IET
On Campus
UET LAHORE

Electrocon'24

RULE BOOK

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info.econ24@gmail.com

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ABOUT IET

The Institution of Engineering and Technology (IET) is a leading global organization fostering technological innovation and excellence. With over 167,000 members in 127 countries and 2,195 Chapters, it serves as a trusted "voice" in engineering, computing, and technology, driving positive change worldwide through publications, conferences, standards, and professional activities.

IET On Campus UET Lahore, based at the University of Engineering and Technology (UET), is dedicated to fostering science and technology awareness among students. Through various events and informative sessions, it promotes new technological innovations and provides a platform for students and professionals to share their views and expertise.

info.econ24@gmail.com

ECON24

INTRODUCTION

ElectroCON'24, formerly known as IETEC, presents a unique opportunity to sponsor an esteemed event that has transformed while maintaining its distinguished legacy. As an integral part of the IET On Campus UET Lahore tradition, ElectroCON'24 continues the mission to inspire, motivate, and cultivate the skills of young engineers.

REBRANDING MENTION

This year, ElectroCON'24 emerges with a refreshed identity, symbolizing a new era of innovation and excellence. Formerly known as IETEC, this rebranding reflects our commitment to evolving with the ever-changing technological landscape while honoring the rich heritage of our predecessors.

CONTINUITY & MISSION

With a history of countless impactful events and workshops, ElectroCON inherits the spirit of spreading knowledge far and wide, ensuring affordability and accessibility for all. Rooted in the ethos of maximum outreach and technological innovation, Electrocon 24 serves as a cornerstone event, uniting engineers from diverse backgrounds, fostering connections, and equipping them with the skills essential for real-world success.

RULES FOR MODULES

- **ROBOWARS**
- **CIRCUIT SPEED PATCHING**
- **PROGRAMMING COMPETITION**
- **LINE FOLLOWING ROBOT**
- **GAMING**

Robowars

1. Description:

Robowars competition will be held at EED UET Lahore as part of Electrocon 24' featuring participants from all four provinces of Pakistan with over 800+ participants in various modules. The competition involves applying technical skills to engineer robots that outmuscle and outsmart the opponents.

2. DRAWS:

Teams will be drawn in a classic knockout tournament fashion with the objective to create the most diverse draw i.e., teams from same cities and same universities won't be drawn against each other.The official draw will be held on the event day in live attendance before the matches commence.

3. Weight Limits:

The standard weight limit is 60 kg. However, relaxation will be given with B points penalty as follows.

62-65 kg: -1 point

66-70 kg: -2 points (Robots exceeding 70 kg will be asked to cut weight failure to which will be disqualified)

However underweight bots will be given a points advantage at the start.

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58-55 kg: 1 point
54-51 kg: 2 points
The weight of the robot will be inclusive of all attached weapons, mini-bots etc. The official weigh-in and Faceoff will be held on event day before the actual matches in live attendance.

4. Dimension Limit:
The Robot must have dimensions that allow it to maneuver inside an area of 128 sq ft. Too large robots (decided by the jury) will not be allowed to compete however, some relaxation will be given in this regard.

5. Matches and Scoring System:
Each match will have a duration of 5 minutes and only 1 round. Point scoring system will be used. Each team will be allowed one timeout (maximum 2 minutes) by throwing in the white flag in the cage per match. However, the team can avail another timeout by conceding a point penalty (-1 points). KO/TKO will be determined by the referee in case the robot stops moving after conducting a 10 second count out. The teams will still be eligible for a timeout even if they are being counted out. At the end of the match, the jury will score points for both robots and the higher score wins.

Damage (visible) / Striking	Out of 3 points
Aggression (willingness to engage)	Out of 3 points

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Control	**Out of 3 points**
Flair	**Out of 1 points**
KO/TKO	**10 points**

6. Ring:

A Hexagon cage with an area of 160 sq ft. and cage walls that are 2 ft in height. A metal roller is attached to one side of the hexagon and it will damage the robot if it is driven into it.

