

## Courses Description

**College:** Prince Alhussein Bin Abdullah The Second For Information Technology

**Department:** Information Technology

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**Couse ID:** 2010041240      **Description:** Information Systems for Small and Medium-sized Enterprises

**Full Course Description:** This course introduces the enterprise architecture and information systems in small-to-medium-sized enterprises. The focus is on the cost-based tools that enable the business flow where the resources and budget are available for small-to-medium scale businesses such as national enterprises. Mainly, the focus would be on Open-source and/or low-cost software such as but not limited to, Microsoft Office products; Excel, Access, and publisher in managing enterprise data, Google products and analytics, open-source tools for meetings, project development tracking, data organization, what-if analysis, goal seekers, and basic data modeling and organization techniques.

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**Couse ID:** 2010041250      **Description:** Busniess Data Analytics

**Full Course Description:** This course introduces the fundamental concepts and practice of descriptive, predictive, and prescriptive analytics to identify and analyze business data. The course also covers part of Python libraries of data science to make sense of the collected data on the business websites and pages on social networks such as Facebook and/or Twitter, sentiment analysis, and customer opinion on products trends through text analysis techniques.

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**Couse ID:** 2010041330      **Description:** Managing and Developing Business Databases

**Full Course Description:** This course introduces the concepts of databases in the context of the electronic business environment by applying knowledge related to databases and using the appropriate tools to apply them to real cases. Topics include user requirements analysis, logical and physical database design, relational and object-oriented databases. Basic concepts for designing, creating and using relational data models as well as how to use databases to support website operations through various programming tools such as Oracle, SQL Server, Java A selected DB Language such as Oracle

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**Couse ID:** 2010041351      **Description:** AI Applications in Busniess

**Full Course Description:** This course covers transferring and cross-referencing data; updating enterprise files, consumer behavior forecasting and product recommendations, fraud detection, personalized advertising and marketing messaging, customer service via telephone or chatbots, Intelligent Conversational Interfaces, Reduced Energy Use And Costs, Market Prediction.

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**Couse ID:** 2010041360      **Description:** E-Marketing

**Full Course Description:** This course introduces the fundamental concepts of marketing and how information technology can increase product sales. The course will cover products and goods marketing on social networks; concepts, methods, and ethics, search engine marketing (SEM), Search Engine Marketing Ad Auction, spamming, websites evaluation metrics, basic Ad technology, and design, and analysis and design of smart marketing information systems.

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**Couse ID:** 2010041361      **Description:** E-Services

**Full Course Description:** The course covers mainly focuses on two integral e-services; e-government and e-commerce. It introduces principles and models of e-government, e-democracy, e-participation, and e-voting. It also covers the steps and procedures followed in executing e-government projects and its benefits for government, citizens and business organizations. The second part presents an overview of Information Systems and Electronic Commerce, E-Marketplaces, Retailing and Consumer behavior, Multi-stage channel of E-Commerce Model, B2B E-Commerce, B2B Exchange and E-Supply chain

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**Couse ID:** 2010041431      **Description:** Electronic Business Security

**Full Course Description:** This course introduces the principles, techniques, and methodologies necessary to design and evaluate information security in a complex electronic business environment. The course is designed to include topics that cover issues such as the nature of electronic business security, information security services for electronic business systems, enterprise security design, design of security protocols for e-business, security tools and programming techniques, the perimeter security of these technologies such as firewalls, systems to detect and prevent intrusion technology, Security requirements, and the humanitarian factors that affect e-business security.

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**Couse ID:** 2010041441      **Description:** Decision Support Systems

**Full Course Description:** The course establishes a foundation for understanding and analyzing information and information systems in organizations. It also provides an overview of technical and organizational aspects of decision support systems (DSS), including individual, group, and organizational DSS as well as executive information systems (EIS). Management of DSS and EIS within the end-user computing environment is also discussed.

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**Couse ID:** 2010041442      **Description:** Knowledge Management

**Full Course Description:** This course describes the fundamental concepts of knowledge, the knowledge-centric organization, building knowledge management solutions, and the KM cycle, knowledge representation, and implementation. It also covers knowledge management tools, portals, and social intelligence networks. It provides a study on knowledge management models and programs and the technology and communication tools used to implement such models such as the structured controversy.

