

**Faculty of Business and Law**

**Department of Accounting and Finance**

**ACFI3425 Advanced Business Intelligence**

**Academic Year: 2018-2019**

**Credit value: 15 credits**

**Module leader: Dr. Samar Gad**

**Email: samar.gad@dmu.ac.uk**

**Room: HU 3.51**

**Advice and Feedback hours: See Blackboard**

**Module Overview**

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|  | **Assessment 1** | **Assessment 2** |
| **Type** | Financial Modelling | Database |
| **Length** | 1 hour | 1 hour |
| **Weighting** | 50% | 50% |
| **Deadline** | Week 16  18 January 2019 | Week 27  05 April 2019 |
| **Return date** | 15 February 2019 | 09 May 2019 |

**Note:** all coursework must be submitted electronically via Turnitin by the deadlines unless there are mitigating circumstances. Information on penalties and late submissions can be found at: <http://www.dmu.ac.uk/dmu-students/the-student-gateway/academic-support-office/deferral-of-assessments.aspx>

The Faculty is committed to a 20-working day turnaround time for the marking and return of coursework. The turnaround time does not include weekends, bank holidays or university closure days.

**Leicester Castle Business School**

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| **Our Mission** | **Our Vision** | **Our Values** |
| **To transform lives** in our global community of students, staff and partners through outstanding education and research  **To go beyond business as usual** by fostering creative, distinctive and pioneering solutions to real-world problems  **To promote the public good** through critical analysis of the purpose of business and through active engagement in initiatives aimed at tackling business, social and community challenges | Through our unsurpassed commitment to the public good and transformational scholarship, we will position ourselves as the definition of a 21st century global Business School | **LEADERSHIP**: Confidence and courage to shape a better future  **INTEGRITY**: Taking personal pride in our work  **CREATIVITY**: Thinking beyond the usual and embracing ideas  **GLOBAL MINDEDNESS**: Finding opportunities in our diversity  **COMMUNITY**: Realising the purpose and power of business |

## **Module Outline**

Welcome to Advanced Business Intelligence

A career in accounting or in the banking sector requires technical experience in using spreadsheets, financial models and VBA. This module offers a deep insight into the realm of data science and explores the wide range of tools in Excel to develop dynamic, structured and user-friendly reports. This module links the theoretical basis of managing risk, asset valuation and scenario/sensitivity analysis, with intelligent business applications. It enables students to integrate big data in data models to create integrated financial reports, present solutions to real-world financial problems in an interactive way and help colleagues/supervisors make better and informed decisions.

This is a **15-credit** optional third-year module. The pre-requisite for this module is ACFI2424 Business Intelligence Using Excel. Many of the topics covered in your second year will be expanded here.

Your time in the lab is divided into the following way:

1. 50 minutes demonstration of the tools and skills, and
2. 1-hour simulation.

You will be able to experience a situation where you work as an administrator or as a financial analyst. I will provide you with real financial market data, financial statements and datasets, and you will need to tackle any given task using the most efficient way they have learned. You will be able to develop your skills in terms of:

* Financial modelling and data analysis
* Scenario Management
* Visualisation and charts
* Macros and VBA programming
* Data analysis with Power Query

## **LEARNING OUTCOMES**

On successfully completing this module, all students should be able to demonstrate the following:

***Subject specific skills and knowledge***

1. Systematic understanding of the theoretical and practical basis of financial modelling.
2. Assess organisations’ reporting needs and deploy accurately a suitable financial model.
3. Critically evaluate different financial scenarios and apply scenario management to facilitate informed decision-making.
4. Apply presentation and visualisation methods for efficient and dynamic reporting.
5. Formulate macros to automate calculations and reporting.
6. Consolidate dispersed multi-dimensional data in a database using Power Query features in Excel.

***Non-subject specific skills***

1. Demonstrate effective use of information technology.
2. Display quantitative problem-solving skills.
3. Apply principles learnt to different contexts and self-learn additional tools as required.
4. Carry out independent, self-managed learning in a commercial environment.
5. Demonstrate an ability to manage time effectively.

## **Teaching and Learning Strategies**

Practical 44 hours

Generally, the lecture and tutorial components will be combined with a total duration of 2 hours “practical”. The combined session will be held in computer lab (HU2.03), giving you more hands on experience of the content being delivered and the tasks set for that session.

