Name of Programme: BSc Operational Excellence

Final Award: BSC

Awarding Institution/Body: University Of Buckingham

Teaching Institution: University Of Buckingham

Location: University Of Buckingham

School of Study: Business School

Parent Department: Lean Enterprise

Programme Code(s): UBSF3SOE / Full Time / 3 Years

Professional Body Accreditation: Some of the content will go towards American Society of Quality (ASQ) Certified Quality Engineer

Relevant Subject Benchmark Statement (SBS): Bachelor's degrees in Business and Management (2015)

Admission Criteria: 3 years working experience

Applicable Cohort(s): From March 2017

FHEQ Level: 6

Summary of Programme

The programme is designed to develop professionals who can improve the performance of their organisations by implementing the concepts of Operational Excellence. As such it is essentially a practical programme, which provides the optimal learning environment, that is, allowing students to develop skills and knowledge by ‘doing’. Students will be learning mainly from online resources including papers, videos, animations, case studies and simulations. There are also interactive activities with tutors such as assignments, questions and answers and virtual meetings. A work-based project in their own workplaces is designed to ensure relevance and actual development of skills. On successfully completing the programme, graduates will be able to demonstrate a systematic knowledge and understanding of organisations, people, markets, operations, business models and the dynamic and changing nature of business. They will be able to grasp a wide range of cognitive, intellectual and practical skills related to the business environment, which include people management, networking, problem solving, data analysing and decision making, critical thinking and innovation, collaborating with others, project management, self-reflection, etc.

Educational Aims of the Programme

• To deliver a practical knowledge of the concepts and theories of Operational Excellence (OE) To enable students to shape and lead an OE strategy in their own companies. These include Strategy, Operations Management, Business Decision Making, Innovation and Human Resource Management as applied to Operational Excellence and to meet the challenges of Industry 4.0.
• To provide students with various kinds of tools to drive for process excellence and performance improvements, such as Lean, TOC, Six Sigma.
• To evaluate the current business situations by Value Stream Mapping and apply Standard Work, TPM, TWI and Kaizen to improve the business.
• To demonstrate a critical understanding of quality management and be able to judge the appropriateness of any improvement approach.
• To enable students to effectively apply DMAIC and PDCA for continuous improvement.
• To develop the leadership and management skills necessary to understand organizational behaviours and develop teams capable of effectively implementing OE, problem-solving and achieving high performance.
• To develop students’ ability of creative thinking and innovation to sustain OE.
• To build a comprehensive appreciation of the factors (strategic and environmental) affecting change and the future of manufacturing in a digital economy and deciding on appropriate responses and business models to meet the challenges and opportunities.

Programme Outcomes
Knowledge and Understanding

1. The history and development of Operational Excellence methodologies for incremental and, where necessary, breakthrough change.
2. The practice of problem solving and continuous improvement in business contexts.
3. Tools and techniques for implementing and practicing OE, such as Mistake-proofing, Standard Work, Kaizen and TWI (Job Instruction, Job Method and Job Relation).
4. The organisation and culture of incremental and breakthrough continuous improvement.
5. High performance people skills for managing and leading OE organisations.
6. Innovation, creative thinking and idea generations for OE.
7. The information systems in the business environment and the process of assessing uncertainty and risks for decision making.
8. Advanced improvement tools and systems for Operational Excellence, such as SPC, DMAIC, TOC and Vanguard Method, both for the manufacturing and services industry.
9. The principles, practices and techniques critical for project management, with an emphasis on the role of improvement projects.
10. Good leadership for business success, the management of people-organization relationship and the influences of employee behaviour on organizations’ operational performance.
11. The nature and importance of service business, understanding and mapping of the service processes and its supply chain, understanding of customer (consumer) behaviours and related tools of improving service operations.
12. The supply chain operations management of materials, logistics and information to understand the critical role they play in the success and competitiveness of the broader organisation.
13. A systemic approach to creative thinking and idea generation, different methodologies and skills for creative problem solving, innovation, and human-centred ‘design thinking’.
14. Project evaluation and management by integrating the technical, financial and operational considerations, such as SMART, DMAIC, PDCA and Visual Planning principles and the coaching skills to manage relations and conflicts for effective project management.
15. Structures, models and dynamics of decision making and the management of risk and uncertainty.
16. The challenges and opportunities faced by the digital economy and Industry 4.0, the impact this will have on organisations and their supply chains. New business models such as Product-Service-Systems and exploitation of the Internet of Things for Smart businesses.

