CUHS PS Example
Mathematics 2026 (1)

Q1. Why do you want to study this course or subject?
This is your opportunity to showcase your passion and knowledge of your chosen subject area and to demonstrate to universities and colleges why they are a good fit for you and your future ambitions.

What first struck me about mathematics was the logical questions I enjoyed thinking about from primary school competitions. Later, I saw the beauty of constructing idealised yet functional axioms and definitions, which lead to sometimes abstract theorems. It is motivating and rewarding to see practical applications of theory. This is why I aspire to a career in applied mathematics or statistics. I am inspired to form a profound understanding of mathematics and its connections to other areas of life.

Seeking mathematical challenges, I have participated in numerous competitions, both in Hungary and internationally. In the 2024-25 school year, I secured a gold medal at the Middle European Mathematical Olympiad after placing 9th in the Hungarian TST competitions and 14th in the national OKTV Olympiad. In the 2023-24 school year, I achieved first prize at the Arany Dániel competition, the primary national competition for 10th graders, and I earned a gold medal at the Italian National Olympiad as a guest participant. In the KöMaL B correspondence competition, I achieved first honours and placed 3rd and 6th over the past three years.

Q2. How have your qualifications and studies helped you to prepare for this course or subject?
This is your chance to shout about the relevant or transferable skills you've gained from your education and highlight your understanding of how they will help you succeed in this subject area.

I have been a student in the special mathematical class at Budapesti Fazekas Mihály Secondary Grammar School for 5 years. During my studies here, I had 7-8 maths classes weekly and learnt from outstanding teachers. Their precision of thought and explanation influenced my mathematical style. I especially admired their elegant generalisations of polynomials, projective geometry, and complex numbers.

In a school project, I researched the Gale-Shapley algorithm and the concept of stable matchings. I still enjoy reading about this subject because of its unexpected connections to other topics, such as distributive lattices. I also took part in a group project focusing on Euler's polyhedron formula. Through these projects, I learnt how to analyse mathematical articles, both individually and in a group. The most recent articles I read were about Burnside's lemma and stereographic projection.

I devote much of my time to mathematical camps (including national IMO preparation and the Hungarian-UK Winter camp), which offer insights into subjects like the moving points method, captivating in its elegance and shrewdness. This year, I was invited to the Mathematical Olympiad Program in the USA, where I learnt from new teachers in an international setting. One of the most memorable lectures was about posets, where I was fascinated by the elegance of Sperner's theorem and the intuitive definitions of chains and antichains.

The annual Hungarian summer camp called Mamut introduced me to topics ranging from the Banach-Tarski paradox to the stock market over the past 5 years. I have also been taking part in the Pósa camps since I was 12. Held 2-3 times a year, these camps have introduced

me to intuitive problems from seemingly independent fields of mathematics. We are encouraged to ask questions inspired by solved problems, keeping a curious mindset. Groupwork at these camps shows me how helpful it is to reflect on others' ideas in problem-solving

Q3. What else have you done to prepare outside of education, and why are these experiences useful?

This is your chance to reflect on any other activities you have undertaken outside of your education, or personal experiences which further demonstrate your suitability for the course. This section is likely to be deeply personal to you, so anything you include should be meaningful and relevant to you.

I volunteered two years ago to teach 6th graders at my school. During the weekly classes, I enjoyed explaining concepts to others in a thought-provoking manner. This year, I joined Athemath (a maths program for young girls in the US) as a Teaching Assistant. When teaching, I can both inspire students and understand their thinking methods by posing problems they find challenging.

Beyond academics, I have been playing handball for 10 years and was selected for the national talent programme that trains potential junior team players. Later, I chose to continue handball as a hobby, focusing more on maths and the social aspects of the sport.

Studying in the UK is an excellent opportunity to deepen my knowledge at the highest level and explore specific topics. I am especially looking forward to the tutorial system, which provides profound understanding and encourages intellectual inquiry.