

**Official Rules**  
**for**  
**Metaverse Challenge for Semiconductor Education**

**NO PURCHASE OR PAYMENT IS NECESSARY TO ENTER OR WIN. A PURCHASE WILL NOT IMPROVE YOUR ODDS OF WINNING.**

**Contest: Metaverse Challenge for Semiconductor Education** (the “Contest”)

**Sponsor:** The Institute of Electrical and Electronics Engineers, Incorporated, 445 Hoes Lane, Piscataway, New Jersey, USA, 08854 (“Sponsor”)

**Eligibility:** Contest is open to residents of the United States of America and other countries, where permitted by local law, who are the age of eighteen (18) and older. **All entrants must be a student from an accredited university.** Employees of Sponsor, its agents, affiliates and their immediate families are not eligible to enter Contest. Entrants may be subject to rules imposed by their institution or employer relative to their participation in contests and should check with their institution or employer for any relevant policies. Void where prohibited by law. "For the avoidance of doubt, the Contest is not open to individuals or teams who are subject to export control regulations. This may include, but is not limited to, those listed here: <https://legal.ieee.org/compliance/ofac/applicability-countries-entities-persons>."

**Agreement to Official Rules:** By participating in this contest, entrants agree to abide by the terms and conditions thereof as established by Sponsor. Sponsor reserves the right to alter any of these Official Rules at any time and for any reason. All decisions made by Sponsor concerning the Contest including, but not limited to the cancellation of the Contest, shall be final and at its sole discretion.

**Entry Period:** This Contest commences on June 1, 2024 at 8 AM EDT and ends on **September 3, 2024** at 5 PM EDT ("Entry Period"). Sponsor's server is the official clock for the Contest. Entries received before or after the entry period are void.

**How To Enter:** Entrants must first sign up (register) for the Contest by **August 14, 2024**. After that, entrants must upload a project online as specified in the contest submission webpage <https://ieee-isemv.org/competition> within the entry period specified above. More details on the format of submissions are included in the description below.

**LIMIT ONE (1) ENTRY PER PERSON.** Teams may consist of one (1) to four (4) individuals. Each individual shall be on one (1) team only. Team members cannot be changed once the project is submitted.

Only entries submitted in accordance with these Official Rules will be eligible for consideration. No alternate means of entry permitted. All entries become the exclusive property of Sponsor and will not be acknowledged or returned.

**Selection of Winner:** A Selection Committee of judges qualified to evaluate submissions of this nature has been created by the IEEE Metaverse Initiative. Submissions will be assessed based on the criteria listed below. Judges will use a scoring system to evaluate each submission and will meet to establish final rankings and determine the winners in case of a tie. The confidentiality of the contents of each submission will be strictly maintained.

**The Challenge:** The IEEE Metaverse Initiative invites you to embark on an immersive journey into the world of semiconductor manufacturing. The objective is to create a virtual cleanroom environment in a metaverse platform that accurately depicts the intricate steps of semiconductor chip manufacturing.

All contestants must design and simulate **at least one of the seven (7) steps** as outlined in the article, "[Introduction to Semiconductor Manufacturing](#)".

- Step 1: Wafer Manufacturing
- Step 2: Oxidation
- Step 3: Photolithography
- Step 4: Etching
- Step 5: Doping
- Step 6: Metallization
- Step 7: Quality Control and Packaging

Teams are free to choose which step or steps of the semiconductor manufacturing process they wish to design and simulate in their submission.

Use animations, interactive elements, and educational content to enhance the experience. Incorporate interactive elements to engage participants, such as clickable objects, quizzes, and collaborative activities. Develop informative and accessible educational content to accompany your virtual environment, providing explanations, demonstrations, and supplementary resources.

The goal is to provide an engaging and educational experience for students and participants to learn more about the semiconductor manufacturing process. **Learners must be able to access the virtual cleanroom environment with just a standard computer setup.**

Teams are free to choose their preferred **2D or 3D metaverse** platform for project development. The selected platform should support educational content creation and interactivity.

**Submission Format:** Submissions to the Contest consist of:

- A PowerPoint presentation (up to 5 pages). The presentation should specify which of the seven step(s) of the semiconductor manufacturing process are being simulated. The presentation should include a brief description of the implementation design methods and techniques used, **development platform and whether it is 2D or 3D**, language, and tools. The presentation should also highlight key elements that increase engagement. Credits and citations to open source or other work should be referenced appropriately.
- A 5-7 minute long video recording in MP4 format. The video should showcase the virtual cleanroom environment, demonstrate at least one of the steps of the semiconductor manufacturing process, and explain key features and functionalities.

**Judging Criteria:** Elements for consideration include

- Accuracy
- Creativity
- Educational Impact
- Technological Innovation
- User Experience
- Integration of Gamification Elements

**Prize:** The prize(s) for the Contest are being sponsored by IEEE. The winner(s) (the “Prize Winner(s)”) shall receive up to \$2000.00 USD in travel funds for one team member to attend the 2024 IEEE International Symposium on Emerging Metaverse (the “Prize”).

