

# ROADMAP OF THE LEARNING PATHWAY AT STORMING ROBOTS

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## ROBOTICS ENGINEERING TRACK

### LEVELS

#### Robotics Projects level B

- About 1 term to complete

#### Robotics Projects level I

- Require satisfactory completion of Level B
- About 1 term to complete

#### Robotics Projects level II

- Require satisfactory completion of Level I
- About 1-2 term to complete

#### Robotics Projects level III

- Require satisfactory completion of Level II
- About 1-2 term to complete

#### Robotics Projects level IV

- Require satisfactory completion of Level III
- About 2-3 term to complete

#### Robotics Projects level V

- Require satisfactory completion of Level IV
- Ongoing to the entry level of robotics competition

#### Robotics Projects level VI

- Require satisfactory completion of Level V
- Require proficiency in Algorithms in C/C++ - Level I
- Ongoing to the more advanced levels of robotics competition.
  - o Some require proficiency in Algorithms in C/C++ - Level III+

## COMPETITIONS OPPORTUNITIES

### ROBOCUPJUNIOR (PRECOLLEGE) ENTRY LEVEL COMPETITION

Rescue Line Entry Level Prerequisites:

- Proficiency in Level V completion

Rescue Maze Entry Level Prerequisites:

- Proficiency in Level V completion
- Proficiency in Algorithms in C/C++ - Level I

## SOFTWARE ENGINEERING TRACK

### LEVELS IN ALGORITHMS IN C/C++

Level B

- Require high proficiency in Introduction of Algebra
- About 1-2 term to complete

Level I

- Require satisfactory completion of Level B
- About 2 terms to complete

Level II

- Require satisfactory completion of Level I
- About 2-3 terms to complete

Level III

- Require satisfactory completion of Level II
- About 2-3 terms to complete

Level IV

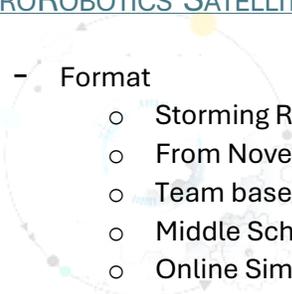
- Require satisfactory completion of Level III
- About 2-3 terms to complete

## COMPETITIONS OPPORTUNITIES

### ROBOCUPJUNIOR (PRECOLLEGE) RESCUE SIMULATION COMPETITION

- Format
  - o 2 to 4 members per team.
  - o Storming Robots selects and registers teams.
  - o From Fall to Spring.
  - o Attend National competition in May.
  - o Offsite venue.
- Prerequisites:
  - o Level II+ Completion, prefer on track in Level III
- Levels
  - o USA national level
  - o Advance to International level

### ZEROROBOTICS SATELLITE PROGRAMMING COMPETITION

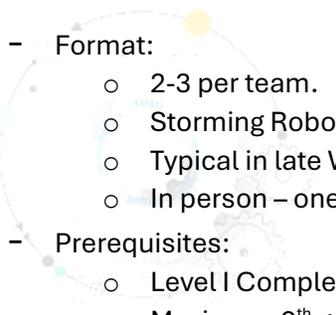
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- Format
    - o Storming Robots selects and registers teams.
    - o From November to May: 4 contests with one Final Contest in May
    - o Team based throughout the 4 contests and individual base at the Final
    - o Middle School: Two in-person group and one online group
    - o Online Simulation competition
  - Prerequisites for Middle School Division:
    - o Half-way completion of Level I
    - o Maximum 8<sup>th</sup> grade
  - Prerequisites for High School Division:
    - o Level I Completion with proficiency
  - Limited to 16 seats. (maximum SR may accommodate)
    - o Selection based on levels.
  - Levels
    - o USA national level only for Middle School Division
    - o International level only for High School Division (only with USA NASA's partnering countries)

### ACSL

- Format
  - o Storming Robots selects and registers teams.

- From November to May: 4 contests with one Final Contest in May
- Team based throughout the 4 contests and individual base at the Final
- Online Contests
- Prerequisites for Junior Division:
  - Level I Completion with proficiency
  - Maximum 9<sup>th</sup> grade
- Prerequisites for Intermediate Division:
  - Level II and ongoing progression
- Prerequisites for Senior Division:
  - Level III+ and ongoing progression
- Open volume of Seats.
- Levels
  - International level
  - NOT against others, but purely individual progression

## HPE CODEWAR

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- Format:
    - 2-3 per team.
    - Storming Robots selects and registers teams.
    - Typical in late Winter
    - In person – one day of approximately 2-3 hours competition
  - Prerequisites:
    - Level I Completion with high proficiency
    - Maximum 9<sup>th</sup> grade
  - Very Limited seats (determined by the HPE CodeWar policy).
    - Selection based on levels.
    - Higher level and demonstrates high proficiency
  - Levels
    - HPE CodeWar has several sites across the USA, and other countries.
    - Each Contest is confined within each local organization, such as NJ, or Texas, etc.

## USACO

- Format:
  - Individual basis.
  - Students register on their own.
  - November to April : one exam per month
- Prerequisites:

- Level I Completion with high proficiency-
- Levels
  - Participants from many countries.
  - Bronze to Platinum Levels.
  - NOT against others, but purely individual progression

