

Frank Smith

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EDUCATION

Oxford Brookes University, **BEng (Hons) Motorsport Engineering** 2016 – 2019
2:1 Predicted.

Key modules include:

- Stress Analysis I
- Engineering Thermo-fluids
- Engineering Mathematics
- Engineering Dynamics I
- Materials Engineering
- Mechanical Engineering Design and Computer Aided Engineering

Otago Polytechnic, **Certificate in Automotive Technology (Electrical)** 2015 - 2016

Units include:

- Wiring repairs and electrical circuit testing
- Basic tuning on 4 stroke engines

Otago Polytechnic, **Diploma of Mechanical Engineering** 2014 - 2015

Modules include:

- Strength of Materials 70%
- Computational Mathematics 70%
- Mathematics 65%
- Engineering Drawing 82%

SKILLS

Mathematics

- Gained a good understanding of Advance Matrix Algebra, MATLAB, Mathcad, application of Finite Differences and Laplace Transform, throughout my second year. Applied this knowledge to solve varied engineering problems.

Analysis

- Developed a good understanding of front pull rod suspension as part of design group project. Carried out FEA (Finite Element Analysis) in SolidWorks to analyse the stresses that act on the suspension components such as wishbones, pull rods and uprights under heavy braking, cornering and full bump.
- Learnt and developed analytical skills in Stress Analysis. Defined the characterisation of Stress Profiles, Yielding and Buckling, under different load conditions.

Mechanics

- Race Go Karts competitively, which has helped me to improve my understanding of how karts behave with different kinds of set up. This experience included toe in and toe out, caster and camber adjustments, changing front and rear widths, using different tyre pressures.

Team player

- Participating in Formula Student, I learnt how to work in groups through listening to what others had to contribute, as well as how to build trust and bond with new people.

Working under pressure

- Undertook various tasks while at Chubb that often required extra work at short notice. I ensured that important jobs were prioritised and completed to deadlines.

AUTOMOTIVE EXPERIENCE

Formula Student Member (Electrical & Electronic Groups) Nov 2017 – Present
Oxford Brookes University Team, Oxford

- Made and installed the wiring looms and sensors for both class 1 and 1A cars.
- Contributed to design and making of dashboards, fuse boxes and brake lights for class 1 and 1A cars.

Support Technician Aug 2015 – June 2016
Delphi Heavy Duty Diesel Systems, New Zealand

- Built and tested diesel injectors and pumps – proved to be a useful and demanding experience as I had to learn how to operate the test rigs and build pumps and injectors with the group. After one month I was able to proceed on my own.
- Measured diesel injector and pump parts with Talysurf and CMM machines.
- Prepared build sheets for both diesel injectors and pumps.

Automotive Technician Apr 2014 – July 2015
Kendall Cars Ltd, New Zealand

- Mechanical and Electrical servicing and repairs – clutch and gear box replacements, electrical fault finding, tyre and brake pad replacements, serviced vans, cars and Lutons.

Automotive Apprentice Feb 2013 – Jan 2014
CBS AUTOS, New Zealand

- Developed skills in mechanical and electrical servicing and repairs – CV joint replacements, brake pad and disc fittings, wheel alignment, overhauled starters and alternators.
- Assisted with engine tuning, using scanning tool. Traced electrical faults, undertook M.O.T.s

OTHER EMPLOYMENT

Fire Protection Engineering Draughtsman Mar 2012 – Jan 2013

- Chubb Systems & Services, New Zealand
- Contributed to the design of small to large installations of sprinkler systems.
- Preparation of sprinkler system drawings, schematic diagrams, block plans, reports and maintenance manuals.

I.T SKILLS

- Competent user of Microsoft Office packages, AutoCAD, SolidWorks, Crocodile clip, TinyCAD, MATLAB, Working Model and Mathcad.

INTERESTS

Motorsports: Go Karting – member of Formula Brookes
Sports: Boxing and Gym workout

ADDITIONAL INFORMATION

Member of The Institution of Mechanical Engineers – IMechE Student Affiliate.
Full UK driving licence.

REFERENCES AVAILABLE ON REQUEST

