil, Guri-si, Gyeonggi-do 11938, Republic of Korea

Tel. +82-31-553-7774 | Fax +82-31-553-1013 | admin@ngfsteam.org | www.ngfsteam.org