IT EXPERT SYSTEM INC.

CATALOG

951 N Plum Grove Rd, Suite # A, Schaumburg, IL – 60173

www.itexps.net | 847-350-9034

2022-2023

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

TABLE OF CONTENTS

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VERSION CONTROL

Version	Details	Date
1.0	Original Version	2/1/2017
2.0	Added/ updated courses as per IBHE/ GI Bill changes	9/9/2018
3.0	Added/ updated courses as per IBHE/ GI Bill changes	2/10/2019
4.0	Added/updated Calendar	1/6/2021
5.0	As per Educational Approval Program	2/24/2022
6.0	As per Educational Approval Program	3/24/2022
7.0	As per ACCET	8/08/2022
8.0	Added/Updated Calendar	03/01/2023
9.0	As per the ACCET recommendations, updated the Grading, Attendance and SAP Policies Grading Rubric, Multimedia Policy, Employment Verification Policy, Media opt Out Form, Course Content Expanded	11/15/2023

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INTRODUCTION

IT Expert System Inc. (WWW.ITEXPS.COM) is a progressive IT organization committed to impart outstanding IT Training, Staffing and Services to our clients. Founded in 2014 by Patel family with its HQ in Schaumburg, IL, and branch office in Naperville- IL, Des Plaines-IL; the company has provided effective, accurate, and quality IT Training to hundreds of individuals and supported them to find the right job and achieve their career goals.

We are approved training providers by IBHE, WIOA, MyCAA, Army Cool, and GI BILL. We are affiliated by IIBA and are corporate partners with Agile Alliance and Microsoft Systems.

Our job placement success rate is 78% from year 2021 to 2022, in year 2022, 80% of our students pass certification exams for PMP, Agile Scrum Master, ITIL, Six Sigma Green Belt, Java, SQL, and CCNA in first attempt. Our student satisfaction rate is 98% in the year 2022 and our BBB rating is A+ from 2018 to 2023. Along with training, we support students with resume preparation, interview coaching, and career counseling.

TRAINING

IT Expert provide IBHE approved training programs to our students. All our programs are designed to meet today's job market needs. We engage our students from the beginning to understand their background, aspirations and map their skills to available programs and select the one which best suits student needs and aspirations. Once the program is identified, the student goes through training and instructions in a classroom setting. In this phase, students acquire knowledge through classroom training, discussions and apply their knowledge while doing lab work, homework assignments and project preparation. Here, we make sure students are motivated and focused on the path to success. We also prepare them for industry standard certifications in their related field of study.

The student is accepted and notified of acceptance by providing a copy of the completed enrollment agreement, the school catalog, and written confirmation of acceptance via email.

WIOA Training **MYCAA Training** **GI Bill® training** **ARMY COOL training**

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FACILITY'S NAME, ADDRESS, AND PHONE NUMBER

Name: IT Expert System Inc.

Year of Establishment: December 12th, 2016

Organization Type**: S- Corporation**

Owner Name: Padmaben Patel

Share Ownership: 100%

Main Office:

951 N Plum Grove Rd,

Suite A, Schaumburg IL 60173

(Central Access from HWY: I290, I90, I390 & I53)

Phone: 847-350-9034, option one

Branch Office:

1560 Wall Street,
Suite #111, Naperville, IL 60563
Phone: 847-350-9034, Option 2

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Branch Office:

2400 E Devon Avenue, Suite#257, Des Plaines, IL 60018

Phone: 847-350-9034, Option 3

MISSION/PURPOSE OF THE FACILITY

Mission:

The IT Expert System works to provide a better educational experience to our students and increase our clients' competitiveness by supporting their IT Training, Staffing and Solutions needs and financially rewarding our stakeholders.

Vision:

Be the #1 trusted, and respected Training and Placement provider in the Chicago market and expand our offerings to the world-wide market. We want to provide students with the skills they need for successful careers in fast-growing industries nationwide.

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Beliefs:

- Customers define our success.
- Effective training is essential for talent development.
- Technology is a strong vehicle for Business Strategy Implementation
- Talented staff produce quality products and improve business productivity.
- Educating today's Students, to build a stronger Tomorrow.
- Education, Experience and Expertise - provides job security & rewards.

GENERAL DESCRIPTION OF THE FACILITY (INCLUDING ENROLLMENT CAPACITY OF THE CLASSROOMS)

Main Office Schaumburg

Building Description	
Owned By	Expert Advantage Schaumburg Real Estate, LLC
Present use	Training & Consulting

Existing Space			
Type of space	Total Net Square Feet	Number of Classrooms	Total seating capacity of classrooms
Overall Space	7,000	6	Approx. 75

Room Type	Quantity
Offices	5
Theary Room	4
Lab Room	3
Conference Room	2
Kitchen	1
Library Room	1
Admin Station	2
Restroom	4
Open Areas	2

Equipment Type	Quantity

Desktop Computers	45
Laptop Computers	8
Printers	4
Projectors	5
Office Desk	5
Training Tables	22
Chairs	50
Camera System	16
Podium	3
TV Sets	2
Conference Camera	4

Branch Office Naperville

Building Description	
Owned By	Mari Rodriguez
Present use	Training & Consulting

Existing Space			
Type of space	Total Net Square Feet	Number Of Classrooms	Total seating capacity of classrooms
Overall Space	2800	8	Approx. 30

Branch Office Des Plaines

Building Description	
Owned By	O'Hare Lake Three Building LLC
Present use	Training & Consulting

Existing Space			
Type of space	Total Net Square Feet	Number Of Classrooms	Total seating capacity of classrooms
Overall Space	4000	5	Approx. 75

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DATES OF ALL HOLIDAYS WHICH THE INSTITUTION DOES NOT PROVIDE INSTRUCTION:

Holidays	Date	Status
Memorial Day	Monday, May 29, 2023,	Institution Closed
Independence Day	Tuesday, July 4, 2023,	Institution Closed
Labor Day	Monday, September 4, 2023	Institution Closed
Thanksgiving Day	Thursday, November 23, 2023	Institution Closed
Christmas Day	Monday, December 25, 2023,	Institution Closed

LISTING OF FACILITY ADMINISTRATORS

Name and Role: Padmaben Patel, President

Contact #: (734) 254-0632

Contact Email: Padmaben@itexps.com

Responsibilities: Ms. Padmaben is the head of IT Expert System, and she is responsible for leading and strategizing the policies in alignment with the institution's vision and mission

Name and Role: Tushar Patel, Chief Education officer

Contact #: (224) 315-7025

Contact Email: Tushar@itexps.com

Responsibilities: Mr. Patel directs, shapes, and coordinates the instructional curricula, teaching processes, educational board members, and the staff to advise and govern the appropriate curricula, educational materials, and techniques.

Name and Role: Narendra Lilaramani, Chief Technology Officer

Contact #: (630) 914-0798

Contact Email: Narendra@itexps.com

Responsibilities: Responsible for IT Expert technical tools, including decisions on procuring, maintaining, upgrading state of the art technology.

Name and Role: Haresh Godhani, Business Development Director

Contact #: (630) 926-9502

Contact Email: haresh@itexps.com

Responsibilities: Responsible for IT Expert developing new business opportunities for an organization by growing its revenue, finding, and developing new business opportunities and expanding the brand.

Name and Role: Karen Merchant, Education Advisor

Contact #: (630 251 3718

Contact Email: karen.merchant@att.net

Responsibilities: Karen establishes business connections and communication connections to grow adult education training business. She organizes workshop/marketing events and brings in new potential students/clients. She is part of the education board and influence company's decisions.

Name and Role: Rina Patel, Business Development Manager

Contact # :(847)350-9034

Contact Email: rina@itexps.com

Responsibilities: Business Development, getting leads, Liaison and relationship building with profession organization and government bodies, Student Counseling

Name and Role: Bhaumik Patel -Chief Marketing Officer

Contact #: (847)350-9034

Contact Email: bhaumik@itexps.com

Responsibilities: Responsible to undertake market research, understand the trends and customer preferences, create marketing strategy and budgets, oversee the creation of marketing materials and content, and perform all other relevant tasks essential for increasing the business's sales.

LISTING OF FACULTIES SHOWING DEGREES EARNED.

