DBA Program

Mathematics Requirement

A strong background and ability in mathematics are important for successful completion of the program. A minimal mathematics prerequisite for entering DBA students is a thorough working knowledge of the material covered in a Term 2 DBA200 Qualitative and Quantitative Methodology (10 ECTS) .

The entering student must be able to use mathematics as a language, translating verbal descriptions of phenomena into the appropriate mathematical framework. Students with some background in the elements of optimization, and probability and statistics will be better prepared for required course work. All DBA candidates must have met the admission requirement for Mathematics proficiency, to graduate from the DBA Program.

MBA Program

Mathematics Requirement

Effective January 2021, the MBA Program is adopting a new curriculum that integrates more mathematics skills. As a result, a new core course has been added –DBA/ MBA/EBBA 001 Math (online):

DBA/MBA/EBBA 001 Math (online): Prior to enrolling in any section of the MBA, which consists of: Spreadsheets, Accounting, Economics, Finance, and Statistics, students must have completed DBA/MBA/EBBA 001 Math (online) with, at least, an 85% or have met the admission requirement for Mathematics proficiency, to graduate from the MBA Program. DBA/MBA/EBBA 001 Math (online) (online) is paid for via your enrollment fee and carries no additional cost. Access to DBA/MBA/EBBA 001 Math (online) will be provided to students shortly after the reply to the offer of admission and enrollment/tuition deposits are received.

Students who do *not* have all prerequisites will complete the DBA/MBA/EBBA 001 Math (online) after attending the New Student Orientation. These students will then have one year from the start of the program to complete the foundational prerequisites and remaining DBA/MBA/EBBA 001 Math (online) sections.

Students who do not complete MBA Math sections by specified deadlines will be withdrawn from section-aligned courses the week before classes begin, which may delay graduation.

EBBA Program

Mathematics Requirement

Effective January 2021, the EBBA Program is adopting a new curriculum that integrates more mathematics skills. As a result, a new core course has been added – DBA/MBA/EBBA 001 Math (online):

DBA/MBA/EBBA 001 Math (online): Prior to enrolling in any section of the EBBA, which consists of: Spreadsheets, Accounting, Economics, Finance, and Statistics, students must have completed DBA/MBA/EBBA 001 Math (online) with, at least, an 85% or have met the admission requirement for Mathematics proficiency, to graduate from the EBBAProgram. DBA/MBA/EBBA 001 Math (online) (online) is paid for via your enrollment fee and carries no additional cost. Access to DBA/MBA/EBBA 001 Math (online) will be provided to students shortly after the reply to the offer of admission and enrollment/tuition deposits are received.

Students who do *not* have all prerequisites will complete the DBA/MBA/EBBA 001 Math (online) after attending the New Student Orientation. These students will then have one year from the start of the program to complete the foundational prerequisites and remaining DBA/MBA/EBBA 001 Math (online) sections.

Students who do not complete EBBA Math sections by specified deadlines will be withdrawn from section-aligned courses the week before classes begin, which may delay graduation.

CODE: DBA/MBA/EBBA 001 Mathematics Review Seminar

Introduction

This is a full course syllabi for the research seminar course below. Unless mentioned otherwise, course scheduling, course structure, as well as course evaluation are standardized for all undergraduate and graduate courses. Credits are expressed using the European Credit Transfer System. One European credit stands for 30 hours of workload. The EBU course load consists of 20 contact hours and 10 study hours. Contact hours include lectures, discussion forums and examinations and study hours include independent study, practical work, research, etc. This does not apply for Seminars

COURSE PLANNING

The total number of courses offered is dependent on the total credit study plan requirements of enrolled students. Students plan their courses according to course availability and prerequisites. Some of the courses have required prerequisites.

A minimum of one course from each of the specialization courses is offered. The total number of specialization courses offered per specialization is dependent on the total credit and course requirements of enrolled students. Students plan their courses according to course availability. None of the specialization courses have required prerequisites.