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**Couse ID:** 2010041452      **Description:** Business Intelligence

**Full Course Description:** The course gives an overview of how business intelligence technologies can support decision making across any number of business sectors. These technologies have had a profound impact on corporate strategy, performance, and competitiveness and broadly encompass decision support systems, business intelligence systems, and visual analytics. Modules are organized around the business intelligence concepts, tools, and applications, and the use of data warehouse for business reporting and online analytical processing, for creating visualizations and dashboards, and for business performance management and descriptive analytics.

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**Couse ID:** 2010041470      **Description:** Enterprise Resource Planning Systems

**Full Course Description:** This course will explore the concepts, principles, and state-of-the-art methods in successfully integrating Enterprise Resource Planning (ERP) systems into extant enterprise architectures. The course will help both functional area and IT managers understand the respective role of users, enterprise architects, developers, and managers in the selection, preparation, implementation and management of large and complex enterprise applications. This course is a precursor to deeper involvement in ERP management, implementation and, if desired, administration.

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**Couse ID:** 2010041490      **Description:** Practical Training

**Full Course Description:**

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**Couse ID:** 2010041491      **Description:** Project In Business Information Technology (1)

**Full Course Description:**

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**Couse ID:** 2010041492      **Description:** Project In Business Information Technology (2)

**Full Course Description:**

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**Couse ID:** 2010041493      **Description:** Special Topics In Business Information

**Full Course Description:**

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**Couse ID:** 2010041494      **Description:** Research Methods in Information Technology

**Full Course Description:** This course provides students with practical perspectives on how research can be applied in real information technology environments. This covers the skills of reading, reviewing, and developing research papers, perform a literature review, describe sampling methods, measurement scales and instruments, research publishing ethics, and demonstrate how educational research contributes to the university and country objectives.

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**Couse ID:** 2010042101      **Description:** Discrete Mathmatics

**Full Course Description:** This course is intended to provide a thorough understanding of discrete mathematics and its application in computer science. This course focuses on teaching a specific set of mathematical facts and how to apply them in real-life situations. In addition to logical and mathematical reasoning. This course explains combinatorial analysis, discrete structures, algorithmic thinking, computers, and applications in order to achieve these goals.

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**Couse ID:** 2010042210      **Description:** Introduction to Data Science

**Full Course Description:** This course provides an overview of Data Science, covering a broad selection of key challenges and methodologies for working with big data. Topics to be covered include data collection, integration, management, modeling, analysis, visualization, prediction and informed decision making, as well as data security and data privacy. Students will also learn concepts such as exploratory data analysis, statistical inference and modeling, machine learning, and high dimensional data analysis.

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**Couse ID:** 2010042211      **Description:** Data Engineering

**Full Course Description:** This course introduces the basic processes in data analysis and information extraction; data collection and acquisition, integration, storage management, analysis and visualization, prediction, feature selection, and result and model reporting. It also covers building Data Engineering Infrastructure, Reading and Writing Files, Working with Databases Cleaning, Transforming and Enriching Data, Data analysis Pipelines.

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**Couse ID:** 2010042220      **Description:** Introduction to Artificial Intelligence

**Full Course Description:** In this course, students will learn what Artificial Intelligence (AI) is, explore use cases and applications of AI, understand AI concepts, and terms such as machine learning, deep learning, and neural networks. You will be exposed to various issues and concerns AI such as ethics and bias, & jobs, and get advice from experts about learning and starting a career in AI. You will also demonstrate AI in action with a mini project. This course does not require any programming or computer science expertise and is designed to introduce the basics of AI to anyone whether you have a technical background or not.

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**Couse ID:** 2010042250      **Description:** Programming for Data Science and Artificial Intelligence

**Full Course Description:** This course introduces the necessary programming environment for data science and AI applications. In the first part, the focus will be on Unix-like OS shells, scripts, and Git programming. In the second part, an introduction to Python programming that covers Control statements, functions, lists and tuples, dictionaries and sets, array-oriented programming with NumPy, and Strings. Students should work on practical assignments and mini project(s) as integral part of the total score.

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**Couse ID:** 2010042271      **Description:** Information Retrieval

**Full Course Description:** In this course, you will learn the underlying technologies of these and other powerful tools for accessing and mining text information. You will be able to learn the basic principles and algorithms for information retrieval. Unlike structured data, which is typically managed with a relational database, textual information is unstructured and poses special challenges due to the difficulty in precisely understanding natural language and users' information needs. In this course, we will introduce a variety of techniques for accessing and mining text information. The course emphasizes basic principles and practically useful algorithms. Topics to be covered include, among others, text processing, inverted indexes, retrieval models (e.g., vector space and probabilistic models), Information Retrieval evaluation, text categorization, retrieval system design and implementation, issues of web search engines, and applications of text retrieval and mining.