Teaching/Learning Strategy

>
Knowledge and Understanding

1. The history and development of Operational Excellence methodologies for incremental and, where necessary, breakthrough change.
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Explain the teaching and learning methods and strategies used to help students achieve each part of the knowledge and understanding.

The programme consists of 15 taught modules, four of which are compulsory and 11 electives, of which the student must choose to take 8 electives. The students must all undertake 3 work-based projects. The students will need to pass 12 out of the 15 modules to complete the taught element. The modules will be delivered on line and the project will be implemented in the student’s workplace. Modules will include lectures (videos), case studies, animations, simulations and team discussions. This approach will deliver ideas and concepts and then develop deeper understanding of this material by allowing students to see how it can be applied in working scenarios. Each project will take 12 weeks to complete and the student should apply what he/she has learned online into the business environment for Operational Excellence guided by a local tutor and CI Leader.

Students will be encouraged to engage with their tutors in an interactive discussion and to reflect on what they have learnt through a learning log. Successful completion of the course will also require that students develop time management and organisational skills as it is an intensive programme which needs a balance between work and learning.

Outcomes of learning will be achieved through the modules:
- 1 - Foundations of Operational Excellence.
- 2, 3 and 8 - Lean Operations Management and Improvement & Systems.
- 4, 5 and 10 through Managing People and Teams, Managing People and Operations and the work-based project. Outcome 6 - Introduction of Innovation and Change.
- 7 - Business Information Systems.
- 9 - Managing Improvement Projects and the work-based project.
- 11 - Service Operations Management.
- 12 - Supply Chain Operations Management.
- 13 - Innovation and Design Thinking.
- 14 - Leading and Managing for Operational Excellence.
- 15 - Business Decision Making
- 16 - Strategic Operating Models for the Digital Economy

The programme has a dual assessment strategy.
1. Each of the taught modules will be assessed by a written assignment and on-line exam right after the course.
2. In addition to the taught modules there will be three substantial work-based learning projects that will be assessed by an individual and group presentation plus a written project report.

The written assignments include learning logs or homework which aims to enable students to reflect on what they have learned. The test is to ensure a good understanding of the course content. The work-based project requires a final project report and presentations.

The student must study 11 out of the 15 modules. There are 4 compulsory modules and 11 electives, of which they must select 8 electives.

The taught modules make up 50% of the total marks and
each module is assessed by:

**Written Assignment (60%)** 2500 words* ±/− 10%, excluding the reference list and including Learning portfolios. A3 problem solving, together with a reflective summary of what they have learned and how the learnings can be applied into the workplace.

*applicable to L5 Diploma and L6 Degree only. L4 Certificate requires 1500 words +/−

- **Computer Based Exam (40%)** comprising multiple choice questions to test the understanding of module content.

The assignment and exam together for the 11 taught modules will comprise 50% of the total marks for the programme.

• In addition to the taught modules, the programme includes 3 substantial work-based projects that represent a further 50% of the total marks. This is assessed by:

**Written Project Reports (3) - 2500 words for L4 Certificate & L5 Diploma (5000 words for L6 Degree)** nominal covering the description and analysis of a work-based project conducted as part of the organisation's improvement activities that relates to the theoretical aspects of the module. This should include a project plan, A3 learning portfolio and project results. Photographs, and occasionally videos, may be incorporated. This written project has 70% marks.- Individual and group presentations to managers at the beginning and end of each project. The Proposal Presentation has a 10% mark and the Final Presentation has a 20% mark.

