

Job Specification

Drone Systems Engineer

Responsible to:	Head of Engineering
Grade of post:	Senior
Salary:	To be agreed
Hours of work:	37 hours per week
Work location:	Oakley, Bedford

Role Purpose

Formulate conceptual design of unmanned vehicles or systems to meet customer requirements. Support and coordinate activities of engineering or technical personnel designing, manufacturing, modifying, or testing of aircraft or aerospace products.

Key Responsibilities:

- Capturing and assessing design requirements.
- Agreeing timescales and specifications with clients and managers.
- Undertaking theoretical and practical research at System or Subsystem level.
- Process Development - producing and implementing designs and test procedures.
- Measuring and improving the performance of vehicle systems & components.
- Testing, evaluating, modifying and re-testing products.
- Writing reports, manuals and Certifiability evidence documentation.
- Providing technical process advice to team members.
- Collecting, analysing and interpreting Customer data as well as test data,
- Design and integration of on-board systems such as airframe Sensors & Actuators, Secondary Power Generation & Distribution System, Energy Storage Systems, Health & Usage Monitoring Systems (HUMS).
- Developing and integrating avionic sub-systems, navigation aids incl. GPS-denied navigation systems (e.g., Laser Gyro / MEM augmented IMU platforms), state estimation sensors & firmware, inter-system communications.
- Payload systems integration (e.g., Optical, RF, DEW, etc), with understanding of impacts on aircraft performance and of holistic optimisation at all stages of the aircraft design cycle.

- Using computer-aided design packages (CAD, ideally Solidworks), related CAE (FEA/ CFD) and CAM to support rapid prototyping of on-board systems.
- Define ground and flight-testing programmes on prototypes vehicles and systems.
- Estimating project costs and timescales.
- Attending project reviews and meetings with external business clients.
- Giving presentations to managers and clients.

Other Duties and Responsibilities

- To actively participate in Blue Bear's Performance Management Scheme.
- To undertake such other duties and responsibilities as may be reasonably required within the grade and level of the post.
- You will be expected to perform different tasks as necessitated by your evolving role within the company and the overall business objectives of the company. Some travel within the UK may be required.

The above is not an exhaustive list of duties. You will be expected to perform different tasks as necessitated by your evolving role within the company and the overall business objectives of the company.

Equality and Diversity

We are committed to the promotion of equality of opportunity in all of our activities and to encouraging access to our organisation from all groups irrespective of the equality strands. We are working to create an environment in which cultural diversity and individual difference are positively valued in an atmosphere free from harassment and discrimination. We take our legal and moral obligations with respect to equal opportunities seriously and welcome dialogue with individuals on ways in which our equal opportunities policies and practice can be enhanced.

Health and Safety

The organisation together with the assistance of all employees are fully committed to developing a positive safety culture.

We encourage and support employees becoming involved in and participating in health, safety and welfare matters. Our goal is to motivate and empower all employees to work safely and protect their long-term health, not simply to avoid accidents.

PERSON SPECIFICATION

Education/Qualifications			
<i>Essential:</i>	S/L	I	A
• BEng/ CEng in Mechanical/Aerospace/Electronics Engineering	X		
• Proficient in CAD (ideally Solidworks), related CAE (FEA/ CFD) and CAM rapid prototyping	X		
• Understanding of DFMEA and Safety Management methods in aerospace Certifiable environment	X		
<i>Desirable:</i>	X		
• MSc/ PhD in Mechanical/Aerospace/Electronics Engineering	X		
• Member of industry related Professional Body	X		
• Mechatronics and/or Robotics literate	X		
• Health and Safety qualification (IOSH or NEBOSH)	X	X	
• Experience with Dstl and MOD	X		
• Qualifications on aircraft design, aerodynamics, electronics, firmware, software and flight trials	X		
• Training on multidisciplinary engineering disciplines and/or diverse skill sets	X		
• BMFA RC plane flying, basic Workshop hands-on skills		X	
Knowledge and Experience			
<i>Essential:</i>			
• Proficiency with planning and reviewing of technical work through formal gate events (e.g., SRR, PDR, CDR, MRR, TRR, PRR)	X		
• Knowledge of Systems Engineering processes	X		
• Delivery, reporting and presentation of technical and experimental work	X		
• Support experimental test activities (ground-based testing, flight-based testing)	X		
• Payload systems integration (e.g., Optical, RF, DEW, etc)	X		
• Design and integration of on-board systems e.g., airframe Sensors & Actuators, Secondary Power Generation & Distribution System, Energy Storage Systems, Health & Usage Monitoring Systems (HUMS)	X		
• Development & integration of avionic sub-systems, e.g., navigation aids, GPS-denied navigation systems (e.g., Laser Gyro / MEM augmented IMU)	X		
• Appropriate IT Skills including full MS Office Suite	X		
Personal/Behavioural Attributes			
<i>Essential:</i>			
• Good analytical and communication skills	X	x	
• Strong technical leadership competencies	X	x	
• Attention to detail balanced with high process overview/ improvements	X	x	
• Confident and articulate with good communication skills	X	x	
• Excellent verbal and written communication skills	X	X	
• Excellent organisation skills	X	X	
• Excellent problem-solving skills	X	X	
• Able to work cross-functionally and collaboratively		X	
Other Requirements			
Subject to UK MoD security clearance vetting to a minimum SC level	X		

S/L = Short Listing I= Interview A=Assessment