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**Couse ID:** 2010042300      **Description:** Algorithms Analysis and Design

**Full Course Description:** This course introduces the time-space complexity analysis, common searching algorithms, common sorting algorithms, stacks and queues, binary trees, AVL trees and red-black trees, heaps, basic graph algorithm, breadth-first and depth search algorithms, shortest path, Dijkstra algorithm, Bell-man-Ford algorithm, spanning trees, Kruskal's algorithm theory and implementation.

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**Couse ID:** 2010042312      **Description:** Data Mining

**Full Course Description:** Data mining is concerned with the extraction of novel knowledge from large amounts of data. This course introduces and studies the concepts, issues, tasks and techniques of data mining. Topics include data preparation and feature selection, association rules, classification, clustering, evaluation and validation, scalability, spatial and sequence mining, and data mining applications. The practical side of this course will introduce students to learn and use the open-source Weka data mining tool.

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**Couse ID:** 2010042313      **Description:** Time Series analysis

**Full Course Description:** The course provides a basic introduction to modern time series analysis. Topics include time series regression and exploratory data analysis, model identification/estimation/linear operators, Fourier analysis, spectral estimation, and state-space models. Some important probability models for time series will also be covered such as stationarity, Moving Average (MA), Autoregressive (AR), Auto Regressive Moving Average (ARMA), and Auto-Regressive Integrated Moving Average (ARIMA) models.

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**Couse ID:** 2010042314      **Description:** Data Security

**Full Course Description:** This course introduces students to the principles of information systems security (confidentiality, integrity, and availability) and the seven domains of the typical IT infrastructure. Risks, threats, and vulnerabilities will be defined. The creation of an IT security policy framework will be emphasized. The following topics will be introduced: the risk management process, cryptography, compliance laws, and information security standards. At the end of the course, students will be able to apply the security life cycle to an information system.

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**Couse ID:** 2010042321      **Description:** Machine Learning

**Full Course Description:** This course provides a broad introduction to machine learning and statistical pattern recognition. Topics include supervised learning (generative/discriminative learning, parametric/non-parametric learning, neural networks, support vector machines); unsupervised learning (clustering, dimensionality reduction, kernel methods); learning theory (bias/variance tradeoffs, practical advice); reinforcement learning and adaptive control. The course will also discuss recent applications of machine learning, such as to robotic control, data mining, autonomous navigation, bioinformatics, speech recognition, and text and web data processing.

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**Couse ID:** 2010042322      **Description:** Digital Image Processing

**Full Course Description:** This course introduces basic concepts, methodologies, and algorithms of digital image processing focusing on the following two major problems concerned with digital images: (1) image enhancement and restoration for easier interpretation of images, and (2) image analysis and object recognition. Some advanced image processing techniques (e.g., wavelet and multiresolution processing) will also be studied in this course. The primary goal of this course is to lay a solid foundation for students to study advanced image analysis topics such as computer vision systems, biomedical image analysis, and multimedia processing & retrieval.

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**Couse ID:** 2010042323      **Description:** Neural Networks & Deep Learning

**Full Course Description:** This course introduces and relates the basic concept of neural networks. The course will provide a current and coherent view of artificial neural networks. The neural net algorithms will be discussed to understand contemporary neurocomputing technology. It emphasizes mathematical analysis of neural networks, methods for training networks, and application of networks to practical problems. Neural network implementation will be discussed to understand contemporary neurocomputing and soft-computing techniques. The course will focus on Understanding the major technology trends driving Deep Learning: Be able to build, train and apply fully connected deep neural networks, Know how to implement efficient (vectorized) neural networks, Understand the key parameters in a neural network's architecture.

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**Couse ID:** 2010042340      **Description:** Robot Programming

**Full Course Description:** In this course you will build on a library of robotics software in the language of your choice (among Python, Mathematica, and MATLAB) and use the free cross-platform robot simulator V-REP, in addition to ROS which allows you to work with state-of-the-art robots in the comfort of your own home and with zero financial investment.