**The University expects its students to attend taught courses and requires all academic staff to keep a record of your attendance.**

If you have reasons for prolonged non-attendance, you should explain the situation to the module leader (Samar Gad), preferably by contacting her during her surgery hours. Samar will advise you in the first instance, and refer you if you need specialist support. For general support, you should contact SAC in Hugh Aston Building.

The Faculty is committed to providing an equal learning experience for every DMU student using Universal Design for Learning (UDL). Examples of the ways in which we do this include a focus on flexible ways of learning, providing flexible study resources such as by recording lectures, and by using a variety of assessment methods.

You must attend the tutorial group **allotted to you**. In exceptional circumstances, you may change tutorial groups, but you must obtain the approval of the module leader.

## **Student’s responsibilities**

* **Preparation:** Complete the tasks before coming to each timetabled session on this module and undertake the required follow-up work.
* **Participation:** You should come prepared so that you can fully engage in class discussions and activities.
* **Respect:** Throughout your studies, it is important that you treat other students with respect as well as engaging in a respectful manner with academic staff. It is imperative that you listen to others and treat their contributions with respect, even if you disagree with them. In particular it is important that:
* You are respectful of your peers’ learning and resist talking through seminars, workshops and lectures.
* You do not answer your phone unless it is an emergency.
* If you are late, then please take the first available seat and settle yourself as quietly as possible.
* The student charter sets out commitments from the university to students, from students to the university, and from the Students’ Union to students. You can consult it at: <http://www.dmu.ac.uk/dmu-students/student-resources/student-charter/student-charter.aspx>

The module leader will contribute to this environment by:

* Treating all students with respect.
* Welcoming diverse viewpoints, experiences, and interpretations of the class materials.
* Challenging your thinking, beliefs, and analysis of issues, concepts, and ideas in this class.

## **Module Support**

In addition to practicals, you will be supported in the following ways:

### **Blackboard and DMU replay**

The module will be supported by DMU’s online learning on **Blackboard** and by **DMUReplay**. You can gain access to the modules on which they are enrolled by visiting <https://my.dmu.ac.uk>. DMUReplay is system that gives students access to visual material from practicals. This does not replace the interactive face to face session but does allow you to revise the taught material in a more efficient way.

Access to Blackboard can be obtained from any computer connected to the Internet and does not necessarily have to be within the University. You are advised to consult the relevant module pages regularly for any new information or announcements.

Blackboard will have copies of the handbook, practical notes, and any other material deemed relevant by the module.

**Blackboard is not a substitute for attending the practicals.**

Blackboard will also act as a form of communication between the module leader and students. Please check the announcements regularly.

### **Surgery Hours**

Office Location HU 3.51

Office Hours: By appointment

Please email samar.gad@dmu.ac.uk to arrange an appointment.

Surgery is not a replacement for practicals. Samar will expect you to have **attempted** practicals.

### **Microsoft Support**

De Montfort University subscribes to the Microsoft Imagine Academy programme(formerly known as the Microsoft IT Academy) which offers access to on-line training courses free of charge for Microsoft Office and Microsoft Project, plus courses for those interested in technical applications such as Windows operating systems and server software.

Link to Microsoft Imagine Academy

<http://ittraining.our.dmu.ac.uk/microsoft-imagine-academy/>

Link to The full list of Microsoft Imagine Academy Courses

<http://ittraining.our.dmu.ac.uk/files/2015/12/academy_english_list.pdf>

### **DMU Office 365 Support**

Your DMU office 365 account allows you to download the latest version of Microsoft Office to 5 separate devices as well as using the online versions.

<https://demontfortuniversity.sharepoint.com/sites/support365/SitePages/Home.aspx>

The guides below give an easy step-by-step process for installing Office on your PC/mac at home

[**Install Office on your PC​**](https://demontfortuniversity.sharepoint.com/sites/support365/SitePages/Installing%20Office%20on%20your%20PC.aspx)

[**Install Office on your Mac​**](https://demontfortuniversity.sharepoint.com/sites/support365/SitePages/Installing%20Office%20on%20your%20Mac.aspx)

If you are interested to get some basic training from Microsoft click the link below:

[**Microsoft Office Training Centre​**](https://support.office.com/en-us/article/Office-Training-Center-B8F02F81-EC85-4493-A39B-4C48E6BC4BFB?ui=en-US&rs=en-US&ad=US)

### **Library support**

Adele Creak is our subject librarian and a specialist in books/journals for the subject area. She is based in the Kimberlin Library, and can be contacted on [adele.creak@dmu.ac.uk](mailto:adele.creak@dmu.ac.uk).