Name of the instructor: Tushar Patel

Qualification:

- Bachelor of Engineering in Computer Engineering,
- Master of Engineering Management

Area of specialization: Program Management and Ecommerce

Program Teaching: Program Management and Ecommerce

Name of the instructor: Padmaben Patel

Qualification:

- Bachelor of Commerce

Area of specialization: Office Admin

Program Teaching: Office Admin

Name of the instructor: Narendra Lilaramani

Qualification:

- Bachelor of Engineering in Computer Engineering,

Area of specialization: Big Data and Database Management and Ecommerce

Program Teaching: Big Data and Database Management and Ecommerce

Name of the instructor: Rajeev Bajpai

Qualification:

- Master's in Computer Engineering

Area of specialization: Agile Scrum, Project Management

Program Teaching: Agile Scrum, Project Management

Name of the instructor: Dhaval Anand– Six Sigma Instructor

Qualification:

- Master's in industrial engineering

Area of specialization: Six Sigma

Program Teaching: Six Sigma

Name of the instructor: Sarah Willis - Kanter

Qualification:

- Bachelor's in Pathology

Area of specialization: Agile Scrum, Project Management

Program Teaching: Agile Scrum Master Certification, Business Analyst

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Name of the instructor: Sarah Ibrahim

Qualification: Bachelor of Sciense

Area of specialization: Agile Scrum Master

Program Teaching: Agile Scrum Master Certification

Name of the instructor: Ada Cerda

Qualification: Bachelor of Arts

Area of specialization: Data Analysis, Microsoft Excel, Word, and Power Point

Program Teaching: MS Excel 1-2

Name of the Instructor: Haresh Godhani

Qualification: Bachelor of Sciense

Area of specialization: MS Office 365

Program Teaching: MS Excel, MS Word, MS Powerpoint

INSTITUTION SELF-EVOLUTION PROCESS

IT Expert System implement continuous monitoring on-going performance process of communication between a supervisor and an employee that occurs throughout the year, in support of accomplishing the strategic objectives of the organization. The communication process includes clarifying expectations, setting objectives, identifying goals, providing feedback, and reviewing results. It creates a trusted environment in which our employees feel empowered to take control of their own work.

AT IT Expert continuous monitoring consists of the automated collection of feedback evidence and indicators through email, phone, or website review by an internal or external auditor on a frequent or continuous basis. At IT Expert we gather feedback from our students, peers, or customers on a continuous basis.

- ★ **Student Feedback:**
  - The Teacher/Instructor evaluation will be administered electronically, facilitated by the Training Director
  - The feedback results will be aggregated as anonyms responses and provided to
  - Instructor Instructor's ranking is determined based on students' feedback.
- ★ **Peer Feedback:**
  - The Teacher/Instructor evaluation will be conducted by peers by attending Instructor's class.
  - Training directors will collect peer feedback.

Instructor Coaching improvement plan will be decided based on peer feedback.

Training director - will meet all instructors and provide them with student and peer feedback, training director will be responsible to mentor and groom Instructors and regularly evaluate Instructor's progress.

ADMISSION

The admissions Process is the same for all students: Individual, Group, or Third – third-party funded.

- The institute does not discriminate based on race, color, religion, sex, sexual orientation, gender identity, national or ethnic origin, age, status as an individual with a disability, protected veteran status, genetic information, or other protected classes under the law.
- Enrolling students made aware of the potential effects and consequences of past criminal behaviors. Externship/clinical sites, employers, or state/national licensing agencies have requirements that could prevent a student from completing the program or finding employment in his/her chosen field. Consent to perform a criminal background check must be completed and received as part of the admissions process. Results will be evaluated immediately upon receipt, but no later than the add/drop period.

1) Registration Intake

If a student is interested in a technology certificate program, our website directs them to call or email Student Services at info@itexps.com. If after an initial correspondence, the students determine what they would like to apply for, the Student Services team will send them a registration form together with information on the student's previous experience and training needs.

2) Interview and Proof of Education

Once the registration form is complete, Student Services staff will set up a video or phone interview to review the student's information and go over the details and requirements of the program. Along with technical competency and the desire to gain employment in the field post-program completion, the below requirements must be met to move forward:

- **Minimum Age:** IT Expert System Inc. enrollment requires students to be eighteen (18) years of age or older.
- **Minimum Education:** IT Expert System Inc. requires all students to have a minimum education of a High School diploma or GED equivalent. Have the required passing scores on an ability to benefit test.

  To make this training program accessible and affordable for those without a high school credential and promote economic mobility, at IT Expert System Inc we create additional enrollment opportunities for students interested in the training program through the **ATB (Ability to Benefit)** test results.

  Minimum Education Requirements by Program:

  I. Business Analysis Combo Program - High School Diploma or GED

II. Software test Quality Assurance and Test Automation Combo Program - High School Diploma or GED
III. Database and Data Analytics Combo Program - High School Diploma or GED
IV. DevOps and Docker Combo Program - High School Diploma or GED
V. E-Commerce Program - High School Diploma or GED
VI. Office Administration - High School Diploma or GED
VII. System Engineering - High School Diploma or GED
VIII. Management Program – associate degree, bachelor's degree
IX. Big Data and Database Management Program - associate degree, bachelor's degree

- **Proof of Documentation:**
  I. Valid Driver's License or State issued Photo ID
  II. Social Security Card
  III. Transcript or Certificate of Diploma or Degree

3) Advising and Registration

Advisors assess students based on their education, experience, expertise, and interests and suggest the program that best suits their interests. Once students have been accepted into our organization, we provide them with an opportunity to audit our classes.

4) Enrollment Forms

Once the student completes the registration and is ready to enroll in our program, the student will be sent the Enrollment Agreement to review and sign. In the Enrollment Agreement, the student reviews and acknowledges IT Expert System Inc.'s Student Performance fact sheet, the School Catalog, and other specific topics that are required by the Illinois Board of Higher Education (IBHE), and Accrediting Council for Continuing Education and Training and IT Expert System Inc. After the student completes the enrollment document, it will be sent to the Student Services Manager to review and sign.

4) Payment Processing

Once the Student Services Manager signs the enrollment agreement, Student Services will send the student a link for payment. If the student is paying in full, there is no Payment Agreement form needed and the student can purchase the certificate program. If the student's enrollment is being funded through a state or federal agency or third party via check, the student is not required to complete a purchase process.

If the student enrollment is being paid through a third party (a) that information must be provided to IT Expert System Inc in the Enrollment Agreement and (b) copies of all the paperwork between the student and the third-party payer will be retained in the student's folder.

For students having part or all their tuition paid for by a state or federal agency, IT Expert System Inc. will adhere to the payment payback policy for each individual state or federal agency. Within one month of the official start date for that student, the Student Services Manager will complete an invoice for the student and will send the invoice to the counselor or person in charge of helping the student find training.

Once the student audits our classes then meet with our advisor and finishes the enrollment. If a student has the financial aid voucher, then they can submit it before the deadlines, and if they do not then need to have alternative payment arrangements to cover tuition costs.

5) Attend Orientation:

Once students enroll in the class, we encourage them to attend new student orientation with their advisor to understand the Google classroom process. How to access Google Classroom and how to use it for communication with other students and instructors.

IT Expert System Inc is an equal opportunity training organization, does not and shall not discriminate based on race, color, religion, gender, expression, age, national, origin, disability, marital status, sexual orientation, or military status in of its activities and operations.

Students with documented disabilities can receive auxiliary aids and services, which may include extended time on exams, texts in an alternative format, note-takers, and sign language interpreters. Students are encouraged to contact the institute to learn what specific accommodations are available.

STUDENT/TEACHER RATIO

- For In-person class, there is a 10:1 student teacher ratio, which means per ten students there is one instructor in the class.
- For IDL class, there is a 20:1 student teacher ratio, which means per twenty students there is one instructor in the class.

IT Expert System Inc. does not currently provide any financial aid or scholarship options.

ABILITY TO BENEFITS

IT Expert System Inc. is committed to providing equitable and inclusive educational opportunities to all students. This policy outlines the criteria and procedures for determining the ability to benefit from our vocational programs for students who do not possess a high school diploma or equivalent credential.