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**Couse ID:** 2010042341      **Description:** Introduction to Mobile Robots

**Full Course Description:** This course introduces robotic systems from a computational perspective. A robot is regarded as an intelligent computer that can use sensors and act on the world. We will consider the definitional problems in robotics and look at how they are being solved in practice and by the research community. The emphasis is on algorithms, probabilistic reasoning, optimization, inference mechanisms, and behavior strategies, as opposed to electromechanical systems design. This course aims to help students improve their probabilistic modeling skills and instill the idea that a robot that explicitly accounts for its uncertainty works better than a robot that does not.

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**Couse ID:** 2010042351      **Description:** Advanced Programming for Data Science and Artificial Intelligence

**Full Course Description:** This course introduces the methods of develop data-driven applications. Mainly, the course focuses on Python programming language and extend the prerequisite course to object-oriented programming, High-end topics in searching and sorting and code complexity, files and exceptions, simulation and dynamic visualization, Pandas series and Data frames, regular expression, and data wrangling, time-series, linear regression, web scraping (NLP basics). Algorithms of machine learning and deep learning will be explored via classifications and clustering on real-life problems and datasets.

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**Couse ID:** 2010042352      **Description:** Data Science Tools

**Full Course Description:** This course introduces R tool to turn facts and data into useful information. R tool is one the most common statistical tools currently used in data science and statistical learning. It is a collection of packages designed to work together to make data science fast, fluent, and fun. This course covers introduction and preliminaries in R environment, simple manipulations; numbers and vectors, objects, their modes and attributes, ordered and unordered factors, arrays and matrices, lists and data frames, reading data from files, probability distributions, grouping, loops and conditional execution, user-defined functions, statistical models in R, graphical procedures, packages, OS facilities. Students of this course should work on projects and practical assignments as they represent a significant part of this course.

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**Couse ID:** 2010042360      **Description:** Big Data

**Full Course Description:** This course is an introduction to the concepts of "Big Data" and "data analysis". It introduces one of the most common frameworks, Hadoop, that has made big data analysis easier and more accessible. At the end of this course, students are expected to first, describe the Big Data landscape including examples of real-world big data problems including the three key sources of Big Data: people, organizations, and sensors. Second, explain the V's of Big Data (volume, velocity, variety, veracity, and value) and why each impacts data collection, monitoring, storage, analysis, and reporting. Third, to have some practical experience with some commonly used tools and techniques for (big) data processing. Forth, know the basics of distributed file systems, databases, and computing. Fifth, to have gained practical data processing skills with the MapReduce framework / Apache Hadoop, Apache Spark, H2O Framework, and TensorFlow.

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**Couse ID:** 2010042362      **Description:** cloud-computing

**Full Course Description:** This course covers essential cloud-computing concepts, including compute, storage, database, networking, and security services. Students will gain an overall understanding of these concepts, along with some initial skills for working with the services of a specific cloud provider. Mainly, understand the different categories of cloud services and the specific types of services available in at least two cloud environments, e.g. AWS and Azure, understand the variety of pricing models that currently exist in the market today, how to compute direct costs, and estimate indirect costs, understand the global infrastructure of at least two cloud environments, e.g., AWS and Azure, understand the security and compliance measures, in the context of a specific cloud environment. Besides, know how to set up a virtual private cloud, know how to set up, and when to use virtual machines in the cloud, know how to set up and use lambda functions, understand and know when to use various types of file and object storage services.

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**Couse ID:** 2010042424      **Description:** Computer Vision

**Full Course Description:** This course introduces computer vision, including fundamentals of image formation, camera imaging geometry, feature detection, and matching, stereo, motion estimation, and tracking, image classification, scene understanding, and deep learning with neural networks. We will develop basic methods for applications that include finding known models in images, depth recovery from a stereo, camera calibration, image stabilization, automated alignment, tracking, boundary detection, and recognition. We will develop the intuitions and mathematics of the methods in a class, and then learn about the difference between theory and practice in project

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**Couse ID:** 2010042470      **Description:** Natural Language Processing and Text Mining

**Full Course Description:** This course introduces the field of natural language processing (NLP). Students will learn how to create systems that can understand and produce language, for applications such as information extraction, machine translation, automatic summarization, question-answering, and interactive dialogue systems. The course will cover linguistic (knowledge-based) and statistical approaches to language processing in the three major subfields of NLP: syntax (language structures), semantics (language meaning), and pragmatics/discourse (the interpretation of language in context).

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**Couse ID:** 2010042480      **Description:** Smart Cities

**Full Course Description:** This course introduces the basics of smart cities foundations, principles, and applications, and it examines the possible future trends of this technology. It will also discuss the potential of AI and Big data in smart cities applications.

