Job Description and Person Specification

Last updated: 14/06/2019

JOB DESCRIPTION

<table>
<thead>
<tr>
<th>Post title:</th>
<th>Senior Research Engineer</th>
</tr>
</thead>
<tbody>
<tr>
<td>School/Department:</td>
<td>Wolfson Unit MTIA</td>
</tr>
<tr>
<td>Faculty:</td>
<td>Faculty of Engineering and Physical Sciences</td>
</tr>
<tr>
<td>Career Pathway:</td>
<td>Technical and Experimental (TAE)</td>
</tr>
<tr>
<td>Level:</td>
<td>4</td>
</tr>
<tr>
<td>Posts responsible to:</td>
<td>Unit Head (level 6) &amp; Associate Dean for Enterprise: FEPS: (level 7)</td>
</tr>
<tr>
<td>Posts responsible for:</td>
<td>None</td>
</tr>
<tr>
<td>Post base:</td>
<td>Non Office-based (see job hazard analysis)</td>
</tr>
</tbody>
</table>

Job purpose

To participate in consultancy services that the Wolfson Unit MTIA provides to industry.

Key accountabilities/primary responsibilities

<table>
<thead>
<tr>
<th></th>
<th>% Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To ensure specialist technical support for the department's education, research and/or enterprise activity; designing, developing and building specialist machines and equipment and developing solutions, techniques and procedures. Assist in routine experimental tests, trials, CFD, commercial and internal software development, consulting or specialist activities as part of a team to solve problems and satisfy research or other work contracts for external clients. The role may include the carrying out of data analysis and the preparation of draft reports.</td>
<td>30 %</td>
</tr>
<tr>
<td>2. Conduct theoretical, numerical or analytical studies to solve problems and satisfy research or other work contracts for external clients. To contribute to academic publications in the area of technical specialism.</td>
<td>25 %</td>
</tr>
<tr>
<td>3. Work with more senior Engineers, attending external meetings and assisting with the preparation of tender documents to initiate projects with clients. To oversee the budget of the work area, maintaining appropriate records</td>
<td>10 %</td>
</tr>
<tr>
<td>4. To provide a repair and fault finding service including planned maintenance of equipment and devices within the work environment, advising on future resource requirements and ensuring health and safety standards within the environment are complied with by staff and students.</td>
<td>5 %</td>
</tr>
<tr>
<td>5. Provide support and expertise to Ship Science and Faculty by teaching / assisting students of both undergraduate and post-graduate levels.</td>
<td>5 %</td>
</tr>
<tr>
<td>Key accountabilities/primary responsibilities</td>
<td>% Time</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>6. Be involved in the improvement and development of in-house products and systems, for example, the development and maintenance of measurement / data acquisition equipment and software packages.</td>
<td>5 %</td>
</tr>
<tr>
<td>7. To attend internal meetings to assist with planning and managing the Unit's activities and business strategy. To attend internal and external meetings to ensure the work unit issues are represented</td>
<td>5 %</td>
</tr>
<tr>
<td>8. To plan, organise and manage the work environment; recruiting, training and developing own technical team, and supervising non-technical staff.</td>
<td>5%</td>
</tr>
<tr>
<td>9. Any other duties as allocated by the line manager following consultation with the post holder.</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Internal and external relationships**

Other members of the Enterprise Unit and University staff.

External customers

Relevant suppliers and external contacts

**Special Requirements**

Provide the contracted services for the client and provide expertise and solutions in a limited time frame. Potential for:

- Travel away from the University campuses to work in other laboratories.
- Work extended and anti-social hours when testing in laboratories.
## PERSON SPECIFICATION

