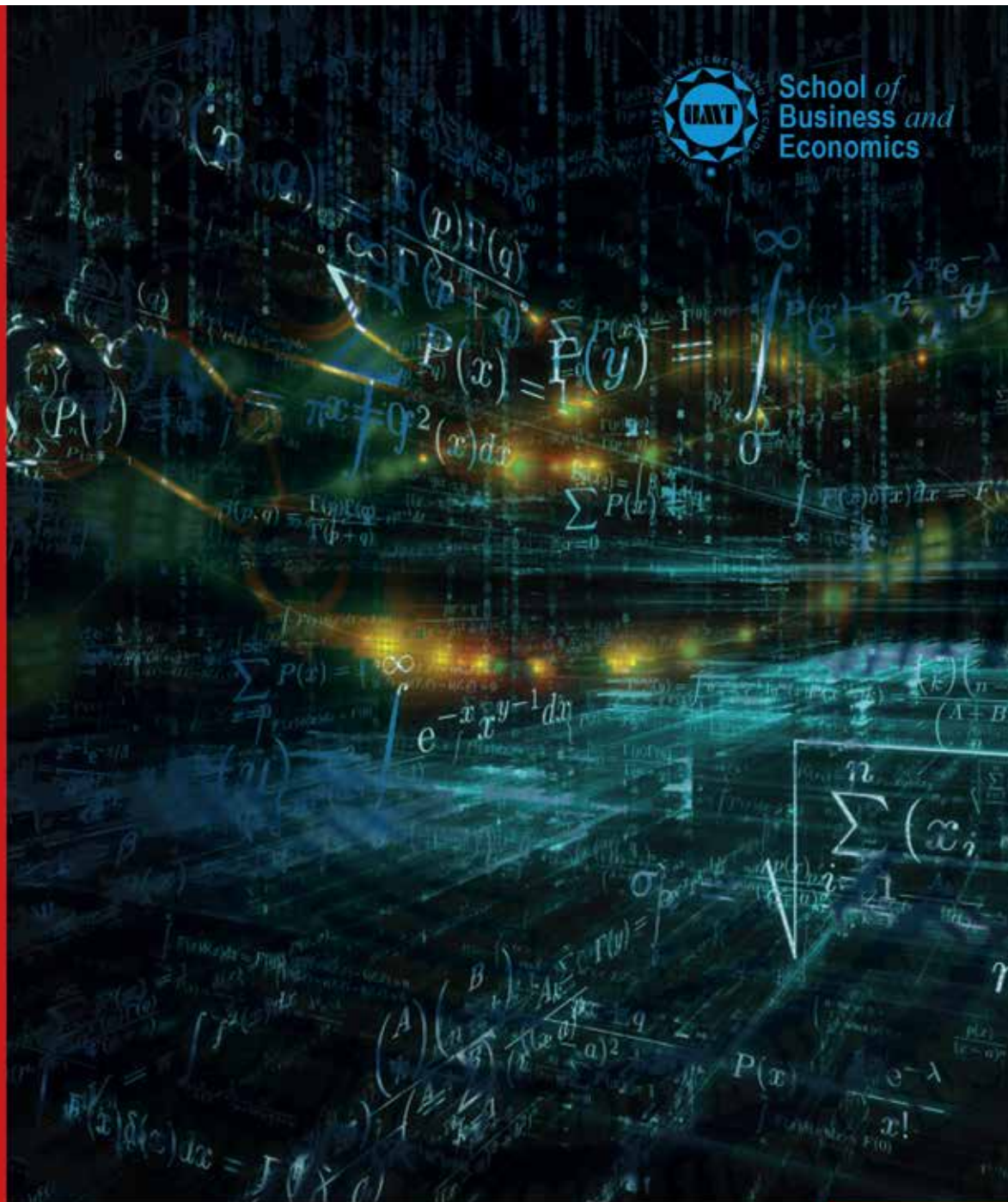




School of
Business and
Economics



Center for Enterprise Technology Advancement

EXPLORE
XPERIENCE
XCEL





INTRODUCTION

Center for Enterprise Technology Advancement (CETA) came into existence with the objective of introducing the latest and dynamic technological advancements to the people of Pakistan. It started by offering 'ERP Certifications' known as 'Enterprise Resource Planning' in collaboration with Microsoft, Oracle and SAP. CETA is now widening its portfolio by focusing on the new data driven world by offering 'Nanodegrees' in various fields of Big Data.