Purpose:

This policy aims to establish guidelines and processes for assessing and granting admission to students without a high school diploma or its equivalent, in compliance with federal regulations.

Definitions:

Ability to Benefit: The capacity of a student to benefit from the vocational programs provided by IT Expert System Inc.

Eligibility Criteria:

To determine the ability to benefit from IT Expert System Inc.'s programs, students without a high school diploma or its equivalent must meet the following criteria:

1. Age Requirement: The student must be beyond the age of compulsory education in their state or at least 18 years old.
2. **ATB Test**: The student must receive a passing score on an approved Ability to Benefit (ATB) test that evaluates basic reading, writing, and math skills. The passing score will be determined by IT Expert System Inc. and may change based on institutional needs and requirements.

ATB Testing:

1. IT Expert System Inc. will administer the ATB test to assess students' basic skills in reading, writing, math, and computer skills.
2. Students must receive a passing score as determined by the institution to be eligible for enrollment in an eligible Career Transitioning Education Program.

ATB Retesting:

1. Students who do not achieve the required passing score on the initial ATB test will be provided with opportunities for re-testing.
2. Retesting will be offered after an appropriate period of remediation to help students improve their skills.

Notifications and Admissions:

1. Students who meet the ATB requirements will be notified of their eligibility for enrollment in eligible programs.
2. Admission to eligible programs will be granted upon completion of the ATB assessment.

Documentation:

1. IT Expert System Inc. will maintain records of ATB testing results, including scores, dates, and any remediation efforts.
2. Documentation will be retained as required by federal and state regulations.

ACADEMIC CALENDARS FOR THE PERIOD COVERED IN THE CATALOG.

Institutional Calendar (Program Start and End Date):

Quarter	Dates	Events

Fall 2022	Tuesday, September 27	Fall Quarter Begins
	Thursday, November 24	Thanksgiving Break
	Saturday, December 16	Program Completion Celebration
	Friday, December 15	Fall Quarter Ends
	Monday, December 19 – Saturday, December 24	Program / Course Evaluations
Winter 2023	Monday, January 9	Winter Quarter Begins - Program Orientation Day
	Monday, January 16	Martin Luther King, Jr. Day
	Friday, March 17	Winter Quarter Ends
Spring 2023	Monday, March 27	Spring Quarter Begins
	Monday, May 29	Memorial Day
	Saturday, June 03	Program Completion Celebration
	Friday, June 9	Spring Quarter Ends
	Monday, June 12 – Friday, June 16	Program / Course Evaluations
Summer 2023	Monday, June 19	Summer Quarter Begins - Program Orientation Day
	Tuesday, July 4	Independence Day Holiday
	Friday, August 25	Summer Quarter Ends
Fall 2023	Wednesday, September 20	Fall Quarter Begins
	Thursday, November 23	Thanksgiving Break
	Saturday, December 8	Program Completion Celebration
	Friday, December 15	Fall Quarter Ends
	Monday, December 18– Saturday, December 23	Program / Course Evaluations

APPLICATION DEADLINE

IT EXPERT SYSTEM INC IS A VOCATIONAL TRADE SCHOOL.

All applications are submitted during the first week of the course's start. However, students will be eligible for admission if the application is submitted by the priority deadline with all the required documents.

For an Example:

If the course starts on June 27th, 2022, then the deadline date is 2 weeks from the start date means July 11th, 2022.

ADVANCED STATING

Notice to Student:

- IT Expert System, Inc. is approved to operate by the Private Business and Vocational Schools Division of the Illinois Board of Higher Education.
- IT Expert System, Inc. is not accredited by a US Department of Education recognized accrediting body.
- The school does not guarantee transferability of credit and in most cases, credits or coursework are not likely to transfer to another institution. To get more information please refer to our transfer policy.
- COMPLAINTS IF ANY AGAINST THIS INSTITUTION MAY BE REGISTERED WITH THE BOARD OF HIGHER EDUCATION:
  Address: 1 N Old State Capitol Plaza, Suite # 333, Springfield, IL - 62701
  Website: www.complaints.ibhe.org

FACILITY'S GRADING SYSTEM/METHOD OF RECORDING GRADES AND FURNISHING GRADES.

GRADING POLICY

IT Expert uses the following individual letter and numeric grading system. Grade point averages are computed on the following scale with points computed for each hour of work attempted:

Grading rubric to assess student progress through the program in each course. Detailed information is provided to students through google classroom.

Rubric for Student Work	Rubric Weight in Percentage
Attendance	10%
Quiz	10%
Homework	30%
Classroom Participation	20%
Project	30%

Percentage	**Grade Point**	
90 – 100%	A	4 Points

80 – 89%	B	3 Points
70 -79%	C	2 Points
59 -69%	D	1 Points
0 – 59%	F	0 Points

The following symbols may also appear on the student's transcript.

D	Dropout
P	Pass
F	Fail
W	Withdrawn
I	Incomplete

Courses with a grade of 'F' will not be counted toward degree conferral and must be repeated.

Grading Rubric:

- **Attendance and Quiz Grading Rubric**

	Excellent (100% of the points)	Good (80% of the points)	Satisfactory (60% of the points)	Unsatisfactory (≤ 40% of the points)
Attendance (10%)	Students attended all classes. (10 points)	Students attended most classes with occasional absences. (8 points)	Students attended some classes with a few absences. (6 points)	Students attended few classes with frequent absences. (4 points)
Quiz (10%)	Scores high on quizzes consistently. (10 points)	Scores above average on quizzes. (8 points)	Scores at an average level on quizzes. (6 points)	Scores below average on quizzes. (4 points)

- **Class Engagement Grading Rubric**

Total Waight (20%)	Excellent (100% of the points)	Good (80% of the points)	Satisfactory (60% of the points)	Unsatisfactory (≤ 40% of the points)

Frequency of Participation in class (3)	Students always initiate contributions more than once in each recitation.	Mostly Student initiates contribution once in each recitation.	Sometime Student initiates contribution at least in half of the recitations	Rarely Student does not initiate contribution & needs instructor to solicit input.
Listening Skills (3)	Always student listens attentively when others present materials, perspectives, as indicated by comments that build on others' remarks, i.e., student hears what others say & contributes to the dialogue.	Students are mostly attentive when others present ideas, materials, as indicated by comments that reflect & build on others' remarks. Occasionally needs encouragement.	A student is sometime inattentive and needs a reminder of focus of class. Occasionally makes disruptive comments while others are speaking.	Rarely listen to others; regularly talks while others speak or does not pay attention while others speak; detracts from discussion; sleeps, etc.
Participation in Discussions (5)	Always contributes to class discussions, providing insightful and well-thought-out contributions.	Mostly participates in discussions with meaningful input.	Participates sometime but may lack consistency or depth in contributions.	Rarely contributes to discussions or provides shallow input.
Encouraging/ Motivating to Peer (5)	Always provide constructive, detailed, and timely contribution to motivate peer	Mostly Provides constructive feedback in a timely manner.	Sometime offers feedback, but it may lack detail or be occasionally untimely.	Rarely provides limited or unclear feedback.
Clear Communication (4)	Always seeks and implements feedback to improve performance.	Mostly welcomes and integrates feedback positively.	Sometime accepts feedback but may struggle to implement changes.	Rarely accept feedback or fails to apply suggested improvements.

