



## Team Aero-Watt FAQs

### **What is the team goal?**

Team Aero-Watt are an entrant in the IMechE UAS (Unmanned Aircraft Systems) challenge, where we develop an aircraft capable of performing a variety of tasks autonomously. To achieve this, we design and manufacture our craft from scratch over the course of the academic year. The full rules of the competition from last year can be found [HERE](#). The rules for this year may differ slightly, and we expect these rules to be released in late September 2022. This year we intend to develop our second vertical take-off and landing (VTOL) aircraft.

### **Who can apply?**

Fundamentally, anybody can apply, although we are primarily looking for mechanical engineers, electrical engineers, computer scientists and robotics students, we will consider anybody with relevant experience to the project. We also will consider applicants from any year, including 1<sup>st</sup>.

We also have less engineering-focused roles in the team, such as working on our media and marketing material, as well as managing our finances and sponsors. Anyone with a relevant degree or experience may apply for these roles.

### **Do I need experience?**

Experience in this field is ideal, although not required, and so you will not be expected to have any knowledge beyond your degree to fulfil your role. Please be sure to note all relevant experience in your application.

### **What is expected of team members?**

From past years we have found that it is typical for team members to contribute around 6 hours work per week, although this is flexible around other deadlines. During the manufacture of the UAS, the workload on the team will increase so any extra time spared will be greatly appreciated.

### **When do we meet?**

Our weekly team meetings will be based around all team member's schedules, and so aim to make them as convenient as possible for all members. These meetings will likely be held in person on campus; however, we are happy for members to join virtually at times where this is not possible. If you are unable to attend a meeting, we understand that things come up, and just ask that you let your team lead know.

We will also meet for optional team social events a few times every semester which have always proved to be popular and enjoyable.



### **How is the team structured?**

The engineering side of the team is split into three sections – airframe design (AD), flight dynamics (AD) and software and electrical systems (SES), each team having an independent team lead. The engineering is all overseen by the chief engineer, as well as the relevant technical lead. The whole team, including non-engineering roles, is led by the team manager. The total team will have approximately 20 members.

### **What will I do in the team?**

We aim to give team members flexibility over which aspect of the aircraft that they work on, and there are many roles. Some of these are:

- Airframe Structure
- Aerodynamics
- Manufacture Planning
- Autopilot Software Development
- Payload Deployment
- Propulsion and Power System
- Control System
- Image Recognition
- Media Engagement
- Business Proposal and Presentation
- Poster Design
- Piloting

### **Can I fly the UAS?**

We have two trained pilots currently on the team, and so are not currently looking to train another. However, if you have considerable RC flying experience, let us know in your application and we will consider you as pilot.

### **How are the team funded?**

The team are funded by both the university and external sponsors, both of which we advertise for.

### **What are the deadlines?**

As well as flying at the final competition, we have deadlines to reach for other work, such as our concept paper and design report. These deadlines begin in October with our concept paper and there are regular submissions until the final event.

### **Can I attend the competition?**

The competition is traditionally held over the course of 3 days in early July, with the date and location being announced by the IMechE in late September 2022. We aim to allow all available team members to attend the competition.



### **How do I apply?**

The application for the team can be found [HERE](#). Applications close on Friday 23<sup>rd</sup> September at midnight, and we will let applicants know the outcome shortly afterwards via email.

### **My application was unsuccessful, are there any other ways to be involved?**

More opportunities may open through the year, so follow our social media to stay up to date.

### **Anything else?**

If you have any further questions, please contact us at [aero-watt@hw.ac.uk](mailto:aero-watt@hw.ac.uk) or reach out to us on social media and we will get back to you as soon as we can.