In pursuance for such excellence, the Center has now placed its prime focus on the Dynamic Technological 'NANODEGREE' that would prepare professionals for the modern data driven world. It will enable them to compete in the modern dynamic technological world and set themselves up for jobs of the future.



DEAN'S MESSAGE

SBE is one of the three business schools in Punjab with highest accreditation from the Higher Education Commission, and one of the top eight in all of Pakistan. Our goal is to not only be one of the top business schools and universities, but to share with all universities in Pakistan, and in particular in Lahore, the abundance of resources we have. CETA is one of the resources we want to share.

We are particularly delighted to be able to offer certifications to students all over Lahore, as well as to our own students at UMT. You can choose to take one or two 'courses' from CETA to earn certifications and increase your career opportunities, or you can earn a Nanodegree, made up of five courses to enter a new, well-paying career.

We are proud of our outstanding Professors who are trained in these areas. This is your opportunity to learn from the best and be part of the fastest moving business school in Pakistan.

Prof F. Robert Wheeler III

Dean, School of Business and Economics



DIRECTOR'S MESSAGE

I have seen this world changing in front of me, upside down.

In 1999, I touched a computer for the first time and was so intrigued. I used to play games on my Super Nintendo console before that, but I never thought about how the games were created, or how the machines were made. But when I first saw a Pentium first generation CPU, a monitor, a mouse, and a keyboard, I saw opportunity; an opportunity to create programs which will actually do things as per my instructions, and I started creating since that day and never looked back.

Today, I work as a Data Scientist which is a subset of Artificial Intelligence. I teach Data Science, and try to inspire young minds to use technology to transform the future. We are on a tipping point, and we have the resources and knowledge to positively solve our biggest problems. That's the very reason I joined CETA as Director.

Together, we can combine the resources and knowledge to empower people to reach their true potential. The purpose of the Center is to kindle the spark of enthusiasm in you to not only learn these new technologies but envision the future, and set the direction for tomorrow's technological advancements.

I hope to work together with all the mavericks and visionaries out there to create a new future using technology.

Dr Ammar Aftab Raja

Director CETA

NANODEGREE SNAPSHOT

WHAT?

- ❖ Intended to impart detailed technical knowledge in the most vibrant technological advancements
- ❖ A combination of modules and capstone project
- ❖ Development of professional portfolio consisting of real time projects and assignments

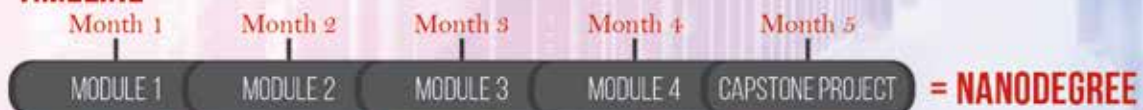
WHY?

- ❖ Immense need of the market for advanced mastery of tools
- ❖ Development of a portfolio during coursework and project to be used in professional life
- ❖ An opportunity to learn from the best and prove your potential to future employers through Github (the de facto site for Techies)

WHO?

- ❖ For every participant willing to take full advantage of upcoming and rapid changes of the industry
- ❖ Suitable for everyone irrespective of their background
- ❖ Flexible for Programmers and Non-Programmers

TIMELINE



CAREER PROSPECTS

When you enroll in a Nanodegree program, you will:

- ❖ Master in-demand skills
- ❖ Earn a valued credential
- ❖ Build and design amazing projects

When you graduate from a Nanodegree program, you can launch your career as:

- ❖ Data Scientist
- ❖ Business Analyst
- ❖ Machine Learning Engineer
- ❖ Big Data Analyst
- ❖ Data Analyst
- ❖ Data Visualisation Engineer
- ❖ ERP Professional

NANODEGREE



INTRODUCTION

Nanodegree is a combination of courses and a practical project, which is offered from CETA's platform. Nanodegrees are intended to impart detailed technical knowledge in the most vibrant technological advancements in the form of modules along with capstone application project.