Library Services and Study Guides are available in <http://www.library.dmu.ac.uk/Support/Guides/>.

### **Study Skills**

The Centre for Learning and Study Support (CLaSS) are based in the Kimberlin Library and can provide a variety of small-group or one-to-one session providing assistance with essential study skills.

<http://libguides.library.dmu.ac.uk/class>

## **Recommended Reading**

* Fairhurst, D. S. (2017). Financial Modeling in Excel For Dummies.
* Alexander, M., & Kusleika, R. (2016). Excel 2016 Power Programming with VBA. John Wiley & Sons.

## **Module Assessment**

**Coursework 1: Financial Modelling**

This assessment consists of different tasks and it will examine your ability to critically evaluate different scenarios/data and develop an appropriate financial model.

**Coursework 2: Database**

This coursework will engage you with the process of building a database, automate reports and utilise your experience in using power query and macros. This is the final assessment in this module.

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| --- | --- | --- |
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**You do not need to pass each element of assessment, but you need to get an overall pass mark of 40% in the module.**

## **Marking**

Anonymous marking will be implemented for the courseworks. The assessment will be subject to both internal and external moderation within the department, as well as by an academic member of staff external to the university. This will ensure that the assessments are of appropriate standard and that the marking process has been correctly followed.

If you believe there to be issues with the marking process, you should follow the academic appeals process detailed in DMU student guidelines. Academic appeals can only be made on one of the two following grounds:

1. That there were demonstrable errors in the conduct of the assessment process which are likely to have made a real difference to the outcome.
2. That there have been errors in the marking or in the consequent decisions of the assessment board

### **Assessment Regulations**

**Cheating, plagiarism, collusion and other forms of misconduct:**

Plagiarism, cheating, collusion and other forms of misconducts are regarded as very serious offences. Allegations of assessment offences will be investigated by the School Academic Dishonesty Committee. Any attempt to gain unfair advantage in any assessment will be penalised. All students need to sign a declaration stating that they will not plagiarise on the cover sheet for coursework assessment and for open book examinations.  
  
The above terms may be defined as follows:

* Cheating is trying to or managing to gain an unfair advantage in an assessment.
* Plagiarism is the use of someone else’s words, work, conclusions or ideas without acknowledgement of the source — for a quotation it includes failure to use inverted commas or other formatting to delimit the quotation.
* Collusion is working together when you are supposed to be working individually. This could happen on group work if more than two people work together.
* Other is basically anything else that is deemed as misconduct such as falsification of data, submitting the same piece of work for two different assessments without acknowledgement, doing research that does not have ethics approval, breach of a professional and/or a commercial confidence, helping another student to commit an offence.

**Late hand-in:**

Penalties will be imposed for unauthorised late hand-in of work, as follows:

* Up to 14 days late without permission Max. mark 40%
* More than 14 days late without permission 0%

**Extensions:**

**Permission for an extension** can only be obtained from Module Leader (Samar Gad) on the presentation of an appropriately completed Coursework Extension Form (available from the Student Advice Centre) with the necessary written evidence attached.

* Do not phone or email for an extension as only the formal written request is acceptable.
* These forms will be signed by the Module Leader as the only official approval of late hand-in.
* No other authorisation process has any official status and students will be penalised for not following this procedure when requesting extra time for the assignments.
* Do not leave an extension request until the day of submission as it is unlikely to be administered in sufficient time to be valid.