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**Couse ID:** 2010042490      **Description:** Practical Training

**Full Course Description:**

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**Couse ID:** 2010042491      **Description:** Project in data science and artificial intelligence(1)

**Full Course Description:**

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**Couse ID:** 2010042492      **Description:** Project in data science and artificial intelligence(2)

**Full Course Description:**

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**Couse ID:** 2010042493      **Description:** Special Topics

**Full Course Description:** Trends and new technologies in AI and data science. This course could be offered in a research-oriented theme to cover some of the new research published in the area of Artificial Intelligence, Machine Learning, Data Science and Big Data.

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**Couse ID:** 2010043250      **Description:** Introduction to cybersecurity

**Full Course Description:** This course introducing Information Security and focusing on fundamental concepts and models, malicious software (Malware), Social Engineering Attacks, Application and Network Attacks, Internet, Wireless, and Other Attacks, Physical Security. Improving Host security, Vulnerability Assessment and Mitigating Attacks, Host, Application, and Data Security.

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**Couse ID:** 2010043251      **Description:** Cryptography

**Full Course Description:** This route offers a creation to information protection and its importance, know-how classical encryption strategies: Substitution, Transposition and product Ciphers, exam of conventional encryption algorithms and design concepts together with transposition and substitution techniques which include DES, know-how of the modern cryptographic techniques which includes RSA, Key distribution, digital signature, identity and authentication, and sharing keys. A survey of symmetric encryption, along with classical and contemporary algorithms, are provided

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**Couse ID:** 2010043316      **Description:** Python Programming

**Full Course Description:** This course will give an overview of Python, together with the way to create and run scripts, use threads, and manage exceptions. Then, the students of this course will learn how to network, together with a way to use the Python libraries for network scripting and develop fundamental scripts with network functionality. This path will also cover HTTP programming, security scripting, and forensic scripting. Subsequently, the student will find out about Twisted Python, which includes the Echo server and HTTP client. Once the student has finished the route, he/she might be completely capable of debugging and safety checking out the usage of Python, as well as writing Python scripts. Working files are included.

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**Couse ID:** 2010043360      **Description:** Information Security Protocols

**Full Course Description:** This path will cover Cryptographic Data Integrity Algorithms and starts off evolved with a survey of cryptographic hash functions. it'll then covers tactics to data integrity that depend on cryptographic hash capabilities: message authentication codes and digital signatures. For Mutual trust, the course will cover key control and key distribution subjects and then covers user authentication strategies. The direction examines using cryptographic algorithms and protection protocols to offer security over networks and the Internet.

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**Couse ID:** 2010043371      **Description:** Database Management Systems and Security

**Full Course Description:** Database management systems (DBMS) describes a standard set of models, layout paradigms and a Structured Query Language (SQL). Furthermore, the course would examine data structures, file organizations, concepts and principles of DBMS's, data analysis, database design, data modelling, database management, data & query optimization, and database implementation. More specifically, the course introduces relational data models; entity-relationship modelling, SQL, data normalization, and database design. It would also introduce query-coding practices using MySQL (or any other open system) through various assignments. Design of simple multi-tier client/server architectures based and Web-based database applications will be introduced.

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**Couse ID:** 2010043380      **Description:** Network Monitoring and Documentation

**Full Course Description:** This direction covers standard information that a community administrator can use to screen, examine, and troubleshoot a collection of disbursed local area networks (LANs) and interconnecting T-1/E-1 and T- 2/E-3 lines from a central web page. The route emphasizes "learning by doing", and calls for college students to conduct a sequence of lab physical activities. through these labs, college students can decorate their knowledge of the ideas, and be capable of observe the ones concepts to clear up actual issues.

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**Couse ID:** 2010043381      **Description:** Ethical Hacking

**Full Course Description:** This direction introduces the principles of Ethical Hacking and offers the students the possibility to study distinctive tools and techniques in ethical hacking and safety and practically follow a number of the tools. Learn factors of protection, significance of data gathering, foot printing and system hacking assessment of computer security.

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**Couse ID:** 2010043382      **Description:** Ethical Hacking Lab

**Full Course Description:** The lab teaches the scholar to pick out and analyses the degrees an ethical hacker requires to take in order to compromise a target device, identify gear and techniques to perform a penetration testing, compare protection techniques used to protect system and user data.