Students will complete four core courses. All these courses will include projects, with the help of which students will form a portfolio. The portfolio of the projects will be supplemented with the Capstone Project which will be detailed implementation of the subject of Nanodegree.

Students who will complete a single course in the Nanodegree will be granted certificate in that course. When the student will complete the four required courses and the final Capstone Project, they will be granted the individual course certificates along with the Nanodegree in that specific specialization.

The biggest benefit the students will gain from a Nanodegree is the portfolio which they will make during their coursework and project. This portfolio can be presented to prospective employers to signal the students' ability.

Flexibility is another benefit, i.e., the student can start with one course or multiple courses according to their schedule on weekends. They will have to follow the structure of the Nanodegree, but they will have the flexibility to complete it at their own pace.

DURATION OF NANODEGREE

Each course in the Nanodegree will constitute eight 1.5-hour instructor led sessions on weekends. Two sessions will be offered every weekend for a month. Therefore, one course can be completed in one month.

Since a Nanodegree is made up of four courses and a Capstone Project which is equal to one course, the whole Nanodegree can be completed in five months. Students have the flexibility to take courses according to their schedules; therefore students can take maximum one year to finish a Nanodegree.





WHY NANODEGREE PROGRAMS?

The value of a Nanodegree program can be broken down into three main categories:

- ❖ Skills
- ❖ Technological and Academic Community
- ❖ Employment

Skills

In today's fast moving world, the prime focus of major companies is towards enhancing their capabilities in order to serve the needs of their clientele in an efficient manner. Every company has its own set culture. In order to progress, it is vital that the participants initiate the development of their skills to help them move to an advanced level and gain advanced mastery of technology.

Technological and Academic Community

The participants need skills to begin. To advance, CETA provides the academic community a platform that will make them part of the technological community. In our community, our prime focus is to teach our participants the 'art of demonstrating their mastery of the skill set' which they would learn after going through the numerous processes of the course.

At every step of the Nanodegree program you will always be accompanied by supporting faculty members and students in case of any query or counseling requirement.

Employment

CETA understands that the ultimate value proposition of education is employment. We believe that if you choose CETA as your learning partner, and your goal is career advancement, then together we will work towards getting you prepared for your future endeavors by tying you in with our network across Pakistan.





WHO SHOULD ATTEND?

The Nanodegree program is designed for each participant who desires to take full advantage of upcoming and rapid changes in an industry. The beauty of this program is that it is well suited for everyone irrespective of their background. Programmers and non-programmers can undergo this degree keeping in sight a successful future.

Beginner

If you have little to no programming skills, and you do not consider yourself to be a 'techie,' but you want to compete in today's technological hiring landscape, a Nanodegree will equip you with modern skills. You may not be thinking of a career path yet, but you will emerge from your first Nanodegree qualified to choose a career path.

Intermediate

You may be functionally adept with valuable technical skills, but you are not yet where you want to be in your career. You may be trying to land your first role in your chosen field. You may be attempting a lateral promotion into a position with the kind of opportunity you are seeking down the road. You may be instigating a career change. You may be re-entering the workforce after a period away. In all these instances, you need to refresh your skills to achieve your goals.

Advanced

When you are ready to make the leap from fully skilled to an incredibly valuable employer, a Nanodegree will give you that boost. You want to master the most cutting-edge skills, compete for top roles at the most innovative companies, and start delivering real value on Day One. You want to learn the skills and techniques used by the most advanced technology companies in the world.