- **Homework - Writing Assignment Grading Rubric**

Total Weight (30%)	Excellent (100% of the points)	Good (80% of the points)	Satisfactory (60% of the points)	Unsatisfactory (≤ 40% of the points)
Content & Relevance (5)	The content is always clear, relevant, and insightful, demonstrating a deep understanding	The content is mostly clear, relevant, and well-structured, demonstrating a	The content is sometime clear and relevant, but some points may lack depth or coherence.	The content is rarely clear or relevant, and ideas are poorly developed. The paper lacks

	of the topic. Ideas are well-developed, and arguments are compelling.	solid understanding of the topic. Ideas are developed effectively.	Ideas are underdeveloped.	coherence and focus.
Organization & Structure (5)	Always the paper has a clear and effective structure, with logical flow and well-defined paragraphs. Transitions between sections are smooth and effective.	Mostly the paper is well-organized, with a clear structure and logical flow, but some transitions may be less smooth.	Sometime the paper has an adequate structure, but it lacks clarity in organization, and transitions may be abrupt or confusing.	Rarely the paper's organization is weak, making it difficult to follow the arguments or structure. Transitions are problematic.
Clarity & Coherence (5)	The writing is always clear, concise, and coherent. Sentences are well-constructed, and there is a powerful sense of unity and coherence throughout the paper.	The writing is clear and mostly concise, with sentences well-constructed. There is a sense of unity and coherence in the paper.	The writing is sometime clear but may contain some wordiness or occasional clarity issues. Unity and coherence are lacking.	The writing is rarely clear or overly verbose, and the paper lacks coherence.
Language & Style (5)	The language and style are always excellent, demonstrating a sophisticated and engaging writing style.	The language and style are mostly good, with engaging and appropriate language, though it may lack some variety.	The language and style are sometime good, but there may be occasional issues with word choice or sentence structure.	The language and style are rarely good or appropriate, negatively impacting readability.
Mechanics & Grammar (5)	Always the paper is error-free, with no or very few minor grammar, punctuation, or spelling issues.	Mostly the paper is error free with a few minor grammar, punctuation, or spelling errors that do not significantly detract from readability.	Sometime the paper is error free with a grammar, punctuation, or spelling errors that may affect readability.	Rarely the paper is error free contains numerous grammar, punctuation, or spelling errors that hinder understanding.
Overall Evaluation (5)	Always the paper is outstanding and demonstrates a deep understanding of the topic, exceptional writing skills, and an	Mostly the paper is good and meets most expectations, demonstrating a solid understanding of the topic,	Sometime the paper is acceptable but needs improvement, showing an understanding of the topic, basic	Rarely the paper falls below expectations and requires significant improvement in understanding, writing, and effort.

	important level of effort.	proficient writing skills, and substantial effort.	writing skills, and some effort.	

- **Homework - Programming Assignments Grading Rubric**

Total Weight (30%)	Excellent (100% of the points)	Good (80% of the points)	Satisfactory (60% of the points)	Unsatisfactory (≤ 40% of the points)
Requirements and Delivery (10)	Always the assignment meets all stated requirements, including functionality, input/output, and submission format. It is submitted on time or with prior arrangements.	Mostly the assignment meets most of the stated requirements and is on time, with minor deviations or issues.	Sometime the assignment meets the stated requirements, with several issues or missing elements. It may be late or require multiple extensions.	Rarely the assignment meets the standards and lacks significant portions of the stated requirements, is late, or lacks prior arrangement.
Coding Standards (5)	code always follows best practices and coding standards consistently throughout. It is well-structured, highly readable, and organized.	Mostly code follows best practices and coding standards but may have occasional issues with readability or organization.	Sometime code follows best practices and coding standards but has notable issues with readability or organization.	Rarely code follows best practices and coding standards, making it difficult to understand.
Documentation (5)	Always comprehensive documentation is provided, including clear explanations of the code's functionality, comments, and inline documentation.	Mostly adequate documentation is provided, covering most aspects of code functionality, but some areas may be unclear or missing.	Sometime adequate documentation provided and does not adequately explain the code's functionality or mostly absent.	Rarely documentation is provided and is minimal or non-existent, making it challenging to understand the code.
Runtime (5)	Always the code runs efficiently without any performance issues, and resource usage is optimized.	Mostly the code runs efficiently with minor performance issues or inefficient resource usage.	Sometime the code runs with performance issues or inefficient resource usage,	Rarely the code runs very efficiently, with significant performance

			impacting execution speed.	issues, or inefficient resource usage.
Efficiency (5)	Always code is highly efficient and optimized for performance without sacrificing readability.	Mostly code is efficient, with minor areas for improvement.	Sometime code is functional but could be more efficient in certain aspects.	Rarely code is efficient, affecting performance.

- **Project Assessment Grading Rubric**

Total Weight (30%)	Excellent (100% of the points)	Good (80% of the points)	Satisfactory (60% of the points)	Unsatisfactory (≤ 40% of the points)
Project Understanding & Planning (5)	Always demonstrates a profound understanding of the project requirements and goals. Thoroughly plans and organizes the project, considering all relevant aspects.	Mostly understands the project requirements and goals. Effectively plans and organizes the project with few oversights.	Sometime understand the project requirements but with some gaps. Plans the project adequately but with some room for improvement.	Rarely understand essential aspects of the project. Lacks a comprehensive project plan, impacting execution.
Execution and Implementation (5)	Always implements the project with an important level of skill and attention to detail.	Mostly executes the project effectively with minor issues.	Sometime implements the project but with noticeable deficiencies.	Rarely execute the project, resulting in significant issues.
Creativity and Innovation (5)	Always demonstrates exceptional creativity and innovation in the project solution.	Mostly shows creativity and innovation in the project solution.	Sometime demonstrates creativity but lacks innovation.	Rarely shows creativity or innovation in the project.
Problem Solving (5)	Always effectively identifies and solves problems that arise during the project.	Mostly addresses project challenges with effective solutions.	Sometime manages to solve project challenges but with limitations.	Rarely solve project challenges, impacting progress.
Documentation (5)	Always provides thorough and well-organized documentation of the	Mostly offers clear and organized documentation but	Sometime provides organized documentation	Rarely documentation is sufficient, making it

	project, including code comments and other relevant materials.	may have some gaps	but lacks detail or have gaps.	challenging to understand the project.
Presentation (5)	Always delivers a compelling and well-organized presentation with effective communication.	Mostly presents the project effectively but with minor issues in communication.	Sometime presents the project adequately but with noticeable deficiencies in communication.	Rarely present the project, impacting clarity.

Completion Policy

- Students must fulfill all requirements of the course with a minimum of 65% or D for the overall final grade. Students who earn less than 65% or D will be required to retake the course.
- All courses attempted will appear on the transcript. For courses that are repeated, only the highest grade will be revealed.
- Upon successfully completion, COURSE COMPLETON CERTIFICATE will be provided.

Incomplete Grade

- A student may need an extension of time to complete course requirements due to unanticipated circumstances arising near the end of the term.
- Incompletes are issued only in cases of extenuating circumstances, such as severe illness or life-impacting events. Incompletes are not issued in cases in which the student is simply unable to complete his/her work within the specified term.
- Students are limited to two incomplete grade requests during their program of study.
- The student must submit the Incomplete Grade request and provide any requested documentation to be reviewed and completed by the course instructor prior to the end of the term.
- The student must have completed at least half of the coursework to be eligible.
- Final approval of an Incomplete Grade Request resides with the department chair or designee.
- The grade received at the end-of-term for incomplete work due is the grade earned.

Grade Record Change

A faculty member or department chair can initiate an official grade change after official grades are posted due to computational or human or technical errors. Grades may also be changed to an earned grade.

FACILITY GRADUATION REQUIREMENTS

Students must have at a minimum, an accumulative grade point average of 65% or “D” Grade, along with a minimum of 80% of the total scheduled program hours attended, to be considered for graduation. IT Expert

awards its' graduates a certificate of completion as an acknowledgment of their successful accomplishment and graduation from their program of study.

NUMBER OF CLOCKS HOURS REQUIRED BY A STUDENT TO BE IN A FULL-TIME STATUS.

Program: **Office Administration**

Length of Program / PROGRAM DURATION: 34 Weeks / 204 Hours (6 hrs. per week - Theory/Labs/Practice)

Program: **BIG DATA and Database Management**

Length of Program / Program Duration: 48 Weeks/ 480 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam)

Program: **E-Commerce**

Length of Program / Program Duration: 56 Weeks / 560 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam)

Program: **Management Program**

Length of Program / Program Duration: 40 Weeks/ 400 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam)

Program: **Quality Analysis**

Length of Program / Program Duration: 36 Weeks/ 360 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam)

Program: **System Engineering**

Length of Program / Program Duration: 55 Weeks/ 550 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

Program: **DevOps and Docker Combo**

Length of Program / Program Duration: 16 Weeks/ 160 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

Program: **Database and Data Analytics Combo**

Length of Program / Program Duration: 16 Weeks/ 160 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

Program: **Business Analysis Combo**

Length of Program / Program Duration: 16 Weeks/ 160 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

Program: **Software Quality Assurance and Test Automation Combo**

Length of Program / Program Duration: 16 Weeks/ 160 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

STUDENT RECORDS

The IT Expert System maintains student data (admissions, grade, fees, etc.) in a secure file cabinet and only authorized users have limited access. IT Expert also manages custom student management system, define with the role and responsibility to provide easy access to IT Expert personal and secure students data in a digital form. IT Expert archives three years old data secure cloud storage for any emergency usage and all student's data retain for 10 years. Records are private and can be accessed only by the authorized person.

