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| **PGR Course unit outline 2020/21** |
| **Unit code:**  | **BMAN80992** |
| **Title:** | **Multiple Regression** |
| **Credit value:** | **5** |
| **Semester:** | **2** |
| **Course Coordinator** **contact details:** | Prof. Paul Irwing, Room 7.005, Tel. 0161-8323872/63419, Email: paul.irwing@manchester.ac.uk |
| **Other staff involved contact details:** | N/A |
| **Pre-requisites****Dependent course units** | Students on this course must also have completed the prior course on factor analysis or its equivalent. To ensure that previous courses have covered equivalent material this should be discussed with the course tutorStructural Equation Modelling, Introduction to Hierarchical Linear Modelling with HLM |
| **Course unit overview** |
| Multiple regression arguably forms basis for all advanced multivariate analyses, including for example structural equation models, multi-level models and longitudinal data analysis. This course will provide a basic introduction simple and multiple regression, including hierarchical, stepwise, moderator and mediation models. |
| **Aims** |
| Most quantitative studies in business involve the simultaneous measurement of a large number of random variables, either at one or at multiple points in time. This course is intended to provide students with a grounding in the statistical techniques in order to validly analyze data sets of this type. The emphasis is on the development of the practical skills required to carry out such analyses using SPSS software.  |
| **Objectives (Learning outcomes)** |
| *On completion of this unit successful students will be able to:** Understand the basic principles of multiple regression
* Analyze a variety of different regression models
* Practically apply this knowledge to real problems as exemplified by publishable data sets
* Acquire a basic mastery of regression as implemented in SPSS
* Know how to write up these analyses in journal form
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| **Syllabus content** |
| * Basic principles of simple regression
* Assumptions of multiple regression
* Multiple R, R2, Beta coefficients, associated F- and t-tests
* The application of multiple regression to simple path models
* Testing of mediator models
* Testing of moderator models
* Applied regression analysis using SPSS
* Interpretation and examples of how to report regression results
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| **Methods of delivery** |
| **Lectures** | **6 hours.** The course will be delivered over two consecutive days |
| **Seminar/Tutorial/Workshop/Lab Hours** | **6 hours**  |
| **Independent Study** | **38 hours** |
| **Total Study Hours** | **50 hours** |
| **Reading List** |
| **Pre Reading**: Tokarev, A., Phillips, A.R., Hughes, D.J., & Irwing, P. (2017). Leader dark traits, workplace bullying, and employee depression: Exploring mediation and the role of the dark core. Journal of Abnormal Psychology, 126, 911-920. http://psycnet.apa.org/doiLanding?doi=10.1037%2Fabn0000299 **Core Texts:** Hair, J. F., Jr., Anderson, R. E., Tatham, R. L. & Black, W. C. (2006). Multivariate Data Analysis. Upper Saddle River, NJ: Prentice-Hall.**Supplementary Texts:*****SPSS*** Field, Andy (2013) Discovering Statistics using IBM SPSS for Windows, Sage Publications.***Advanced***Cohen, J. (2003). Applied multiple regression/correlational analysis for the behavioural sciences. Mahwah, NJ: Lawrence Erlbaum Associates.**Mediation and Moderation**Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.Hayes A. F. (2013). Introduction to mediation, moderation and conditional processs analysis. New York, NY: Guilford Press.Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, *37*, 197-206. |
| **Assessment** |

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| **Mode of Assessment** | **Length required** | **Weighting within unit** |
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| This will comprise a write up of the class exercises in the form of a journal article. | 3,500 words | 100% |

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| **Assessment is for those requiring unit credits (please make this clear to the tutor at the start of the elective)****Coursework**PGRs may take this elective as a stand-alone assessed 5 credit module providing they have completed the equivalent pre-requisites. In which case they will complete a 1500 word assignment based on multiple regression. If this elective is taken alongside EFA the combined assignment should be 2,500 words for 10 credits. If the three electives are taken together then PGRs should see the SEM outline for the 15 credit guidance.  | 1,500 words or2,500 words | 100%100% |

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| **Feedback methods** |
| PGRs are encouraged to express any constructive comments or to seek help and advice from the individual lecturers involved. At the end of the semester there will be the opportunity to give feedback on the course by means of a feedback questionnaire. In addition there will be a group presentation in which both PGRs and staff will provide constructive feedback. For the coursework, there is a standard template which specifies the exact criteria used to assess the coursework. At the end of the course an exemplary piece of coursework will be posted on Blackboard.  |