MASTER IN VIRTUAL EDUCATION WITH CONCENTRATION IN DIGITAL TRANSFORMATION

BIU **University**

Mode	Language	Duration
Online	Spanish	18 months

Course Descriptions

- **VED611 Development and Integration of Technologies in Distance and Virtual Education (3 Credits)** The main objective of this course is to provide an overview of virtual education. From the beginning, students will have a clear vision of how virtual education has changed the teaching process and how it will influence the future. We will study all levels of the distance education system, providing students with the opportunity to have a broad perspective on the applications of virtual education.

- **VED612 Fundamentals of E-Learning Learning Modality (3 Credits)** Online learning (e-learning) in the 21st century provides a coherent, comprehensive, and empirical framework for understanding. This course explores the pedagogical, technological, and organizational implications of the e-learning system. The course provides practical models that allow students to harness the full potential of e-learning. Special attention is given to understanding these technologies from an educational perspective.

- **VED621 Virtual Education and E-Learning (3 Credits)** Information and communication technologies and their impact on the world of learning in the last decade have profoundly changed the paradigms, scenarios, and values of education at all levels. The professionalization of tools and practices, as well as the consolidation of academic and technical knowledge, has been a significant ongoing issue in recent years. This course addresses developments in the field of open, distance, and online learning through new information and communication technologies and methodologies and tools that have profoundly changed paradigms, scenarios, and values at all levels of education over the past decade.

- **VED622 Virtual Education and Technology (3 Credits)** Web technologies are having a significant impact on commerce, media, business, and education in general. Starting with the "Edu-blogosphere," this course will focus on the effect that web technologies have on the field of education. Students will explore the potential of blogs, media-sharing services, and other social programs that, while not specifically designed for e-learning, can be used to educate students and create new and engaging opportunities where learning is much more personal, social, and flexible

- **VDT631 Introduction to Digital Transformation (3 Credits)** This course, focused on the digital transformation of educational institutions, is designed to provide a comprehensive review of the fundamental concepts of digital transformation. It highlights the importance of institutional leaders engaging in a solid analysis and discussion of why the institution should pursue a digital transformation process, what the ultimate goals should be, how the institution will accomplish this task, and what the cost will be. It also examines the importance of redefining the institution's business design and strategy through technology implementation to enable rapid innovation of digital academic offerings and achieve a reliable and integrated academic and administrative structure that supports digital innovation. Finally, other key factors to consider for a successful digital transformation are analyzed, including...

- **VDT632 Digital Technologies and Their Roles in Business (3 Credits)** This course is designed to provide a comprehensive review of existing technologies, their applications in education, their pros and cons, and their specific features to support a complete digital transformation of an educational institution. These technologies, which enhance access to virtual learning opportunities, include technologies such as e-learning applications and cloud storage, learning management systems (LMS), personalized learning systems based on individual student strengths and weaknesses, virtual reality, augmented reality, artificial intelligence applications, security systems, telecommunications systems, big data analytics, student and administrative record management systems, student relationship management systems, among others. The focus of the course is to investigate the capabilities of existing technologies and select those that provide digital solutions to develop a reliable and integrated academic and administrative structure that supports digital innovation and enhances efficiency.

- **VDT641 Path to Digital Transformation (6 Credits)** This course is designed to strengthen students' skills in implementing a viable digital transformation plan in their respective institutions. This plan should include a reliable and integrated academic and administrative operational structure that supports digital innovation, as well as the redefinition of the institution's organizational design and strategy to enable rapid innovation of digital academic offerings. To this end, students will use previously collected information regarding the academic and administrative structural design of their institutions that influences the entire student academic lifecycle and the technologies considered appropriate to facilitate the achievement of the proposed digital transformation plan objectives.

- **VED651 The Ecosystem of Innovation and Knowledge (3 Credits)** The context of this course is the interaction between the student and a set of interconnected resources not tied to a physical or virtual location. This context belongs to an individual and is created through their interactions in the world. Students will analyze the "Resource Ecology" context model based on the student as a framework for designing technology-enhanced learning environments and understanding the importance of adapting available resources to each student's needs. This interdisciplinary course draws on fields such as geography, anthropology, psychology, education, and computer science to find the dynamics and the greatest potential for teacher-student interaction within a continuous learning process and in a variety of locations.

- **VED652 Research Methodology (3 Credits)** In this course, students will develop a scientific research project that will serve as the basis for their Master's thesis. To do this, students must rigorously follow the applicable steps of the scientific method, which includes the research process related to conceptualization and ethics, as well as the description of the qualitative, quantitative, or mixed scientific method to be followed. Specifically, students will identify and define a problem of interest that warrants a search for a solution and/or answers to questions related to the problem, formulated to improve understanding of the problem and/or the proposed related questions. They will address the problem and/or related questions by conducting background research to collect information to become familiar with what is known about the problem and/or proposed related questions, including possible answers. They will establish parameters to be used to study and understand the selected problem and/or formulated questions. They will conceptualize and design the scientific method to be applied to carry out the study. They will plan and present a precise and complete research proposal that includes all of the above elements and, in addition, a detailed description of the procedures to be followed during the field work, as well as the population expected to participate and/or the sampling to be collected for future analysis, and the description of the information evaluation method. Students must follow the most up-to-date version of APA standards for writing their research project. The student must successfully complete this requirement with a grade of B or higher to graduate.

- **VED661 Cloud Learning Environment and Comparative Study (3 Credits)** In this course, students will study the development of virtual education worldwide with the intention of comparing experiences and forming their own perspective on the state of virtual education. Starting with the definition of cloud computing, why it exists, and its pros and cons, this course will provide students with a wide variety of experiences. Students will explore all aspects of cloud platforms, infrastructure, services and applications, and security. They will evaluate the value of cloud computing, including licensing models, ROI, understand abstraction, partitioning, virtualization, capacity planning, and various programming solutions. The use of web services from Google®, Amazon®, and Microsoft® will be debated, cloud communication methods such as instant messaging, Twitter®, Google Buzz, and Facebook® will be explored, and students will learn how cloud services are changing mobile phones and vice versa.

- **VED662 Thesis (3 Credits)** In this course, students are expected to continue and complete their Master's thesis. For this purpose, students must systematically follow the scientific method described as part of their previously completed and approved research project. During this final phase, the student must execute the approved procedure for conducting fieldwork, which may be repeated as necessary to ensure that the data collected is accurate and reliable at the time of collection. They must gather the information obtained from experimentation and/or observation. Carefully record all collected data (observations, measurements, survey information, among other predetermined data) based on the evaluated variables. Analyze the recorded data using the appropriate methodology; interpret the results, focusing primarily on providing a solution to the selected problem and/or answering related questions that have been proposed, without dismissing opportunities to address other aspects of the problem that were not previously identified as objectives but that arise from the interpretation of the data obtained. Establish conclusions inferred from the experimental results and present recommendations that suggest new relevant scientific research. Students must follow the most up-to-date version of APA standards to write their Master's thesis and coordinate a final oral presentation, which should be considered an integral part of a research project. The student must successfully complete this requirement with a grade of B or higher to graduate.