FACILITY'S ACADEMIC PROBATION, SUSPENSION, AND REENTRANCE POLICY

Any student failing to maintain a minimum 65%, or "D" within any time of an evaluation period of the program hours shall be, at a minimum, placed on "Academic Probation" (unless extenuating circumstances are established). The length of probation shall be for the period required for the student to reach a minimum of grade of 65%, or" D" however, in no event shall exceed one evaluation period. The probation period may be lengthened to provide assurance that the student achieves and maintains satisfactory progress. No more than two probationary terms will be allowed per student.

IT Expert reserves the right to suspend or dismiss any student whose attendance, professional conduct, or academic performance does not meet the school's standards, and/or, one who fails to abide by the rules and regulations. Also, if a student does not improve the attendance average to the required minimum by the end of their probationary period, the student will be terminated from the training program.

Students who have been dismissed for lack of satisfactory academic progress from any program may appeal to the school Director to be re-admitted to the school by following the "Reentrance and Reenrollment Policy" outlined in this catalog. A student may appeal the determination of unsatisfactory academic progress and/or their dismissal based upon extenuating circumstances.

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

FACILITY POLICY AND REGULATIONS RELATING TO STUDENT CONDUCT AND CONDITIONS FOR DISMISSAL FOR UNSATISFACTORY CONDUCT.

An important part of the training at IT Expert includes the development of professional attitudes and behaviors. Therefore, we created a professional "work-like" environment in which students can grow and develop according to their professional expectations. The effectiveness of any training program is dependent upon the full cooperation between students and school staff.

Consequently, all students will be expected to extend their best efforts to work harmoniously and conscientiously with instructors to further their training program. Students must adhere to ambitious standards of academics, attendance, and conduct. Students are also encouraged to pursue the development of their personal characters and behaviors as it may serve in their best interest when seeking employment. Those whose conduct reflects discredit upon themselves, or the school may be subject to dismissal. School administration reserves the right to dismiss a student on any of the following grounds, but not limited to:

1. Unsatisfactory academic performance
2. Unsatisfactory attendance
3. Unprofessional behavior and/or conduct that reflects unfavorably upon the school and/or its students
4. Use of drugs, narcotics, alcohol (or under the influence), gambling, profanity
5. Inappropriate clothing worn during training
6. Failure to abide by the Rules and Regulations of the school
7. Failure to pay tuition (or any other charges) when due
8. Breach of school enrollment agreement
9. Deliberate plagiarism and/or cheating
10. Falsifying school records
11. Carrying a concealed or potentially dangerous weapon
12. Disorderly conduct that interferes with any other student, instructor, or the general progress of the class
13. Instigation and/or participation in rebellious activities against the school and/or its student(s)
14. Solicitation that reflects unfavorably upon the school and/or its students
15. Vandalism of school property
16. Any form of gang related activity including but not limited to: flashing of gang signs, wearing of gang colors/attire, etc.
17. Fighting (physical or verbal)
18. Verbal confrontation with any Institute staff and/or student
19. Harassment of any kind, which is defined as (a) unwelcome conduct based on a legally protected class, including: race, color, religion, sex, national origin, gender identity/expression, sexual orientation, ethnicity, age, marital status, physical or mental disability, protected veteran status, or any other characteristic

protected by law; and (b) that is so severe or pervasive that it interferes with an individual's work or academic performance or creates an intimidating, hostile, or offensive working environment.

Disciplinary action may include, but not be limited to, a verbal or written warning, probation, suspension, or dismissal. A student dismissed for unsatisfactory or unprofessional behavior or conduct may request re-admittance into their program by following the appeal procedure set forth under "Satisfactory Academic Progress Policy" as noted in this catalog.

FACILITY'S ATTENDANCE POLICY

Attendance is critical to the success of students who attend the programs at IT Expert System Inc. Absences can prevent students from succeeding in class and hinder their preparation for starting a career in the computer industry. A maximum of 20% of absences is permitted by the school towards the attendance completion requirement. IT Expert System Inc. will record all attendances for students.

A leave of absence (LOA) may be permitted when a student faces temporary problems such as military deployment, accident, death in the family, change in teaching methodology, or an emergency.

A student who misses multiple classes in a course due to a temporary problem may request to make up the class time with his/her instructor. A student must complete 80% of their scheduled clock hours in each course to avoid receiving a failing grade for the course. Students who receive a failing grade for the course will be required to repeat the course as discussed in the "Repeating Courses" section below. Students who fail two courses sequentially or more than two courses in the program are subject to Academic Termination.

Absences

- Students are expected to attend each class session on time and participate actively in class.
- Students are also expected to complete the required number of lab hours each week. If a student is absent from class, they are expected to inform the instructor by email or phone prior to the start of class.
- The accumulation of absences exceeding 20% of scheduled clock hours in any course will prevent the student from receiving credit for the course and cause it to fail. Students who do not receive credit for a course will be required to repeat the course as discussed in the "Repeating Courses" section below.
- Students who fail two courses sequentially or more than two courses in the program are subject to Academic Termination.
- Students with no attendance for 3 weeks will be dismissed from their program and withdrawn for violation of the attendance policy.
- Dismissed students must submit an appeal to their Lead Instructor within 5 business days of termination. Approval of appeal is at the discretion of the Appeals Committee.

Retention

- The institute should provide tutoring, one-on-one, and class repeat options for those students who need additional support to continue their classes.
- The Training Director should organize meetings with those students who are frequently missing class or need academic support.

Leave of Absence (LOA)

Excused Absence:

- Any student who seeks leave of absence must submit the signed, dated request in writing and specify a reason to the instructor prior to the beginning date of LOA, unless unforeseen circumstances prevent a student from doing so. However, if "Unforeseen Circumstances" prevent a student from providing a prior written request, the institution may grant the student's oral, or an individual acting on the student's behalf request for a leave of absence.
- The institution will document its decision and collect the written request from the student later.
- The institution must communicate the procedures and implications for returning or failing to return to his/her course of study.
- The institution must not assess the student any additional charges because of the leave of absence.
- The length and frequency of leaves of absence must not impede student progress and must be. reasonable within the context of the institution's curriculum.
- A leave of absence must be limited to a maximum of 180 calendar days in any 12-month. period or one-half the published program length, whichever is shorter. Multiple leaves of absence may be permitted provided the total of the leaves does not exceed this limit. An approved leave of absence may be extended for an additional period provided that the extension request meets all the above requirements, and the total length of the leave of absence does not exceed the specified limit.

Unexcused Absence: Failure to notify the instructor in advance – even if the absence meets the criteria for excused absence – will result in unexcused absences. **Failure to provide satisfactory written documentation within seven calendar days following an absence will result in an unexcused absence.**

Leaving Early: Leaving a session more to its completion more than 15 minutes without prior approval is considered an unexcused absence. If a student leaves a session due to an emergent issue, the student should notify the instructor before leaving and later in writing as soon as feasible. The instructor will deem the absence to be **EXCUSED** or **UNEXCUSED** based on the reason provided in writing.

Late Start: Late arrival at the session after 15 minutes without prior approval is considered an unexcused absence. If a student leaves a session due to an emergent issue, the student should notify the instructor before leaving and later in writing as soon as feasible. The instructor will deem the absence to be **EXCUSED** or **UNEXCUSED** based on the reason provided in writing.

For a leave of absence to be granted, IT Expert System Inc. must have a reasonable expectation that the student will return to the program at the end of the leave of absence. Students returning from an LOA will enter the appropriate place during the next available class as determined by the Director of Education. If a student fails to reenter the class at the end of the leave of absence, the student will be academically terminated from the program. Students have five business days to appeal the termination. The leave of absence(s) is limited to one-half the published program length.