TECHNICAL VS. 'IN TECH'

Today, there is a critical difference between having technical skills and working 'in tech.' The skills you learn in a Nanodegree program enable you to work virtually anywhere, in any field, not just in tech. As just a few examples, when you master technical skills through a CETA Nanodegree program, you are in a position to bring value to:

- Companies that have web properties which must be built, maintained and upgraded
- Companies that need to build, maintain and upgrade their apps
- Companies that produce data which must be analyzed and rendered strategically actionable
- Companies which need to automate portions of their operations through the use of sophisticated algorithms that can be trained to increase efficacy

COURSES IN NANODEGREE

• PREDICTIVE ANALYTICS NANODEGREE

Introduction to Data Science Using R Programming
Data Structure and Mining
Data Visualization and Communication
Practical Machine Learning
Capstone Project

• WATSON ANALYTICS NANODEGREE

Foundations of Data Science
Exploratory Data Analysis and Visualizations
Predictive Analytics
Watson Analytics Industry Applications
Capstone Project

• BUSINESS ANALYTICS NANODEGREE

Data Science for Data-Driven Companies
Mastering Data Analysis
Data Visualization and Communication
Managing Big Data
Capstone Project

• ENTERPRISE RESOURCE PLANNING NANODEGREE

Introduction to Enterprise Resource Planning
Microsoft Dynamics AX 2012 Foundation in Financial
Microsoft Dynamics AX 2012 Foundation in Supply Chain
Microsoft Dynamics AX 2012 Foundation in Human Resource Management
Microsoft Dynamics AX 2012 Foundation in Customer Relationship Management

ACADEMIC ALLIANCES OF CETA

CETA at the University of Management and Technology prides itself for being the 'First in Pakistan' to have gained prestigious 'Academic Alliance' with renowned technological firms, so that we can train professionals in the most relevant and highly demanded skills. The following esteemed organizations have professional alliances with CETA.



UMT is the First University in Punjab (public and private sector) which has successfully earned a University Alliance with SAP. In addition to receiving an institutional license of SAP ERP for server, UMT has dedicated license workstations, and teaching and training manuals for faculty. A special portal has been created for UMT. Specialized department based software for UMT School of Business and Economics is also available for use.



SBE at UMT has an Academic Alliance with Microsoft Dynamics ERP in Microsoft Dynamics. Microsoft created a dedicated portal for UMT and gave licenses and servers to UMT. UMT is the 'First University in Pakistan' to have successfully established an Alliance with Microsoft Dynamics.



UMT has an alliance with Oracle ERP, the world's leading business software company. In addition to receiving an institutional license of Oracle ERP for servers, UMT has dedicated license workstations, and teaching and training manuals for faculty. A special portal has already been created for UMT. Specialized software for UMT School of Business and Economics is also available for use. Moreover, UMT is now officially authorized to provide Oracle certification under the umbrella of the Oracle Academy.

CETA will operate through the following software/apps:



Watson Analytics is a smart data analysis and visualization service you can use to quickly discover patterns and meaning in your data – all on your own. With guided data discovery, automated predictive analytics and cognitive capabilities such as natural language dialogue, you can interact with data conversationally to get answers you understand. Whether you need to quickly spot a trend or you have a team that needs to visualize report data in a dashboard, Watson Analytics has you covered.



R is a powerful language and environment for statistical computing and graphics. R can be considered as a different implementation of S, and is much used as an educational language and research tool.



Rapidminer, as the name suggests, is a software platform that provides an integrated environment for machine learning, data mining, text mining, predictive analytics and business analytics.



In 2020 the world will generate 50 times the amount of data as in 2011 and 75 times the amount of information sources. Within these data are huge, unparalleled opportunities for human advancement. But to turn opportunities into reality, people need the power of data at their fingertips. Tableau is building software to deliver exactly that; make your data create an impact. Tableau helps the world's largest organizations unleash the power of their most valuable assets: their data and their people.



In open sourcing its artificial intelligence engine, freely sharing one of its most important creations with the rest of the Internet, Google showed how the world of computer software is changing.

These days, the Internet giants frequently share the software sitting at the heart of their online operations. Open source accelerates the progress of technology. In open sourcing its Tensor Flow AI engine, Google can feed all sorts of machine-learning research outside the company.



The mission of the Python Software Foundation is to promote, protect, and advance the Python programming language, and to support and facilitate the growth of a diverse and international community of Python programmers.

CETA seeks more and more intellectual skills set for its students so that it can introduce newer skill set to Pakistani youth as well as to align them with industry beyond the horizon. Our R&D Teams are working earnestly to accomplish this objective.



For complete schedule, please visit our website: ceta.umt.edu.pk

CONTACT US

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