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Essential</th>
<th>Desirable</th>
<th>How to be assessed</th>
</tr>
</thead>
</table>
| Qualifications, knowledge and experience          | Skill level equivalent to achievement of HND, Degree, NVQ4 or basic professional qualification.  
Substantial experience in a relevant technical field, with proven experience of successfully planning and progressing work activities.  
Understanding of how the specialist technical services provided by the post holder support the objectives of the University.  
Ability to make effective use of standard and specialist computer systems | Degree in naval architecture or equivalent qualification/experience  
PhD/EngD or equivalent qualification/experience in a related subject  
Experience of sailing or other small craft operation  
Practical skills and expertise, such as experimentation, electronics, wood or metalwork  
Skills and expertise in coding (Delphi, C++, Labview, Python), numerical modelling or CFD  
Experience working in a commercial or research role in an engineering discipline area | CV  
CV  
CV  
CV & interview  
CV & interview  
CV & interview |
| Planning and organising                          | Able to organise own activities to deadline and quality standards  
Ability and willingness to take a flexible approach to the delivery of work programmes, schedules and problem solving |                                                        | CV & interview  
CV & interview |
| Problem solving and initiative                   | Able to develop understanding of complex problems and apply in-depth knowledge to address them  
Able to use own initiative to develop original techniques/methods |                                                        | CV & interview  
CV & interview |
| Management and teamwork                          | Ability to work effectively as part of a small team |                                                        | CV & interview |
| Communicating and influencing                    | Communicate new and complex information effectively, both verbally in meetings with clients, and in writing.  
Proven communication skills both verbally and in writing.  
Experience of managing a client relationship. |                                                        | CV & interview |
| Other skills and behaviours                      | Understanding of relevant Health & Safety issues  
Positive attitude to colleagues and clients |                                                        | CV & interview  
CV & interview |
<table>
<thead>
<tr>
<th>Special requirements</th>
<th>Able to travel within the UK and overseas to work in other labs/facilities or conduct sea trials.</th>
<th>Full current UK driving licence.</th>
<th>CV &amp; interview</th>
</tr>
</thead>
</table>
## JOB HAZARD ANALYSIS

Is this an office-based post?

| ☐ Yes | If this post is an office-based job with routine office hazards (eg: use of VDU), no further information needs to be supplied. Do not complete the section below. |
| ☒ No | If this post is not office-based or has some hazards other than routine office (eg: more than use of VDU) please complete the analysis below. Hiring managers are asked to complete this section as accurately as possible to ensure the safety of the post-holder. |

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## ENVIRONMENTAL EXPOSURES

<table>
<thead>
<tr>
<th>Occasionaly (&lt;30% of time)</th>
<th>Frequently (30-60% of time)</th>
<th>Constantly (&gt; 60% of time)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside work</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Extremes of temperature (eg: fridge/ furnace)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>## Potential for exposure to body fluids</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>## Noise (greater than 80 dba - 8 hrs twa)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>## Exposure to hazardous substances (eg: solvents, liquids, dust, fumes, biohazards). Specify below:</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Frequent hand washing</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Ionising radiation</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## EQUIPMENT/TOOLS/MACHINES USED

| ## Food handling | N/A |
| ## Driving university vehicles(eg: car/van/LGV/PCV) | Yes |
| ## Use of latex gloves (prohibited unless specific clinical necessity) | N/A |
| ## Vibrating tools (eg: strimmers, hammer drill, lawnmowers) | N/A |

## PHYSICAL ABILITIES

| Load manual handling | Yes |
| Repetitive crouching/kneeling/stooping | Yes |
| Repetitive pulling/pushing | N/A |
| Repetitive lifting | N/A |
| Standing for prolonged periods | N/A |
| Repetitive climbing (ie: steps, stools, ladders, stairs) | N/A |
| Fine motor grips (eg: pipetting) | N/A |
| Gross motor grips | N/A |
| Repetitive reaching below shoulder height | Yes |
| Repetitive reaching at shoulder height | N/A |
| Repetitive reaching above shoulder height | N/A |

## PSYCHOSOCIAL ISSUES

| Face to face contact with public | Yes |
| Lone working | Yes |
| ## Shift work/night work/on call duties | N/A |