



UNIVERSITY
OF WOLLONGONG
IN DUBAI

Faculty of Engineering and Information Sciences

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1. Competition Details

1.1 Competition Date

Saturday, 27 November 2021 (Virtual Round)
Saturday, 8 January, 2022 (Face to face Round)

1.2 Venue

Seniors
Round One – Virtual via Cisco WebEx
Round Two – face to face on campus at UOWD Knowledge Park

Juniors
Face to face on campus at UOWD Knowledge Park

1.3 Website Details

www.uowdubai.ac.ac/mathalon

1.4 Registration

- Online
Start date – 25 October 2021

1.5 Last day to Register

20 November 2021

1.6 Languages

The competition will be held in English

2. Mathalon Day Plan – 27 November 2021 (Virtually for Seniors - Round One)

- 8:30am – 9:30am – Registration, Virtual Tour of UOWD Campus and facilities
- 9:30am – 10:00am – Welcome Address, Rules and Procedures
- 10:00am – 11:00pm – Online Competition
- 11:00am – 11:30am - Break
- 11:30am – 12noon – Announcing finalists for Round Two

3. Mathalon Day Plan – 8 January 2022 (On Campus for Juniors and Seniors - Round Two)

- 8:30am – 9:30am – Registration Tour of UOWD Campus and facilities, Breakfast
- 9:30am – 10:30am – Welcome Address, Keynote Speech, Rules and Procedures
- 10:30am – 12:00pm – Competition / Annual Math Teachers' Forum
- 12:00pm – 1:00pm - Lunch
- 1:00pm - 1:30pm – Closing Address and Prize-giving Ceremony

** Schedules are subject to change without notice.*

1. *Contact Details*

Mathalon Committee
Faculty of Engineering and Information Sciences
University of Wollongong in Dubai
Email: Mathalon@uowdubai.ac.ae

2. *Mathalon Challenge – Senior Category*

The senior category of the Mathalon competition is the prize attraction of this event which has seen 13 iterations of high school students battling it out to vie for the title of the Winner!

This year, due to continued restrictions and safety pre-cautions, Senior category will see two rounds:

Round ONE – Multiple Choice Questions - VIRTUAL – 27 November 2021

This is a one-hour round with international, Olympiad-level questions students have to work through and answer online. This round will be virtual completely. **25 top scoring students will move to the next round.**

Round TWO - Application and Concepts – FACE TO FACE – 8 January 2022

Top 25 scoring students will participate in paper-based exam on campus at UOWD, and battle for the top THREE positions and the coveted scholarships.

2.1 Participants

- All participants in the Senior category must be from Grades 11/12/13 only
- All participants will receive a virtual welcome pack when they register and confirm their attendance
- All participants will receive e-Certificates of Participation that will be emailed to their respective school faculty representatives after the event, within 3-4 weeks.

2.2 Rules and Regulations - Seniors

1. The competition is individual
2. Each school can register up to THREE (3) students only
* Registration is first come, first serve basis.
3. Registration is AED50/- per head for each student registered.
4. All students registered MUST belong to Grades 11/12/13.
5. Once registered, student/coach names can NOT be changed.
6. Each school should register the participants under the school banner
7. Each school should register a Faculty representative (hereby to be referred as Coach) to supervise the participants
8. Participants who have not registered their attendance before and on the day will not be allowed to participate
9. Schools are solely responsible for ensuring the spellings of the participating student/coach names are CORRECT on the forms and readable. We regret we will NOT be able to reprint ANY certificates/e-Certificates once they have been issued.
10. Any kind of competition aids such as books, papers, notes, formula sheets are not allowed. The integrity of the competition is everyone's responsibility! Remember students and mentors are joining to test their mettle, not just win!
11. Machine-readable versions/devices (computers, mobile/smart phones, CDs, flash memories, Bluetooth) are not allowed

12. Programmable calculators are not allowed. However, participants may use their own scientific calculators. List of acceptable calculator-models will be posted online. All participants using their calculators will have to agree to the Integrity Pledge during registration.
13. Any participant attempting to cheat or disrupt the contest environment in any way will be disqualified.
14. Participants requiring any kind of assistance will be expected to reach out to the organisers
15. Winners will be declared based on the scores attained in the rounds
16. Tie-breaker round will be applied if needed (more details on the day of the competition)
17. Committees' and judges' decisions are final