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**Couse ID:** 2010043383      **Description:** Network Security and its Threats

**Full Course Description:** Networks are the number one factor of entry to most computer structures. Network safety is ready keeping the perfect use of network sources at the same time as preventing disallowed use. Network layers (OSI) model, Network Security Protocols and Administering a Secure Network, Wireless Network Security, Attacks on wireless networks, Protection techniques. Basic security protocols in cellular, Security of IEEE 802.11. Vulnerabilities of IEEE 802.11 Security. MAC Address Filtering. SSID Broadcast. Wired Equivalent Privacy (WEP). Wireless Security Solutions, Wi-Fi Protected Access (WPA), Wi-Fi Protected Access 2 (WPA2), Other Wireless Security Steps.

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**Couse ID:** 2010043452      **Description:** Cloud Computing Security

**Full Course Description:** This course focuses on the Cloud Computing Architecture and Security, Current Technologies and Solutions, analyze New and Emerging Cloud Solutions, Identify and Evaluate Cloud Computing Architectures, Cloud Architecture Models, Cloud-Based Services, Threats, Components (Logical and Physical), and Security Issues and New Challenges of Cloud Computing.

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**Couse ID:** 2010043461      **Description:** Digital Forensics

**Full Course Description:** Digital forensics is a form of forensics that deals with recovery and investigation of records in digital devices. Digital forensics studies cyber-attack prevention, making plans, detection, response, and investigation with the dreams of counteracting cybercrimes, and making the accountable folks/agencies accountable. The subjects included in this direction include fundamentals of virtual forensics, forensic duplication and analysis, network surveillance, intrusion detection and response, incident response, anti-forensics techniques, anonymity and pseudonymity, cyber law, computer security guidelines and hints, court docket report writing and presentation.

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**Couse ID:** 2010043462      **Description:** Digital Forensics Lab

**Full Course Description:** This Lab focuses on identifying, acquiring, processing, analyzing and reporting on data stored on a computer system, digital device or other storage media.



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**Couse ID:** 2010043472      **Description:** E-commerce Security

**Full Course Description:** The path describes the underlying infrastructure required to perform electronic commerce transactions. The various classes of the e-commerce internet web page and exclusive models of payment systems to be had over the Internet is likewise described. During this course, college students are familiarized with numerous degrees, producers and issues associated with making plans, designing, web hosting, and launching the web page. Within the second part of this direction, the numerous legal and security issues concerned in e-commerce transactions can be defined. The students might be familiarized with diverse wished strategies and techniques to defend systems.

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**Couse ID:** 2010043484      **Description:** Information Hiding Techniques

**Full Course Description:** Steganography is a method, which includes hiding a message in the ideal service, for example, a picture or an audio file. during this route, a creation to Steganography is delivered. The difference among Steganography and Cryptography is covered. in addition, Steganography strategies and the excellent gear to perform Steganography will be included. This route will offer facts on how we are able to cover statistics and discover the hidden ones the usage of a variety of approaches beneath windows O.S.

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**Couse ID:** 2010043485      **Description:** Malicious Software

**Full Course Description:** The students who have had completed this course should understand approximately these topics: What is Malware? What is Malware? Types of Malware, Setup Open-Source Malware Analysis Lab. Tools and Techniques, Basic and Dynamic Analysis. Debugging and Reverse Engineering. Malware Analysis Primer, Basic Static Techniques, Malware Analysis in Virtual Machines, Basic Dynamic Analysis, Malware Behavior, Covert Malware Launching, Malware-Focused Network Signatures.

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**Couse ID:** 2010043486      **Description:** Integrated Penetration Protection

**Full Course Description:** This route teaches college students the underlying ideas and some of the techniques related to the cybersecurity practice referred to as penetration checking out and protection, introducing college students to penetration checking out and vulnerability evaluation. it'll cover in-intensity methodologies, techniques, and gear to discover vulnerabilities, exploit, and investigate security chance to networks, operating systems, and applications. The students discover how device vulnerabilities can be exploited and learn how to keep away from such problems.

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**Couse ID:** 2010043487      **Description:** Special Topics in Cyber Security

**Full Course Description:**

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**Couse ID:** 2010043490      **Description:** Practical Training

**Full Course Description:**

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**Couse ID:** 2010043491      **Description:** Applied Project(1)

**Full Course Description:**

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**Couse ID:** 2010043492      **Description:** Applied Project(2)

**Full Course Description:**

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**Couse ID:** 2210041132      **Description:** enterepreurship and innovation

**Full Course Description:**