Knowledge Transfer Associate - Product Design Engineer			
Faculty / Department:	Arts, Design and Media	**Grade:**	*SPOT: £38,000 - £40,000*
New appointees to Birmingham City University will ordinarily be appointed at the entry point of the appropriate grade			
Responsible to:	Academic Lead	**Responsible for:**	N/A

Job Purpose

This position forms part of the Knowledge Transfer Partnership (KTP) programme co-funded by Innovate UK. The Product Design Engineer (KTP Associate) will work on a 24-month collaborative innovation project to design and manufacture shelving products for Barton Storage Systems, to be used for load-bearing applications.

The project

The project is focused on the acceleration of new product development and to enable intellectual property protection by creating an inhouse design resource and embedding digital design into Barton Storage Systems (https://www.bartonstorage.com/), a manufacturer of storage solutions.

Main Activities and Responsibilities

The successful candidate will lead the design to manufacture of load bearing structures in a custom-built shelving products. The position is for 24 months. The expected start date is as soon as is practical.

The Associate will work on: -

- Market Research and Analysis
- Concept Development and Design
- Prototyping and Testing
- Intellectual Property Protection
- Production and Launch

The role requires the successful candidate to:

- Conduct thorough market research to identify current trends, customer needs, and gaps in the existing shelving storage systems.
- Analyse competitor products to understand their strengths and weaknesses.
- Collect feedback from potential users through surveys, interviews, and focus groups to gather insights on desired features and improvements.
- Create detailed sketches and 3D models of proposed shelving systems.
- Evaluate design concepts based on feasibility, cost, and user-friendliness.
- Collaborate with cross-functional teams, including engineers and designers, to refine the concepts.

- Develop functional prototypes of the selected design concepts.
- Conduct rigorous testing to assess the durability, functionality, and safety of the prototypes.
- Gather feedback from test users to identify any design flaws or areas for improvement.
- Iterate the design based on test results and user feedback until an optimal
- Identify and document unique features of the developed shelving systems for patent applications.
- Work with legal teams to file patents and protect intellectual property.
- Finalise designs and prepare detailed manufacturing specifications and instructions.
- Source high-quality materials and select reliable manufacturing partners.

The Associate must have completed their latest degree (studies) within the last five years and have the following key attributes to ensure the project's successful completion.

Person Specification	
Essential Criteria	**Application Form / Support Statement / Interview**
1. A minimum 2:1 undergraduate qualification in a Mechanical Engineering related field or Product Design degree with an emphasis on design for manufacture.	Application Form / Support Statement / Interview
2. Excellent communication skills to express ideas effectively, orally, graphically and in writing to articulate complicated problem-solving issues between the academics and the company project team members	Application Form / Support Statement / Interview
3. An ability to work to tight deadlines with diligence, attention to detail, and maintain high standards of work	Application Form / Support Statement / Interview
4. An ability and aptitude to work effectively as part of an interdisciplinary team; and self-management and planning skills to make optimum use of time	Application Form / Support Statement / Interview
5. Strong leadership skills in successfully implementing and embedding new innovations within a company or organisation	Application Form / Support Statement / Interview
6. Competency in the use of SolidWorks.	Application Form / Support Statement / Interview
Desirable Criteria	
7. MSc/PhD in a related subject or relevant experience	Application Form / Support Statement / Interview

8. Experience in the use of SolidWorks for Design simulation and manufacture/production.	Application Form / Support Statement / Interview
9. Academic acumen to enable successful reporting through research publications in academic journals and marketing/training materials	Application Form / Support Statement / Interview
10. A clean driving license and a willingness to travel to utility contracts throughout the UK	Application Form / Support Statement / Interview
11. Practical experience of working in the manufacturing industry.	Application Form / Support Statement / Interview
12. Enthusiastic, self-motivated and able to take a proactive role in delivering the proposal's work plan successfully.	Application Form / Support Statement / Interview
13. Practical interpersonal skills to establish good working relationships with colleagues, stakeholders, and industrial partners.	Application Form / Support Statement / Interview
14. Excellent communication skills to express ideas adequately and articulate complicated matters between the academics and the company project team members either orally or in writing.	Application Form / Support Statement / Interview
15. Excellent analytical, problem-solving, and computational skills, along with being adept at applying knowledge to commercial projects, driving value and making an impact where possible.	Application Form / Support Statement / Interview
16. Strong leadership and project management skills.	Application Form / Support Statement / Interview

- Application Form – assessed against the application form. Normally used to evaluate factual evidence e.g. award of a qualification. Will be assessed as part of the shortlisting process.
- Cover Letter & CV - applicants are asked to provide a statement to demonstrate how they meet the criteria, and may reference their CV. The response will be assessed as part of the shortlisting process.
- Interview – assessed during the interview process by either competency-based interview questions, tests, work-related exercise, presentation and discussion, or teaching session etc.