2.3 Syllabus - Senior Level

- Sets and numbers
- Polynomials and factors
- Exponents and radicals
- Inequalities
- Absolute values
- Functions (domain and Range)
- Composite functions
- Linear functions
- Quadratic functions
- Logarithms
- Curve sketching
- Basic geometry (2 dimensions)
- Trigonometry
- Probability (counting / combination principles)

2.4 Winners and Prizes

The winners, runners-up and second runners-up will be awarded:

- Certificates of Achievement
- Scholarships from UOWD (which will come into effect after the winner has graduated high school and completed Ministry of Higher Education's Entry and English Language requirements)
- The school with the top winning student will receive a Rolling trophy (that will be with the school for the duration of a year and returned to Mathalon Committee for the next year's competition).

3. *Mathalon Concept Booths (MaCoB) - Junior Category*

Each booth is dedicated to one team of three (3) students only from each school belonging to Grades 9 and/or 10, and a coach. The teams are expected to prepare and present a mathematical concept in an innovative, imaginative, and audience-friendly manner.

Although mathematics is a subject by itself, we want to go beyond textbooks and classrooms. We want to celebrate Mathematics as an integral part of our daily lives – after all, humans have been ‘counting as a basic necessity of everyday life for thousands of years’ (COMAP, 2017). At the MaCoB, we invite teams to select any area of life and demonstrate how mathematics is inter-twined with the selected area. For instance, we all enjoy music. How often do we stop to think about the mathematics behind it? From the notes to rhythm, from scales to intervals, the harmonies, tone, pitch – are all closely connected to, yes you guessed right – mathematics!

We invite one team comprising of students from each school's Grades 9 and/or 10 to prepare a virtual poster/video/visual presentation to be displayed at the virtual booth on the day of Mathalon (8 January 2022), where we expect more than 50 high school students and teachers to attend.

3.1 How does the team benefit?

Mathalon has been and continues to be a constructive, challenging event for high school students, adding to their college application, making for impressive credentials. MaCoB goes beyond high school grades 11/12/13 and extends Mathalon to include grades 9/10 to provide them with opportunity to also showcase their knowledge, test their mettle and develop 21st century learning skills such as time management, team work and interpersonal skills. Each student and mentor will receive a Certificate of Appreciation and the winning team voted will walk away with a grand prize.

3.2 Why MaCoB?

At UOWD we believe in student-centric learning just as much as we believe in community outreach, benefiting the greater community. These are the key objectives that have driven Mathalon all these years. Furthering our objectives, we are expanding the reach of the competition to include Grades 9 and 10, students who are at the cusp of getting to the point where they will begin thinking about further education, subjects that are of interest, and courses that will influence their careers. As strong advocates of STEM and STEM to STEAM education and careers at UOWD, we further aim to open doors of possibilities for young minds to the importance, vitality and expansiveness of mathematics through their engagement in turning theories into practice.

3.3 Participants

- All participants in the Junior category must be from Grades 9/10 only
- All participants will receive a welcome pack when they register their attendance on the day of the event
- All participants will receive e-Certificates of Participation that will be emailed to their respective school faculty representatives after the event, within 3-4 weeks.

3.4 Rules and Regulations - Juniors

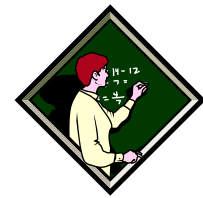
1. The competition is in teams
2. Each school is allowed to register a maximum of one (1) team
* Registration is first come, first serve basis.
3. Registration is AED50/- per participant, so AED150/- for a team
4. Each team MUST consist of one (1), two (2) or three (3) students only.
5. All students registered MUST belong to Grade 9/10.
6. Once registered, student/coach names can NOT be changed.
7. Each school should register the teams under the school banner
8. Each school should register a Faculty representative (hereby to be referred as Coach) to supervise the team
9. Participants who have not registered their attendance before and on the day will not be allowed to participate
10. Teams must register and send in **the abstract** for selection. In the spirit of encouraging learning, all registered teams will be invited to submit their abstract by 20 November 2021. Exam committee will choose top FIVE abstracts and these teams will be invited to the campus on 8 January 2022 to set up their booth. Announcement for top five teams will be made by 27 November 2021.
11. We will provide two desks, and four chairs for each team – stall aesthetics is up to the teams.
12. Schools are solely responsible for ensuring the spellings of the participating student/coach names are CORRECT on the forms and readable. We regret we will NOT be able to reprint ANY certificates/e-Certificates once they have been issued.
13. Teams must ensure the project they prepare and present is their research and contribution.
14. Any external source used MUST be cited using Harvard Referencing system
15. Any team found to have copied projects off the internet will be disqualified.
16. Winners will be declared based on the scores attained from judges and senior teams.
17. Committees' decisions are final