### Cognitive Skills

1. The ability to analyse and evaluate processes and information.
2. Problem Solving skills.
3. Ability to reflect on learning and improve personal performance.
4. Ability to mentor others.
5. Ability to integrate information and Decision Making skills.
6. System thinking;
7. Understanding customer values and consumer behaviours;
8. Information Analysing, Problem Solving and Decision Making skills;
9. Skills of leading a team;
10. Creative thinking and design thinking.
11. Big picture thinking throughout the supply chain.

### Teaching/Learning Strategy

Explain the teaching and learning methods and strategies used to help students achieve each part of the cognitive skills

Cognitive skills 1, 2, 5 and 8 are promoted via the modules of Improvement and Systems, which includes various kinds of tools such as the fishbone chart, A3 problem solving and value stream mapping.

Cognitive skill 3 is developed by the self-learning log and the work-based project.

Cognitive skill 4 is developed via module of Managing People and Teams and the work-based project by team building and motivating team members.

Cognitive skills 6-7 are promoted via the module of Service Operations Management.

Cognitive Skill 9 will be developed by modules of Managing People and Teams, Managing People and Operations and the work-based project (such as team building and motivating team members to drive for improvements).

Cognitive skills 10 is promoted via the module of Innovation and Design Thinking (1) and 11 is acquired through Supply Chain Operations Management.
### Cognitive Skills
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2. Problem Solving skills.
3. Ability to reflect on learning and improve personal performance.
4. Ability to mentor others.
5. Ability to integrate information and Decision Making skills.

### Practical/Transferable Skills
Practical/Transferable skills (able to):
1. Time management
2. Self-learning
3. Ability to work collaboratively
4. Leadership skills
5. Ability to transfer theory into practice
6. Building and maintaining relationships
7. Decision-making and problem-solving skills

### Assessment Strategy
- Cognitive skills in areas 1-11 are assessed by assigned homework, learning logs, tests, group discussions and the work-based project.
- Practical/Transferable skills are assessed through homework, learning logs, assignments, work-based learning project.

### Teaching/Learning Strategy
- Skills 1-2 will be developed through the flexible on-line learning and work-based learning project.
- Skills 3-7 will be developed through the work-based learning project.

### Assessment Strategy
- Main assessment method is via the review of the assigned tasks, such as homework, A3 learning log and the project work. Local business supervisor’s feedback is also a way to evaluate the student’s achievement.

### External Reference Points
- Framework for Higher Education Qualifications (http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/quality-code-A1.aspx);
- Relevant Subject Benchmark Statement(s) (http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/quality-code-A2.aspx);
- Other (list)

**Please note:** This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each course unit/module can be found in the departmental or programme handbook. The accuracy of the information contained in this document is reviewed annually by the University of Buckingham and may be checked by the Quality Assurance Agency.
## Programme Structure

### Year One

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### Year Two

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Winter</th>
<th>Work Based Learning Project 1 [L4/60U] (Continued)</th>
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<tbody>
<tr>
<td>Term 2</td>
<td>Spring</td>
<td>Work Based Learning Project 1 [L4/60U] (Continued)</td>
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<tr>
<td>Term 3</td>
<td>Summer</td>
<td>Work Based Learning Project 1 [L4/60U] (Continued)</td>
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### Year Three

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<tbody>
<tr>
<td>Term 1</td>
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<td>Work Based Learning Project 2 [L5/60U] (Continued)</td>
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<tr>
<td>Term 2</td>
<td>Spring</td>
<td>Work Based Learning Project 2 [L5/60U] (Continued)</td>
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<tr>
<td>Term 3</td>
<td>Summer</td>
<td>Work Based Learning Project 2 [L5/60U] (Continued)</td>
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### Preliminary Examination

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| Term 4 | Autumn | | | |

### Part 1 Examination

| Term 4 | Autumn | | | |

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**Part 2 Stage 2 Examination**