7. TECHNICAL RULES:

Forbidden Weapons:

- Untethered projectiles are not allowed.
- Heat and fire weapons are NOT allowed
- Flammable liquids or gases.
- Explosives or flammable solids such as: DOT Class C devices
- Gunpowder / Cartridge Primers
- Military Explosives, etc.
- Light and smoke-based weapons that impair the viewing of robots by an Entrant, Judge,
- Official or Viewer.
- Smoke or dust weapons
- Lights such as external lasers above 'class I' and bright strobe lights which may blind the opponent.
- Hazardous or dangerous materials are forbidden from use anywhere on a robot where they may contact humans, or by

way of the robot being damaged (within reason) contact humans.

- Entangling weapons are NOT allowed at this event.
- Liquid weapons are NOT allowed at this event.
- Powdered material or chaff weapons are NOT allowed at this event
- All pyrotechnics; explosives, flames, firearms, corrosives, liquids, electronic devices e.g., radio jamming, heat-guns, Tesla coils - are
- NOT allowed.

Weapons allowed but with discretion:

- Small, non-offensive pyrotechnics - e.g., flash puffs - May be allowed at the judge's discretion.
- Tethered projectiles are allowed, but the tether may not exceed 2.5m (approx. 3 ft) in length, (measured from the center of the robot to the tip of the projectile).
- The circular saws, carbon or steel cutting discs can be used.
- Commercial blades - e.g., bayonets - must not exceed 20cm/8inches in length.
- All sharp edges of weapons, including fixed weapons - e.g., spikes -and robot bodywork in general that is sharp, MUST be fitted with adequate protection that must be in place at all times except in the arena. (These guards are not included with the overall weight of the robot).

Miscellaneous:

- All Robots must use a safe and stable battery source and must try to ensure a direct shortage does not occur causing fire
- Safety must be a top priority throughout the competition. All robots and equipment must meet safety requirements, and all participants must wear appropriate safety gear.

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- All participants must maintain a high level of professionalism and respect for one another. This includes avoiding unsportsmanlike behavior, such as taunting, jeering, or gloating.
- Participants must follow the rules and guidelines set forth by the competition organizers. Failure to do so may result in penalties or disqualification.
- Good sportsmanship is expected of all participants, including congratulating opponents after a match, offering assistance if needed, and displaying positive attitudes throughout the competition
- Participants must ensure their robots are in good working order throughout the competition, including regular maintenance and repairs as needed.

8. QUERIES:

For any queries regarding the rulebook, Robowars or the event Electrocon24' in general; feel free to contact us at https://econ24.vercel.app

Wired Wizard

1. Description:

Welcome to the Circuit Patching Competition, where creativity meets technical prowess in the realm of electrical engineering! This competition challenges participants to demonstrate their skills in circuit design and problem-solving through the art of circuit patching. The primary objective of the Wired Wizards is to test participants' ability to quickly and effectively diagnose, and optimize electronic circuits. Whether you're a seasoned professional or a begineer, this competition promises excitement, challenge, and the opportunity to push the boundaries of innovation in circuit design and repair.

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2. Competition Format:

The competition consists of single round, where participants will be provided with a circuit diagram and their task will be to patch the circuit by strategically connecting components and jumper wires to achieve specified functionality. Participants may compete individually or in teams.

3. Rules and Regulations:

- ### Circuit Diagram:

Participants will receive a circuit diagram outlining the components and connections of the circuit. They must use this diagram to guide their patching efforts.

- ### Time Limit:

There will be a specified time limit of maximum 1 hour within which participants must patch the circuit and demonstrate its functionality.

- ### Tools and Equipment:

Participants will have access to a standard set of equipment, including transistors, jumper wires, diodes, resistors, capacitors, inductors, MOSFETS, and breadboards.

- ### Scoring:

Points will be awarded based on :

i. Accuracy of the patching.

ii. Overall functionality of the patched circuit.

iii. Neatness of the patching.

iv. Time Taken to patch the circuit.

- ### Team Participation:

A maximum of 2 members are allowed for team participation.

- ### Fair Play:

Any attempt to tamper with other participants' circuits or engage in unsportsmanlike conduct will result in immediate disqualification.

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- **Component Limitations:**

Participants must only use the components provided by the organizers. Any additional components or external devices are strictly prohibited.