Make-up Work

Students who need to complete missed assignments and receive additional reviews of topics missed in class should decide with their instructor. Students must complete the required minimum number of hours, assignments, and/or make-up work by the end date of each course. A student who misses multiple classes in a course due to an extreme circumstance Ex: military deployment, accident, death in the family, change in teaching methodology, or an emergency may request to make up the class time with his/her instructor. The instructor will create an academic plan with the student to use during make-up time. Students who do not complete the minimum required hours and/or assignments by the end of each course will receive a failing grade for that course. Students who receive a failing grade in a course will be required to repeat the course as discussed in the "Repeating Courses" section below. Students who fail two courses sequentially or more than two courses in the program are subject to Academic Termination.

Tardiness & Early Departures

Students are expected to be on time for all class sessions, exams, material review sessions, and so forth. Tardiness is defined as any time missed after the start of class. Early Departure is defined as any time remaining prior to the end of class. Tardiness and early departures are recorded on a real-time basis with students logging in immediately upon arrival and immediately upon departure. Consistent tardiness can adversely affect the learning environment. Excessive tardiness or early departures can result in not meeting the required hours for the training program. Students falling below these minimum requirements of 80% attendance failing grade due to not meeting attendance for the course, may be required to repeat the course and may be subject to Academic Termination if they fail two courses sequentially or more than two courses in the program.

Repeating Courses

To progress timely through the program, and to meet graduation requirements, IT Expert System Inc. students are expected to achieve a passing grade and minimum attendance requirements by the end date of each course.

IT Expert System Inc. will allow a student to repeat a failed course at no additional tuition cost to the student.

Upon successfully passing the repeated course, and achieving the required attendance in the repeated course, the grade earned in the repeated course will replace the grade in the failed course to determine the cumulative Grade. All credits in the repeated course and in the failed course will be included as credits attempted.

The student must repeat the failed course when it is scheduled by the school administration. The student may take a different course in their program prior to repeating the failed course. Efforts will be made by IT Expert System Inc. to align the repeat course with the student's current schedule, but due to the limited availability of seats in repeat classes, the repeat course may be scheduled for a different time/day than the student's original schedule. If for any reason the student does not repeat the failed course, then the student will be subject to Academic Termination from the program.

To graduate, IT Expert System Inc will allow the student to retake courses they have already passed, as determined, and scheduled by the school administration, to achieve the minimum passing course grade needed to meet the cumulative Program GPA. A minimum of 80% attendance must be achieved on the repeat course. The repeat course's grade will replace the originally passed course's grade. All credits in the repeated course and in the prior course will be included as credits attempted. No additional tuition cost will be charged to the student for this repeat course.

All required courses in the program must be completed and passed, and the minimum cumulative Program GPA achieved, within the maximum time frame of the published length of the program. Retakes will only be allowed when it is mathematically possible to reach graduation standards.

Documentation

- Instructor and staff must communicate and document attendance daily and work with the registration office.
- For in-person and online (IDL) attendance must be aggregated and captured daily.
- Agency-specific attendance reports should be prepared and submitted monthly.
- Any attendance modification must go through the Training Director for approval.
- The Training Director regularly audits the attendance reports and provides necessary guidance to instructors and admin staff for data accuracy and consistency.

STUDENT COMPLAINTS

The following guidelines describe how a student at IT Expert System Inc should file a complaint against another member of the Institution community. Complaints should be filed as soon as possible, but no more than 90 days after the incident occurs. Students can contact IBHE if complaints are not satisfactorily resolved with the school.

IBHE contact information:
Address: 1 N Old State Capitol Plaza, Suite # 333, Springfield, IL - 62701
Website: www.complaints.ibhe.org
The process is designed to be a student initiated one. The steps are below:

Process for Filing a Complaint
IT Expert System requires a concerned or aggrieved student to make a concerted effort to resolve the complaint informally. At this stage, the student should talk directly with the staff person, faculty member, or administrator with whom the problem or question exists. During this step, the student should share their

concern directly so that the other person has an opportunity to hear the concern verbatim and attempt to resolve the specific issue at hand. In this situation, the presenting student should consider these tips:

- Contact the Institute employee by phone or email to schedule an appointment.
- Briefly state the purpose of the requested meeting
- During the meeting, clearly explain the concern and suggest a remedy that would help to resolve it.

Enrolled and prospective students, face to face and online, may register concerns in a variety of ways ranging from informal conversations, formal appeals, to feedback on evaluation surveys. If a student wants to register a formal complaint it must be submitted in writing or by email (the official communication medium at the Mount). Written/emailed formal complaints should describe the issue or concern and must include the student's name, signature (electronic signature acceptable), and date. Formal complaints should be submitted to the President, who will determine if further action is necessary.

FACILITY'S REFUND/CANCELLATION/WITHDRAWAL/DROP OFF POLICY.

IT Expert System Inc.'s cancellation and refund policy has been constructed to balance students' occasional need to change their education plans with the institution's financial investment in reserving a seat for that student in a classroom.

Students should be aware that timely notice of cancellation or withdrawal is essential to securing the maximum refund. Students must take care of notifying the institution as soon as possible regarding their intention either to cancel their enrollment contract or withdraw from the institution.

Cancellation Policy

- **Rejection of Applicant:** If an applicant is rejected for enrollment by an institution, a full refund of all monies paid to the applicant.
- **Program Cancellation:** If an institution cancels a program after a student's enrollment, the institution refunds all monies paid by the student.
- **Cancellation Prior to the Start of Class or No Show**: If an applicant accepted by the institution cancels prior to the start of scheduled classes or never attends class (no-show), the institution refunds all monies paid.
- **Cancellation After the Start of Class (Optional Student Trial Period):** At IT Expert System we consider a withdrawal as a cancellation or no-show (for example, within the first week of the program) provided this process is fully delineated in writing as part of the refund policy and provided to all students at or before enrollment. A student who is considered a cancellation or no-show under such a policy has all charges refunded and all payments returned to the individual or the applicable funding source.

Withdrawal or Termination after the Start of Class and after the Cancellation Period

- Refund amounts based on a student's last date of attendance (LDA). When determining the number of weeks completed by the student, we consider a partial week the same as if a whole week were completed, provided the student was present at least one day during the scheduled week.
- During the first week of classes, tuition charges withheld do not exceed 10 percent (10%) of the stated tuition up to a maximum of $1,000.
- After the first week and through fifty percent (50%) of the period of financial obligation, tuition charges retained do not exceed a pro rata portion of tuition for the training period completed, plus ten percent (10%) of the unearned tuition for the period of training that was not completed, up to a maximum of $1,000. (See example.).
- After fifty percent (50%) of the period of financial obligation is completed by the student, the institution retains the full tuition for that period.
- When calculating a refund, the percentage of tuition retained by the institution is based on the portion of the program the student was attending through his or her last date of attendance when the student dropped, not the tuition charged for the entire program listed on the enrollment agreement.

Refund Due Dates:

- If an applicant never attends class (no-show) or cancels the contract prior to the class start date, all refunds due must be made within forty-five (45) calendar days of the first scheduled day of class or the date of cancellation, whichever is earlier.
- For an enrolled student, the refund due must be calculated using the last date of attendance (LDA) and be paid within forty-five (45) calendar days from the documented date of determination (DOD). The date of determination is the date the student gives written or verbal notice of withdrawal to the institution or the date the institution terminates the student, by applying the institution's attendance, conduct, or Satisfactory Academic Progress policy. If a student provides advanced notice of withdrawal such that the 45-day window refund processing ends before the last date of attendance, the refund must be paid within forty-five (45) calendar days from the last date of attendance.