COURSE SCHEDULING

1 ECTS seminars are scheduled over the duration of the semester and all courses finish within one semester. Undergraduate and graduate seminar courses consist of 5 contact hours. Contact hours are usually scheduled as five (5) one (1) hour class sessions in the semester and 2 hours of discussion forum per week for 5 weeks. Research assignments and course preparation amount to 11 hours. Assessments take place as per the instructors decision.

COURSE STRUCTURE

Students are provided a strong theoretical foundation and are introduced to the various concepts in order to gain a thorough understanding of the subject matter. The practical application and implementation of these specific concepts are methodically discussed during the various class sessions by means of real-life examples and comprehensive case studies.

COURSE CONTENT AND LEARNING OUTCOMES

The overall learning of the courses at the graduate program corresponds to the level descriptors proposed by SCQF Scottish Quality and Qualifications Framework, level 11, corresponding also with the descriptors of the European Qualifications Framework (EQF) for second cycle qualification. The overall learning of the undergraduate programs aims at students obtaining a level according to the indications below.

The descriptor for the second cycle in the Framework for Qualifications of the European Higher Education Area agreed by the ministers responsible for higher education at their meeting in Bergen in May 2005 in the framework of the Bologna process corresponds to the learning outcomes for EQF level 7.

The learning outcomes are established according to Benjamin Bloom's taxonomy for cognitive learning. Based on this framework, courses at Graduate level address primarily the thinking processes: Knowledge, Comprehension, Application, and Analysis.

Setting

· *Operational Context:* The learner operates in complex and unpredictable contexts, requiring selection and application from a wide range of largely standard techniques and information sources.
· *Autonomy and responsibility for actions:* The learner acts with minimal supervision or direction, within agreed guidelines taking responsibility for accessing support and accepts accountability for determining and achieving personal and/or group outcomes.

CHARACTERISTIC 1: KNOWLEDGE AND UNDERSTANDING

• Demonstrate and/or work with:

• Knowledge that covers and integrates most, if not all, of the main areas of the subject/discipline/sector – including their features, boundaries, terminology and conventions.

• A critical understanding of the principal theories, concepts and principles.

• A critical understanding of a range of specialised theories, concepts and principles.

• Extensive, detailed and critical knowledge and understanding in one or more specialisms, much of which is at, or informed by, developments at the forefront.

• A critical awareness of current issues in a subject/discipline/sector and one or more specialisms.

CHARACTERISTIC 2: PRACTICE: APPLIED KNOWLEDGE, SKILLS AND UNDERSTANDING

• Apply knowledge, skills and understanding:

• In using a significant range of the principal professional skills, techniques, practices and/or materials associated with the subject/discipline/sector.

• In using a range of specialised skills, techniques, practices and/or materials that are at the forefront of, or informed by forefront developments.

• In applying a range of standard and specialised research and/or equivalent instruments and techniques of enquiry.

• In planning and executing a significant project of research, investigation or development.

• In demonstrating originality and/or creativity, including in practices.

• To practise in a wide and often unpredictable variety of professional level contexts.

CHARACTERISTIC 3: GENERIC COGNITIVE SKILLS

• Apply critical analysis, evaluation and synthesis to forefront issues, or issues that are informed by forefront developments in the subject/discipline/sector.

• Identify, conceptualise and define new and abstract problems and issues.

• Develop original and creative responses to problems and issues.

• Critically review, consolidate and extend knowledge, skills, practices and thinking in a subject/discipline/sector.

• Deal with complex issues and make informed judgements in situations in the absence of complete or consistent data/information.

CHARACTERISTIC 4: COMMUNICATION, ICT AND NUMERACY SKILLS

• Use a wide range of routine skills and a range of advanced and specialised skills as appropriate to a subject/discipline/sector, for example:

• Communicate, using appropriate methods, to a range of audiences with different levels of knowledge/expertise.

• Communicate with peers, more senior colleagues and specialists.