4. Skills Tested:

- Circuit analysis and diagnosis
- Efficient Patching techniques
- Component identification
- Problem-solving under time pressure
- Collaboration and teamwork (for team-based participants)

Programming Competition

1. Description:

Get ready to ignite your coding genius at Electrocon's thrilling Programming Competition! Presented by the esteemed Electrical Engineering Department at the University of Engineering & Technology, Lahore, this competition is the ultimate test for coding enthusiasts. Join us as we delve into the heart of programming challenges, where innovation, logic, and camaraderie come together. Electrocon's Programming Competition offers a platform to showcase your coding skills, tackle real-world challenges, and push the boundaries of technological advancement. Charge up your intellect, fuel your passion for coding, and be part of this electrifying experience. Together, let's script the next chapter in the saga of programming excellence and innovation!

2. What awaits participants for our event:

- Engaging coding puzzles that will push the boundaries of your imagination and problem-solving acumen.
- Immersive coding experiences designed to ignite your creativity and honey your problem-solving skills.
- Dynamic challenges that will stretch your analytical thinking

and foster innovative solutions.

3. Rules and Regulations:

- All participants are to follow the rules and regulations for the competition. Failure to do so will result in disqualification by the organizers.
- All programming languages are allowed.
- Each team should consist of a maximum of 3 participants. Participants must be students regardless of their institution.
- The programming competition comprises two rounds. First round will have two slots of 2 hours each, with the top 50 participants advancing to the second round.
- The second round will be 3 hours long and will take place on day two. Participants will contend for top honors, with the top 10 deserving individuals set to be honored with both cash prizes and exclusive goodies.
- Participants are required to create their own original solutions to the given problem statements. Plagiarism, which includes copying code from external sources, is strictly prohibited and may lead to disqualification
- Participants are expected to behave respectfully and professionally throughout the competition. Harassment, discrimination, or any form of misconduct is strictly prohibited and may lead to disqualification.
- Participants must adhere to the specified list of allowed resources, tools, libraries, and programming languages. Any unauthorized resources or tools may not be used unless explicitly permitted.
- The competition organizers will provide teams with the problem set, papers, and pens .
- Extra time will not be provided under any circumstances. Participants are themselves accountable for coming to the

assigned venue on time.

4. Platform:

Hackerrank

5. Evaluation Overview :

- Solutions should produce correct outputs for provided test cases.
- Participants will be ranked according to the number of problems they solve.
- In case of a tie, the team with the least amount of time taken will be ranked higher than the others.
- The time taken will be assessed by the platform itself.
- Partial marking will be applied in the first round based on the number of test cases passed.
- The marking in the second round will be absolute, meaning you must successfully pass all of the test cases to receive a score for the problem.

Robo Route

1. Description:

Welcome to the annual Line Following Robot Competition_Robo Route , where creativity, innovation, and precision collide! This competition brings together robotics enthusiasts from all backgrounds to showcase their autonomous navigation skills in a thrilling race against the clock. Participants will pit their custom-built line-following robots against each other in a test of speed, accuracy, and agility. The challenge? Navigate a complex track consisting of twists, turns, intersections, and obstacles while following a predefined line from start to finish. With each robot operating autonomously, the stakes are high as competitors vie for victory.

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2. Rules and Regulations:

- **Dimension Limits:**

Robots must adhere to specified size restrictions to ensure fairness and safety on the track. The maximum size of a robot is 30 x 30 x 30 cm, the maximum weight is 3 kg. Dimensional and weight limits for robots shall be strictly enforced. Robots must have passed inspection prior to competing.

- **Line Recognition:**

Robots must utilize onboard sensors to detect and accurately follow a designated line without deviating from its path, showcasing their ability to respond to visual cues.

- **No Human/External Intervention:**

Once the race begins, human intervention, external assistance or remote control is strictly prohibited. Robots must rely solely on their programming and sensor data to navigate the course.

- **Time measurement :**

Clearly marked start and finish lines will denote the beginning and end of the race. Robots must start behind the start line and complete the course by crossing the finish line and time is measured from crossing the start line until the robot crosses the finish line.

- **Track :**

The track consist of a white background with the lines in black 3 cm wide. The robot must not damage the track.

- **Team Participation :**

A maximum of 3 members are allowed for the team participation.

- **Track Variations:**

The competition may feature different track layouts to challenge the adaptability and versatility of the robots. Fair Play: Any form of interference with other robots or tampering with the track is strictly forbidden. Violators will face immediate disqualification.