**Deferrals:**

If your circumstances are such that an extension of 14 days would not be sufficient, or if you feel that, despite being granted an extension of up to 14 days, your performance in a piece of coursework has been seriously impaired, you may apply formally to your faculty panel for a deferral of assessment of coursework. You will have to fill in the appropriate form that is obtainable from the Faculty Student Advice Centre and supply supporting evidence. Forms should be submitted to the Faculty Student Advice Centre. Further information on the deferrals policy can be consulted at: <http://dmu.ac.uk/dmu-students/the-student-gateway/academic-support-office/deferral-of-assessments.aspx>

**Return of submitted work:**

All students will be informed via a Blackboard announcement when their assessment is marked. You are strongly encouraged to discuss your written or in some cases, audio feedback with your module leader if you have any questions or concerns. Modules assessed wholly or in part by examination may have generic feedback on examination performance made available via Blackboard.

All marks on assessed work are provisional marks only and they will not be confirmed until the Assessment Board meets. Marks and feedback on assessed work will be available within 20 days. The turnaround time does not include weekends, bank holidays or university closure days. The full Assessment and Feedback policy can be consulted at:

<http://www.dmu.ac.uk/about-dmu/quality-management-and-policy/academic-quality/learning-teaching-assessment/assessment-feedback-policy.aspx>

The faculty’s Academic Practice Officer (APO) is Bob Webber and his contact details are as follows:

**Bob Webber** HU5.99 [BWebber@dmu.ac.uk](mailto:BWebber@dmu.ac.uk) Ext 6208

Further advice on academic offences can be obtained by emailing [acasupportoffice@dmu.ac.uk](mailto:acasupportoffice@dmu.ac.uk) Full details can be found in the University regulations <http://www.dmu.ac.uk/dmu-students/the-student-gateway/academic-support-office/student-regulations.aspx> .

Further advice on academic offences can be obtained by emailing [acasupportoffice@dmu.ac.uk](mailto:acasupportoffice@dmu.ac.uk)

### **Reassessment regulations**

For the examination, there will be a new coursework set in the August reassessment period.

Students will be reassessed in any failed component at the next available opportunity. Where the first assignment on a module is completed yet fails to achieve a mark of 40% then that assignment can be resubmitted without loss of a formal reassessment attempt. The maximum mark that can be achieved for a resubmission is 40%. Please note: Students MUST have attempted the assignment in order to benefit from in-course recovery. Students are automatically enrolled onto reassessments as per the University’s regulations

Students are responsible for their own registration for reassessments as per the University’s regulations.

There is no right to reassessment in a low-scoring, but passed, assessment.

**Appendix A Lecture Programme 2018-2019**

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| **Week Commencing** | **Lecture**  **Week** | **Topic** |
| **01/10/2018** | **1** | Introduction: modelling and data analysis (Theory and applications) |
| **08/10/2018** | **2** | Financial Modelling in Excel- Introduction (What, why, who uses it) |
| **18/10/2018** | **3** | Applying scenarios to your financial model (part 1) |
| **22/10/2018** | **4** | Applying scenarios to your financial model (part 2) |
| **29/10/2018** | **5** | Presenting model output – charts and visualisation |
| **05/11/2018** | **6** | **Enhancement Week** |
| **12/11/2018** | **7** | Build your own model (part 1) |
| **19/11/2018** | **8** | Build your own model (part 2) |
| **26/11/2018** | **9** | Build your own model (part 3) |
| **03/12/2018** | **10** | Strategies to reduce error in financial modelling and pitfalls to avoid |
| **10/12/2018** | **11** | Comprehensive example |
| **Christmas Break** | | |
| **07/01/2019** | **15** | Revision |
| **14/01/2019** | **16** | Coursework 1 : Financial modelling |
| **21/01/2019** | **17** | Introduction to Excel VBA |
| **28/01/2019** | **18** | VBA programming examples and techniques (part 1) |
| **04/02/2019** | **19** | VBA programming examples and techniques (part 2) |
| **11/02/2019** | **20** | Advanced VBA Techniques – working with pivot tables |
| **18/02/2019** | **21** | Advanced VBA techniques - working with external data and files |
| **25/02/2019** | **22** | **Enhancement Week** |
| **04/03/2019** | **23** | Data analysis with power query |
| **11/03/2019** | **24** | Macros and Power Query – comprehensive example 1 |
| **18/03/2019** | **25** | Comprehensive example 2 |
| **25/03/2019** | **26** | Technical support class |
| **01/04/2019** | **27** | Coursework 2: Database |