Refund Computation Example

· The student enrolled in a 24-week program, starting on January 9th, and scheduled to be completed on June 23rd.
· The total tuition is $8,000.
· The last date of attendance (LDA) for the student is March 3rd.
· The date of determination is March 8th.

$$\frac{\text{Number of weeks student attended}}{\text{Number of weeks financially obligated}} = \frac{8\ \text{Weeks}}{24\ Weeks} = 33.3\%$$

Pro rata portion completed based on 8 weeks = 33.3%
33.3% of $8,000 tuition = $2,667 (earned tuition)
10% of unearned tuition ($8000-$2,667 = $5,333 unearned) = $ 533.3
Owed to institution = $3,200
Student payment = $8,000

Refunded to student by April 22nd = $4,800

Charges Other Than Tuition:

- All extra costs, such as books, supplies, equipment, certification, and any similar charges not included in the tuition price, are clearly stated in the enrollment agreement. Charges that are non-refundable are those materials that are distributed and attributable to the portion of the program attended by the student.

Definitions:

- **Cancellation:** A student who never attends classes at the institution after enrolling and informs the institution, except as noted in the section entitled "Cancellation After the Start of Class (Optional Student Trial Period)."
- **Cancellation Period:** From enrollment to before the first instruction class start date.
- **No Show:** A student who never attends class at the institution after enrolling and does not inform the institution. Note that the ACCET policy treats no-shows as identical to cancellations.
- **Withdrawal:** A student who attends at least one class at the institution but does not complete his/her program.
- **Termination:** A type of withdrawal initiated by the institution due to failure to meet one or more institutional policies.
- **Period of Financial Obligation:** The portion of the program for which the student is legally obligated to pay, which may be less than the full program and may not, under any circumstances, exceed a period of 12 months.
- **Last Date of Attendance (LDA):** The final date the student attends class.
- **Date of Determination (DOD):** The date the student notifies the school of his or her withdrawal, or the date the institution terminates or administratively withdraws the student.

STUDENT'S RIGHT TO CANCEL

The student has the right to cancel the initial enrollment agreement until 23:59 hours of the 5th business day after the student has been admitted. If the right to cancel is not given to any prospective student at the time the agreement is signed, then the student has the right to cancel the agreement at any time and receive a refund on all money paid to date within 10 days of cancellation. Cancellations should be submitted to the authorized official of the school in writing.

TRANSFER OF CREDIT POLICY

This Transfer of Credit Policy outlines the guidelines and procedures for the transfer of credits from and to external educational institutions to IT Expert System Inc. (ITEXPS), a leading technology organization. This Policy is designed to ensure a fair and transparent process for evaluating giving and accepting credits earned by individuals who have completed relevant coursework or programs at accredited institutions.

1. POLICY STATEMENT – Taking Credit at IT Expert System Inc

ITEXPS Transfer of Credits and/or Instructional Hours policy may allow a student to transfer credits and/or instructional hours from a course or curricula taken at another postsecondary school, which is licensed, registered, or accredited by the state or federal authorities if the following guidelines are followed:

1.1 Eligibility

- Transfer of instructional hours is limited to courses of similar content with a similar number of instructional hours at ITEXPS.
- And transfer of instructional hours is limited to the number of instructional hours successfully completed with a minimum of a 'C' grade.

1.2 Transferable Credits

a) The evaluation of transferable credits/clock hours will be determined on a case-by-case basis by the Academic Department, in consultation with relevant faculty or subject matter experts.

b) Only credits/clock hours earned within the last 3 years will be considered for transfer.

c) The maximum number of credits/clock hours that can be transferred shall not exceed 40% of the total credits/clock hours required for the relevant program or degree.

d) Transfer credits/clock hours will be accepted for courses or programs that align with the technical skills, knowledge, and competencies required for the specific program within IT EXPERT SYSTEM INC.

1.3 Limitations and Conditions

a) The acceptance of transferred credits/clock hours does not exempt students from meeting all other requirements for a particular program or degree, including but not limited to academic performance, and completion of mandatory courses.

b) Transfer credits/clock hours from other institutions may not exceed 40% of the program.

c) The transferred credits/clock hours will be evaluated for their relevance and applicability to the student's current or potential program within IT Expert System Inc.

d) The types of courses that will be considered outside of an institutional setting include those offered by the military, the workplace, through apprenticeship and/or training programs, or other such programs recognized by the American Council on Education's (ACE) Center for Adult Learning and Education Credentials programs, Autodesk Authorized Training Center (ATC), Autodesk Authorized Learning Partner (ALP), Adobe Authorized Training Center (ATC), SketchUp Certified Trainer, or programs delivered directly by American General Contractors (AGC) of America.

2. Policy Statement – Taking Credit at External Education Institution

IT Expert System Inc. is committed to supporting its students in their educational goals, including facilitating the transfer of credits/clock hours to external educational institutions. This policy outlines the guidelines and procedures for students who wish to transfer their credits/clock hours earned at IT Expert System Inc. to other recognized institutions.

Transferability is always at the discretion of the receiving institution. Acceptance of the clock hour credits earned while in an ITEXPS certificate program is also determined solely by the receiving institution to which a student may seek to transfer. If the clock hour credits that are earned at ITEXPS are not accepted at the institution to which a student seeks to transfer, they may be required to repeat some or all their coursework at that institution. Students should discuss how their individual courses will transfer with the registrar's office and the receiving institution before they enroll.

2.1 Eligibility for Credit/Clock Hours Transfer

Students seeking to transfer their credits must meet the following eligibility criteria:

a) The student must be enrolled at IT Expert System Inc. and be in good academic standing.

b) The student must have completed the required coursework and earned a passing grade in each course.

c) The student must adhere to the specific transfer credit policies and procedures of the external educational institution they wish to transfer.

d) Students must complete at least 75% of the program at ITEXPS.

3. Transfer of Credit Procedure

The student must notify their Administration Representative, prior to enrollment, of previous training or education that they would like to have considered for transfer. Students must submit a Transfer credit/clock hours request to the Office, along with the following supporting documentation.

- Student's Name
- Course Title
- Date of Completion
- Institution or Employer Name
- Website Link
- Explanation of coursework
- Syllabi
- Institution Catalog
- Proof of Completion/Transcript (must show the course title, percent of course completed, numeric and letter grade for the course)

The Office will review the request within a week and communicate the decision to the student in writing (email or letter).

If the transfer credit request is approved, the Office will update the student's academic record to reflect the transfer credits earned. The decision of the Office regarding the appeal is final.

If ITEXPS approves a transfer of credit/clock hours for prior education, the current tuition, and any financial aid to be awarded will be adjusted to ensure a pro-rated tuition reduction for the transfer of credit and will be proportionally reduced by the number of credit/clock hours approved for transfer into ITEXPS. ITEXPS does not offer any options for earning credit through examination apart from an institutional closure or teach out.

If the transfer credit is not approved and the student is not satisfied with the decision of the officer, he/she may appeal to the subcommittee of the Curriculum and Faculty Affairs Committee. The student will be notified about the decision of the Committee within two business days in writing (email or letter).

The student is responsible for providing the updated academic record, including transfer.

4. Responsibilities

4.1 Administrative Department

a) Review and evaluate the eligibility of transfer credits.

b) Communicate the decision to the student within the specified time.

c) Maintain accurate records of transfer credits and update student profiles accordingly.

4.2 Faculty or Subject Matter Experts

a) Provide input and expertise in evaluating the equivalency of courses or programs.

b) Collaborate with the Academic Department to ensure the fair assessment and acceptance of transfer credits.

5. REVIEW

This Transfer of Credit Policy will be periodically reviewed to ensure its effectiveness and relevance. The review process will involve the Academic Department, relevant faculty, and other stakeholders to incorporate any necessary updates or changes.

FAMILY EDUCATION RIGHTS AND PRIVACY ACT

IT Expert System Inc is committed to the protection and confidentiality of student education records, adhering to the guidelines established by the Family Educational Rights and Privacy Act (FERPA). FERPA is a federal rule governing access and maintenance of student education records. FERPA grants a student certain right with

respect to the education record, including the right to inspect the education record, to request an amendment of the record that the student believes is inaccurate, and the right to control disclosures of the record except to the extent that FERPA authorizes disclosure without consent. It is important to note that all rights to access move to the student when that student is in a post-secondary education institution; parents, spouses, and significant others have no inherent right to access student education records. Education records include, with certain exceptions, all records maintained in any medium which can identify the student.