- **Judging Criteria: Judging will be based on :**
  1. Completion time
  2. Accuracy of line following
  3. Overall performance.

Transparent scoring and adjudication ensure fairness and integrity throughout the competition.

Gamers Arena

Description:

Get ready for thrilling gaming competition as Electrocon presents its Gaming Module, an electrifying showcase of competitive esports! Dive into the adrenaline-fueled world of gaming with four exhilarating tournaments: Valorant, Tekken 8, PUBG, and FIFA 23. Each tournament promises to deliver its own unique blend of skill, strategy, and excitement, captivating both participants and spectators alike. The stage is set for an epic showdown. Whether you're a seasoned pro or a newcomer to the scene, there's something for everyone at Electrocon's Gaming Module. So, gear up, sharpen your reflexes, and get ready to conquer the virtual arena. Get ready to battle it out and showcase your skills in the ultimate gaming extravaganza!

i. TEKKEN 8:

Rules and Regulations:

This rulebook outlines the regulations for the offline Tekken tournament held within the Electrocon'24 E-Gaming Event on PC. Following are the rules and regulations:

1. General Rules:

- **Game:** Tekken 8
- **Platform:** PC
- **Match Settings:**
  a. Rounds: 3

b. Time Limit: 60 seconds

c. Stage Select: Random (First Game)

d. Character Customization: Off (Preset costumes allowed)

- **Controllers:**

Standard arcade sticks (if you can arrange personally) otherwise PS4 controllers only.

- **Conduct:**

Players are expected to maintain respectful and sportsmanlike conduct throughout the tournament. Any disruptive or offensive behavior will result in penalties, including disqualification.

2. Gameplay:

2.1 Single Elimination:

- This format eliminates a player after a single loss.
- Brackets will be randomly generated before the tournament begins.
- Players progress through the bracket by winning their matches.
- The winner of the final match is declared the tournament champion.

2.2 Match Procedure:

- Players select sides (Player 1 or Player 2) before the match starts.
- For the first game, the stage is randomly selected by a tournament organizer using a fair method (e.g., coin toss, random number generator).

In case of a tie, an additional round is played with random stage selection using the same method as the first game.

3. Tournament Management:

- **Registration:**

Players should register for the tournament before the deadline.

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- **Tournament Check-in:**

Players must check in with the head before their scheduled matches.

- **Time Limits:**

Players arriving late for their match may be subject to penalties, including forfeiting the match.

- **Dispute Resolution:**

Any disputes arising during the tournament will be resolved by the tournament head. Their decision will be final.

- **4. Awards for the Winners:**

Awards are being decided upon.

ii. FIFA 23:

This rulebook outlines the regulations for the offline FIFA 23 tournament held within the Electrocon'24 E-Gaming Event on PC/PS4. Following are the rules and regulations:

- **1. General Rules:**
- **Game:** FIFA 23
- **Platform:** PC/PS4
- **Match Settings:**
  - **a. Time Limit:** 4 minutes half
  - **b. Stadium/Ball/Grass Customization:** Off
  - **c. Team/Tactics Customization:** On
  - **d.** Pacing will be set to Default.
  - **e.** All matches will be played in Neutral stadiums.
- **Controllers:** Standard PS4 controller (Participant can bring their own PS4 Controller)
- **Conduct:** Players are expected to maintain respectful and sportsmanlike conduct throughout the tournament. Any disruptive or offensive behavior will result in penalties, including disqualification.
- If any player is caught distracting/disturbing their opponent by any means, he will be eliminated directly.

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- Both players cannot choose kits with matching colors.
- Analogue stick setting can be requested if any of the two players face difficulty while moving their players.
- Pausing the game during gameplay is only allowed in emergencies. Participants must inform their opponent before pausing.
- Players cannot choose custom teams (such as all-star 11 etc)

2. Gameplay:

2.1 Single Elimination:

- This format eliminates a player after a single loss.
- Brackets will be randomly generated before the tournament begins.
- Players progress through the bracket by winning their matches.
- The winner of the final match is declared the tournament champion.

2.2 Match Procedure:

- Players select sides (Player 1 or Player 2) before the match starts.
- Players can choose any kit (home/away).
- n case of tie the winner will be decided by penalty shootout.