• Use a wide range of ICT applications to support and enhance work at this level and adjust features to suit purpose.

• Undertake critical evaluations of a wide range of numerical and graphical data.

CHARACTERISTIC 5: AUTONOMY, ACCOUNTABILITY AND WORKING WITH OTHERS

• Exercise substantial autonomy and initiative in professional and equivalent activities.

• Take responsibility for your own work and/or significant responsibility for the work of others.

• Take significant responsibility for a range of resources.

• Work in a peer relationship with specialist practitioners.

• Demonstrate leadership and/or initiative and make an identifiable contribution to change and development and/or new thinking.

• Practise in ways which draw on critical reflection on your own and others' roles and responsibilities.

• Manage complex ethical and professional issues and make informed judgements on issues not addressed by current professional and/or ethical codes or practices.

COURSE EVALUATION

Course evaluation: Study Load per 1 ECTS course	Total 26 hrs.
- Lectures: one hour per week for (5 weeks)	5 hours
- Self-directed content learning & preparation: 2 hours per week (5 weeks)	10 hours
- Specific assignments: 1 x 1 hour assignments	1 hour
- Course Preparation and Discussion Forums: 2 hours per week for 5 Weeks	10 hours

Attendance to all class sessions and participation in all class discussions is mandatory and is part of the final grade for the course. Reading materials and discussion questions should be prepared by each student individually by the next class session. There should be graded weekly assignments. Formative assignments, where feedback is provided on the student's performance but the grade not included in the final grade, are also given throughout the course. Credits are only awarded upon successful completion of the entire course. Partial credit for partial completion of a course is not

awarded. We reserve the right to change the content of this catalog and to make changes to the academic curriculum at any time and without prior notice.

CODE: DBA/MBA/EBBA 001 Mathematics Review Seminar

Syllabus

COURSE DETAILS

Course level: Undergraduate and Graduate
Course category: Elective
Course credits: n/a
Course duration: 5 weeks
Total contact hours: 10 (5hrs Lectures + 5hrs Discussion Forums)
Total exam hours: 1
Total study hours: 15 (10hrs Self-directed + 2hrs Research + 3hrs Specific Assignments)
Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Mathematics Review Seminar is a five-week review course in basic mathematical analysis to help prepare you for the quantitative material in your DBA, MBA and EBBA courses. You will practice modeling real world scenarios of mathematical con-cepts, and you will see how mathematics can help you understand more about the scenarios.
Each is divided into a lecture/discussion and a team based problem-solving.

You should also plan on spending time going over your notes and problems done during the day, preparing the Final Assignment, and listing any questions you have on the day's work.
You will receive course handouts at the beginning of each session. You will need to obtain a good business calculator for the course (and you will also use it during the program). Use of excel to solve problems is also encouraged and will be demonstrated in webinars..

COURSE CONTENT AND LEARNING OUTCOMES

- Solving Linear and Quadratic Equations
- Functions and Graphs
- Lines, Parabolas, and Systems
- Exponential and Logarithmic Functions
- Mathematics of Finance
- Introduction to Probability, Normal Distribution, Linear Regression

- Differential Calculus
- Partial Derivatives
- Integration

BIBLIOGRAPHY

- Introductory Mathematical Analysis (by Haeussler and Paul)
- Essential Prep - Finance published by GMAC.

- Forgotten Calculus, A Refresher Course with Applications to Economics and Business,3rd Edition by B. Bleau, published by Barron's (ISBN 0-7641-1998-2)
  Units 1-8 comprise an excellent review of algebra with business applications. The Calculus topics that should be covered are found in Units 9-11, 19, and beginnings of Units 22-23

For Probability and Statistics

- The Cartoon Guide to Statistics by Gonick and Smith, published by HarperPerenni-al (ISBN 0-06-273102-5).
- Statistics DeMystified-A Self-Teaching Guide by Gibilisco, published by McGraw Hill (ISBN 0-07-143118-7)