The Contest will award up to two (2) prizes. Awards will be given only if a suitable awardee is identified.

No cash in lieu of prize or substitution of prize permitted, except that Sponsor reserves the right to substitute a prize or prize component of equal or greater value in its sole discretion for any reason at time of award. Sponsor shall not be responsible for service obligations or warranty (if any) in relation to the prize(s). Prize may not be transferred prior to award. All other expenses associated with use of the prize, including, but not limited to local, state, or federal taxes on the Prize, are the sole responsibility of the winner. Winner(s) understand that delivery of a prize may be void where prohibited by law and agrees that Sponsor shall have no obligation to substitute an alternate prize when so prohibited.

**Notification of Potential Prize Winners:** The Prize Winners will be notified by e-mail within 14 days of the selection date. If a Prize Winner does not acknowledge acceptance of the Prize within 14 business days after being notified that he or she is a Prize Winner, or if a potential Prize Winner does not return the signed claim forms within the required time, or is otherwise found to be ineligible or not in full compliance with these Official Rules, another Prize Winner will be chosen using the same procedure specified above. Potential Prize Winner may be asked to execute and return to Sponsor a declaration of eligibility and liability/publicity release, where lawful, within fourteen (14) days of attempted notification. Winner may waive the right to receive the prize. The decisions of Sponsor are final and binding in all respects.

**Release, Publicity, and Privacy:** By receipt of the Prize and/or, if requested, by signing an affidavit of eligibility and liability/publicity release, the Prize Winner consents to the use of his or her name, likeness, business name and address by Sponsor for advertising and promotional purposes, including but not limited to on Sponsor’s social media pages, without any additional compensation, except where prohibited. No entries will be returned. All entries become the property of Sponsor. The Prize Winner agrees to release and hold harmless Sponsor and its officers, directors, employees, affiliated companies, agents, successors and assigns from and against any claim or cause of action arising out of participation in the Contest.

Sponsor assumes no responsibility for computer system, hardware, software or program malfunctions or other errors, failures, delayed computer transactions or network connections that are human or technical in nature, or for damaged, lost, late, illegible or misdirected entries;

technical, hardware, software, electronic or telephone failures of any kind; lost or unavailable network connections; fraudulent, incomplete, garbled or delayed computer transmissions whether caused by Sponsor, the users, or by any of the equipment or programming associated with or utilized in this Contest; or by any technical or human error that may occur in the processing of submissions or downloading, that may limit, delay or prevent an entrant's ability to participate in the Contest.

Sponsor reserves the right, in its sole discretion, to cancel or suspend this contest and award a prize from entries received up to the time of termination or suspension should virus, bugs or other causes beyond Sponsor's control, unauthorized human intervention, malfunction, computer problems, phone line or network hardware or software malfunction, which, in the sole opinion of Sponsor, corrupt, compromise or materially affect the administration, fairness, security or proper play of the contest or proper submission of entries. Sponsor is not liable for any loss, injury or damage caused, whether directly or indirectly, in whole or in part, from downloading data or otherwise participating in this Contest.

Entrant acknowledges and agrees that Sponsor may collect, store, share, and otherwise use personally identifiable information provided during the registration and application process and the Contest, including, but not limited to, name, mailing address, phone number, and email address. Sponsor will use this information with accordance with its Privacy Policy ([https://www.ieee.org/security\\_privacy.html](https://www.ieee.org/security_privacy.html)), including for administering the Contest and verifying Entrant's identity, postal address, and telephone number in the event an entry qualifies for a prize. Entrant's information may also be transferred to countries outside the country of Entrant's residence, including the United States. Such other countries may not have privacy laws and regulations similar to those of the country of Entrant's residence. If an Entrant does not provide the mandatory data required at registration, Sponsor reserves the right to disqualify the entry.

**Right to Use Entries:** By entering the Contest, entrants grant Sponsor a non-exclusive, irrevocable, royalty-free, perpetual, worldwide right and license to reproduce, publish, display, edit and otherwise use the submitted Entries, and entrant's full name and city and state/province/country of residence, photograph, likeness, voice and institutional affiliation, in print or any offline or online and other media for purposes of editorials, exhibition, advertising, publicity and promotion without additional compensation or permission, unless prohibited by law.