3.5 Winners and Prizes

- Certificates of Achievement
- Medals for winning team members

4. Coaches

1. Coaches are expected to be chosen by the respective schools in order to supervise and mentor students
2. Coaches are solely responsible for their participants, particularly on the day of the competition
3. Coaches are expected to train their participants for the competition
4. Coaches have to remain online for the entire duration of the competition (seniors) and supervise their participants.
5. Top 25 students from Senior category who qualify for final round and Junior category Top 5 teams' coaches are invited to join the **UOWD Teachers' Forum** (Math Bloc) whose 14th annual meeting will be held on the same day during the competition hour under the theme: Breaking through Barriers. *Details will be announced closer to the date*



At the end of the competition, each coach will receive a Thank You pack that will contain:

- e-Certificates of Participation for their students and e-Certificates of Appreciation for coaches

5. Mathalon Brief

At UOWD we believe in a student-centered approach to teaching and as part of our blended learning program, we host many events that either showcase student talents or bring out the best in students. Mathematics is one such crucial area of focus. In 2006, one teacher pushed the boundaries to challenge an old perception that Math is only for a select few. Dr Zeenath Reza Khan conceptualized and introduced Mathalon because she recognized the importance of making learning Math fun. Drawing tremendous attention and support from peers and student body the competition has grown over the years to become a sought-after and prestigious Math competition with challenges at the level of international Olympiads. Dr Zeenath Khan and her team including Dr Assane Lo, Ziad Choicer, Vinu Abraham, Marketing team, Service Desk and Student Services have won the prestigious UOWD Partnership Award in 2017 for the tremendous effort and coordination that goes into organizing this event annually for students and staff ranging from 150 – 300 in numbers. Mathalon was and continues to remain successful in drawing students to compete in a healthy and fun-filled environment.

5.1 Mathalon Photo Collage from past years







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Registration Form - Juniors

Name of the School: _____

Coach Details: Coach Details (ONLY ONE COACH)

Name of the Coach: _____

Coach Contact Details:

Mobile #: _____ Email Address: _____

Participant Details:

Team #1: (Payment of AED50/- per participant is expected to be paid via Bank Transfer or Online Payment Portal)

| Sr. # | Full Name of Participant (in English) | Grade | Email Address |
|-------|---------------------------------------|-------|---------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |

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Registration Form - Juniors

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Proposed Title of Stall: _____

Proposed Chosen Concept: _____

Rational for choosing to represent the chosen concept (abstract of 150 words):

Terms and Conditions

- By registering to compete in UOWD Mathalon 2021, I, the undersigned, hereby accept all the rules and regulations of the competition and do ensure my coach and participants are aware of the same.
- I hereby declare that all information given in this form hold to be true and accurate.
- I understand that any violation of the rules and terms will result in disqualification of my participants.
- I understand that the results of the competition, individual scores and position, besides those declared during prize-giving ceremony, are protected under non-disclosure policy of the committee.
- I also understand that Mathalon Committee's decisions are final.

Approved by:

Signature and date

School Stamp

The Principal

The School

For further clarifications, confirmations, or any queries pertaining to registration, please contact: Mathalon Committee, FCSE, UOWD at Email: mathalon@uowdubai.ac.ae



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Registration Form - Seniors

Name of the School: _____

Coach Details (ONLY ONE COACH)

Name of the Coach: _____

Coach Contact Details:

Mobile #: _____ Email Address: _____

Participant Details: *(Payment of AED50/- per participant must be paid via Bank transfer or online payment portal)*

| Sr. # | Full Name of Participant (in English) | Grade | Email Address |
|-------|---------------------------------------|-------|---------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |

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Registration Form - Seniors

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Signature and date

School Stamp

The Principal

The School

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