**Sam Willis**

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# Education

## 2013 - MEng Mechanical Engineering, The University of Manchester

2017 **First year result: 64% Second year result: 65%**

* + Modules included: Engineering Thermodynamics, Fluid Mechanics, Mechanical Design, Modelling & Simulation, Advanced Production Processes, Automatic Control and Power Plant Systems.
  + Leader of third year team project to specify, design and build a prototype 2-stroke engine mount structure for a new concept of lightweight commercial hovercraft machine to be used in the construction industry.
  + Presented final written design report to design tutors. Finished with a successful onsite demonstration of the engine & mount in one of the new hovercraft units to the Technical Director.

## 2006 - Park Royal High School, Surrey

2013

* + A-levels: Mathematics (A\*), Physics (A\*), Further Mathematics (A), Chemistry (A)
  + GCSEs: 10 (5A\*, 3A, 1B, 1C) including Maths and English

# Relevant Work Experience

## Jul - Sep Project Engineer Intern, Health & Beauty Ltd, Manchester

2016

* + Responsible for a project to reduce the % scrap produced in a three-line shampoo packing department.
  + Investigated current operation, looking at equipment design, operation and settings, packing material specifications, suppliers and quality and in shampoo product variability.
  + Interviewed current production managers, technical operators and material suppliers and compared data to manufacturing standards.
  + Collected scrap data over a two-week period using control chart techniques to identify main sources of scrap and to identify possible causes.
  + Proposed a 1-week test programme on the “worst line” to evaluate different machine settings (with specific control on packing material and product quality) to measure changes to scrap production.
  + Worked with the production team to run the trial and to train them in the changes required. Took charge of a night shift to monitor the impact of a sudden requirement to change label supplier mid test.
  + Analysed the results and reported the findings to the Plant Manager. The changes would save £10,000 per month in reduction of scrap production, expected to rise to

£22,000 per month when implemented across all three lines.

# Work Experience

## Sep 2013 Bar Supervisor (term time), Bull’s Head, Chorlton

- Jul 2015

* Promoted to Bar Supervisor after working for the company for twelve months. Responsible for two staff members and for ensuring all aspects of a shift ran smoothly in a demanding, customer-focused environment.
* Successfully till trained two new members of staff and received a customer service award from the Brewery following positive feedback from a mystery customer visit.
* Day to day duties included organising stock replenishment and rotation systems, assisting the manager with weekly stock takes and deliveries and accurately cashing up tills at the end of the night.

# Positions of Responsibility

## 2015 - Social Secretary, University of Manchester Mechanical Engineering Society

Present

* Elected to committee by peer group over 4 other candidates after heading up a recruitment campaign on campus and using social media
* Set up visits to local engineering companies e.g. organised for 30 students to visit SCA (paper company) via an academic contact.
* Increased membership by 35% through effective use of Facebook and innovative activities during Welcome Week.

2015 - **Peer Assisted Study Support (PASS) Leader, University of Manchester**

Present

* PASS is designed to help first year students settle into University and support them with their studies.
* Organised and facilitated weekly meetings with up to ten mentees, providing a safe environment for students to work together to solve complex course-related problems.
* Exercised strong time management to schedule and run sessions, as well as responsibility to guide students’ understanding, rather than just give them an answer.

# Additional Skills

**IT:** Proficient: Microsoft Word, PowerPoint, Excel, Intermediate: MATLAB

**Languages:** French (conversational), Spanish (GCSE plus visits).

# Interests and Activities

**Debating Society:** Participate in competitions and events. Recently organised an evening of guest speakers from industry to present on persuasive public speaking.

**Sport:** Completed the Race for Life independently, raising £75 for cancer charities.