3. Tournament Management:

- **Registration:**

Players should register for the tournament before the deadline.

- **Tournament Check-in:**

Players must check in with the head before their scheduled matches.

- **Time Limits:**

Players arriving late for their match may be subject to penalties, including forfeiting the match.

- **Dispute Resolution:**

Any disputes arising during the tournament will be resolved by the tournament head. Their decision will be final.

4. Awards for the Winners:

Awards are being decided upon

RULES FOR MODULES

iii. <u>Valorant:</u>

This rulebook outlines the regulations for the offline Valorant tournament held within the Electrocon'24 E-Gaming Event on PC. Following are the rules and regulations:

1. General Rules:
- **Game:** Valorant
- **Platform:** PC
- **Match Settings:**
  - **a.** Best of 1.
  - **b.** PCs will be provided.
  - **c.** All matches will be played in Neutral venue.
- **Team Composition:**

Typically, teams consist of five players each. Peripherals and headset will be provided. Players can bring there one as well.

- Pausing the game during gameplay is only allowed in emergencies. Participants must inform their opponent before pausing.
- **Conduct:**

Players are expected to maintain respectful and sportsmanlike conduct throughout the tournament. Any disruptive or offensive behavior will result in penalties, including disqualification.

2. Gameplay:

2.1 Single Elimination:
- This format eliminates a Team after a single loss.
- Brackets will be randomly generated before the tournament begins.
- Teams progress through the bracket by winning their matches.
- The winner Team of the final match is declared the tournament champion.

2.2 Match Procedure:
- **Map Pool:** A predefined set of maps will be used for the tournament. In Valorant, this often includes maps like Bind, Haven, Split, and Ascent.

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- **Agent Selection:** Before each match, teams take turns selecting agents. Duplicate agents are not allowed on the same team.
- **Match Settings:** The default settings for each match (e.g., round duration, spike plant duration) are determined by the tournament organizers.
- **Pause Rules:** Rules regarding pauses, allowing teams to temporarily halt the game due to technical issues or other unforeseen circumstances.
- **Equipment Rules:** Rules regarding equipment, including restrictions on custom hardware or software modifications, may be enforced to ensure fair competition.

3. Tournament Management:

- **Registration:**

Teams should register for the tournament before the deadline.

- **Tournament Check-in:**

Teams must check in with the head before their scheduled matches.

- **Time Limits:**

Teams arriving late for their match may be subject to penalties, including forfeiting the match.

- **Dispute Resolution:**

Any disputes arising during the tournament will be resolved by the tournament head. Their decision will be final.

- **Tournament Administration:**

Organizers will appoint referees or administrators to oversee matches, enforce rules, and resolve disputes.

- **Disqualification:**

Organizers reserve the right to disqualify teams or players who violate tournament rules or engage in unsportsmanlike conduct.

4. Awards for the Winners:

Awards are being decided upon.

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iv. <u>Pubg Mobile:</u>

Rules for PUBG:

- PUBG is onlineon mobile phones not on pc.
- PUBG Mobile participants are allowed only.
- In case of cheating or hacking, team will be disqualified.
- Team up with other squads is not allowed. If anyone is found doing so, both squads will be disqualified.
- Time Table will be strictly followed.
- 10 minutes of relaxation on time will be given. If any squad is unable to join even after 10 minutes of the assigned time, the squad will be disqualified. Hence, try to reach on time.
- If player of any team is unable to join on slotted time, then the team would have to continue without him/her.
- Maps will be informed soon.
- Chicken dinner scores 15 points and accordingly with the position of teams and every kill scores 1 point, and further position points will be according to scrims.
- Teams should be present physically on the event for participation, In some case contact module Head.
- **Participants have to click the screenshot of their match summary and send it to the organizing committee within 5 minutes after each game. Failing to send the screenshot in the slotted time will result in disqualification.**

GET IN TOUCH

- **Organizer :**
  1. Taimoor Hasan
   +92 335 6020138

  2. Fahad Habib
   +92 306 0656836

- **Co-organizer :**
  1. Abdul Wasey
   +92 336 7032290

  2. Muhammad Hamza Awan
   +92 335 0780018

@theiet.uet

@iet_on_campus_uet_lahore

IET On Campus Uet Lahore