**Representations and Warranties Regarding Entries:** By submitting an Entry, you represent and warrant that your Entry does not and shall not comprise, contain, or describe, as determined in Sponsor's sole discretion: (A) false statements or any misrepresentations of your affiliation with a person or entity; (B) personally identifying information about you or any other person; (C) statements or other content that is false, deceptive, misleading, scandalous, indecent, obscene, unlawful, defamatory, libelous, fraudulent, tortious, threatening, harassing, hateful, degrading, intimidating, or racially or ethnically offensive; (D) conduct that could be considered a criminal offense, could give rise to criminal or civil liability, or could violate any law; (E) any advertising, promotion or other solicitation, or any third party brand name or trademark; or (F) any virus, worm, Trojan horse, or other harmful code or component. By submitting an Entry, you

represent and warrant that you own the full rights to the Entry and have obtained any and all necessary consents, permissions, approvals and licenses to submit the Entry and comply with all of these Official Rules, and that the submitted Entry is your sole original work, has not been previously published, released or distributed, and does not infringe any third-party rights or violate any laws or regulations.

**Limitations of Liability/Reserved Rights:** Neither Sponsor, its parent, subsidiary or affiliated companies, nor its advertising or promotional agencies shall have any obligation, liability or responsibility with regard to (i) entries that contain incorrect or inaccurate information or do not comply with these Official Rules, (ii) entries, prize claims or notifications that are lost, late, incomplete, illegible, unintelligible, damaged or otherwise not received by the intended recipient, in whole or in part, due to computer, technical or other error of any kind, (iii) telephone, electronic, hardware, software, network, Internet or computer malfunctions, failures or difficulties of any kind, (iv) any condition caused by events beyond the control of Sponsor that may cause the Contest to be disrupted or delayed, (v) any printing or typographical errors in these Official Rules or any other materials associated with the Contest, or (vi) any damages or losses of any kind caused by any prize or resulting from participation in the Contest, accessing, uploading or downloading data in connection with the Contest, or acceptance, possession or use of any prize. Sponsor, in its sole discretion, reserves the right to disqualify any entrant tampering with or abusing the entry process or the operation of the Contest or otherwise violating these Official Rules. Sponsor, in its sole discretion, further reserves the right to cancel, terminate, suspend or modify the Contest if the Contest cannot be completed as planned because of infection by computer virus, bugs, tampering, unauthorized intervention or technical failures of any sort and to select a winner from among eligible entries unaffected by such event, if any.

**Disputes:** EACH ENTRANT AGREES THAT: (1) ANY AND ALL DISPUTES, CLAIMS, AND CAUSES OF ACTION ARISING OUT OF OR IN CONNECTION WITH THIS CONTEST, OR ANY PRIZES AWARDED, SHALL BE RESOLVED INDIVIDUALLY, WITHOUT RESORTING TO ANY FORM OF CLASS ACTION, PURSUANT TO ARBITRATION CONDUCTED UNDER THE COMMERCIAL ARBITRATION RULES OF THE AMERICAN ARBITRATION ASSOCIATION THEN IN EFFECT, (2) ANY AND ALL CLAIMS, JUDGMENTS AND AWARDS SHALL BE LIMITED TO ACTUAL OUT-OF-POCKET COSTS INCURRED, INCLUDING COSTS ASSOCIATED WITH ENTERING THIS CONTEST, BUT IN NO EVENT ATTORNEYS' FEES; AND (3) UNDER NO CIRCUMSTANCES WILL ANY ENTRANT BE PERMITTED TO OBTAIN AWARDS FOR, AND ENTRANT HEREBY WAIVES ALL RIGHTS TO CLAIM, PUNITIVE, INCIDENTAL, AND CONSEQUENTIAL DAMAGES, AND ANY OTHER DAMAGES, OTHER THAN FOR ACTUAL OUT-OF-POCKET EXPENSES, AND ANY AND ALL RIGHTS TO HAVE DAMAGES MULTIPLIED OR OTHERWISE INCREASED. ALL ISSUES AND QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, INTERPRETATION AND ENFORCEABILITY OF THESE OFFICIAL RULES, OR THE RIGHTS AND OBLIGATIONS OF ENTRANT AND SPONSOR IN CONNECTION WITH THE CONTEST, SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW JERSEY, WITHOUT GIVING EFFECT TO ANY CHOICE OF LAW OR CONFLICT OF LAW, RULES OR PROVISIONS (WHETHER OF THE STATE OF NEW JERSEY OR ANY OTHER JURISDICTION) THAT WOULD CAUSE THE

APPLICATION OF THE LAWS OF ANY JURISDICTION OTHER THAN THE STATE OF NEW JERSEY. SPONSOR IS NOT RESPONSIBLE FOR ANY TYPOGRAPHICAL OR OTHER ERROR IN THE PRINTING OF THE OFFER OR ADMINISTRATION OF THE CONTEST OR IN THE ANNOUNCEMENT OF THE PRIZES.

**Contest Results and Official Rules:** To obtain the identity of the Prize Winner and/or a copy of these Official Rules, send a self-addressed stamped envelope to Technical Activities, The Institute of Electrical and Electronics Engineers, Incorporated (“IEEE”), 445 Hoes Lane, Piscataway, New Jersey, USA, 08854.