If a student does not want the IT Expert System Inc to disclose directory information from his/her student's education records, the student must notify each in writing to Organization. More information on the Family Educational Rights and Privacy Act is available on the U.S. Department of Education web site.

ACADEMIC HONESTY POLICY

Academic honesty is a fundamental value of IT Expert System Inc. We are committed to fostering an educational environment that promotes integrity, trust, and the responsible use of knowledge. This Academic Honesty Policy sets the standards for ethical behavior and outlines the consequences of academic dishonesty within our vocational institution.

Academic Dishonesty: Any form of cheating, plagiarism, fabrication, or deception in academic activities that compromises the integrity of the educational process.

Cheating: Using or attempting to use unauthorized materials, information, or assistance in an academic assignment, examination, or project. Unapproved usage of Artificial Intelligence resources (Ex ChatGPT, Bard, Jasper, et al.) in completing exams, projects, or other course/program assignments may also be considered cheating.

Plagiarism: The act of presenting someone else's ideas, words, or work as one's own without proper citation or attribution.

Fabrication: Creating false data, information, or citations in academic work or projects.

Students at IT Expert System Inc are expected to:

Complete all assignments, examinations, and projects with honesty and integrity. b. Properly acknowledge and cite all sources used in their academic work. c. Avoid any form of cheating, unauthorized collaboration, or submitting work that is not their own. d. Report any suspected incidents of academic dishonesty to the appropriate authorities within the institution.

Consequences of Academic Dishonesty

If a student is found guilty of academic dishonesty for the first time, the consequences may include, but are not limited to, a failing grade for the assignment or examination, academic counseling, and a written warning.

In the event of a second academic dishonesty offense, the student may receive a failing grade for the course, mandatory academic integrity workshops, and probationary status.

Repeated violations may result in academic suspension or expulsion from IT Expert System Inc.

Reporting Academic Dishonesty

Members of the academic community, including faculty, staff, and students, have a responsibility to report suspected instances of academic dishonesty. Reports should be made to the appropriate academic authority or department.

Educational Resources

IT Expert System Inc is committed to educating students about academic honesty and integrity. We provide resources, workshops, and support to help students understand and avoid academic dishonesty.

SATISFACTORY ACADEMIC PROGRESS POLICY

IT Expert System Inc. is committed to helping students achieve satisfactory academic progress toward the completion of their programs. To that end, the organization has established the following satisfactory academic progress policy:

Procedure:

The following procedures will be followed to implement the satisfactory academic progress policy:

1. **Monitoring**: The organization will monitor student academic progress throughout each academic period.
2. **Notification**: Students who fail to meet the minimum academic progress standards will be notified in writing of their academic standing and any resulting probation or termination.
3. **Academic Advisor**: Students on academic warning or probation will be required to meet with their academic advisor to develop an academic improvement plan.
4. **Academic Appeals**: Students may appeal an academic progress decision by submitting a written appeal to the Institution Director.

Satisfactory Academic Progress:

Satisfactory academic progress is measured both qualitatively, by reviewing the educational objectives completed, and quantitatively by reviewing the cumulative attendance rate.

- The student is required to make quantitative progress toward program completion. To make satisfactory academic progress, a student must attend at least 80% of the scheduled class hours on a cumulative basis during each evaluation period.
- The student's academic grade average is reviewed to determine qualitative progress. The minimum required is 65% or D at the conclusion of each evaluation period.

To ensure that students are informed of their progress on a regular and timely basis, evaluation periods or increments for academic purposes may be no longer than 25% of the program or 25% of the academic year, whichever is less.

Incomplete grades are not given, and students must repeat any classes in which they earn less than 65% or a D average. The lowest grade will be dropped, and the highest grade will be used to calculate the academic average. Coursework repeated may adversely affect a student's academic progress in terms of the maximum time.

Any course with a grade withdrawing (W), (F), incomplete (I), or No Pass (NP) is not considered completed coursework. A course is counted as completed only once, regardless of how many times attempted or the grade earned.

Students who withdraw from the program will receive a grade of 0% in each class interrupted by the withdrawal. All interrupted classes must be repeated upon readmission to the institution.

Warning

If a student fails to meet the cumulative 80% attendance or 65% or C grade average for any evaluation period, or both, he and she will be placed on warning for the next evaluation period. The student is eligible for financial aid while on warning. Failure to achieve an 80% attendance or a 65% grade average, or both, at the end of the warning period will result in the administrative withdrawal of the student.

Students will be notified in writing when they are placed on warning and the steps necessary to be removed from warning status. Students will also receive attendance or academic counseling, from the academic advisor, as appropriate, when they are placed on warning.

The institution will notify a student by email or mail if he or she is being administratively withdrawn for unsatisfactory academic progress.

Appeal Process

The student submits a written appeal of his/her dismissal within five calendar days of receipt of the dismissal notice. The appeal must be accompanied by documentation of the mitigating circumstances that have prevented the student from attaining satisfactory academic progress and evidence that changes have occurred to allow the student to meet standards of satisfactory academic progress. Only extraordinary circumstances will be considered, such as death or severe illness in the immediate family. Before an appeal may be granted, a written academic plan must be provided to the student which clearly identifies a viable plan for the student to successfully complete the program within the maximum time allowed.

The Institute Director will assess all appeals and determine whether the student may be permitted to continue in the institute on a warning status, despite not meeting the satisfactory progress requirements. The student will be sent the written decision within ten days of the Institute's receipt of the appeal. The decision of the Institute Director is final.

Students reinstated upon appeal are on probationary status for the next evaluation period, during which time they must meet the terms and conditions set out in the Institute Director's letter granting the appeal. At the end of the evaluation period, and at the end of every evaluation period thereafter, the student's academic status will be reviewed. The student may continue probation if he or she meets the terms of the academic plan approved at the time the student's appeal was granted until such time as satisfactory academic progress status is regained.

The student reinstated after dismissal and appeal is not eligible for financial aid until he or she regains satisfactory progress status by meeting the minimum SAP standards.

Maximum Time Frame

All program requirements must be completed within a maximum time frame of 1.5 times the normal program length, as measured in calendar time. Ex: The Business Analysis Combo program is 16 weeks in length and must be completed within twenty-four calendar weeks. Time spent on an approved leave of absence is not counted against the maximum time frame. Students exceeding the maximum time frame will be administratively withdrawn.

Transfer and Readmitted Students

Transfer students from outside the institution will be evaluated qualitatively only on the work completed while at the Institute.

The maximum time frame is reduced for transfer students, based upon the remaining length of the program in which they enroll. If the student transfers in 40 hours and therefore must complete 120 hours at the Institute (120/10 hours per week = 12 weeks), the maximum time frame is 12 weeks x 150% or 18 weeks.

Course Repeats:

Repeat courses in the classroom training environment must be discussed with the instructor for the class and the Director of the institution.

Incomplete Courses, and Course Withdrawals

If a student does not successfully complete a course by the end of the course's scheduled end date, IT Expert System Inc. counts the hours in the course as attempted clock hours toward the student's Quantitative progress, but not as earned clock hours.

DRUG AND ALCOHOL POLICY

IT Expert System Inc aims to create an environment that promotes the highest levels of learning alongside a healthy and vibrant social atmosphere. To this end, the organization is constantly reevaluating the quality of life on campus. To protect all members of the ITEXPS community, members should understand that the unlawful possession, use, distribution, or manufacture of illicit drugs by students and/or employees, on organization property or as part of any school activity, is prohibited by the organization.

Furthermore, members of the community should understand that IT Expert System Inc observes all laws and regulations governing the sale, purchase, and serving of alcoholic beverages by all members of its community and expects that these laws, regulations, and procedures will be adhered to at all events associated with the organization. This includes activities on the ITEXPS campus, in any work area, and at off-campus functions sponsored and supported by IT Expert System Inc. The organization will continue to work cooperatively with local police agencies to maintain an environment conducive to the learning and social development of its members. The organization cannot and will not protect any member of the ITEXPS community who has broken federal, state, and/or local law.

MULTI-MEDIA POLICY

IT Expert System Inc respects the privacy of its students and is committed to ensuring the responsible use of multimedia materials. This policy outlines the procedures for obtaining consent for the creation, use, and sharing of multimedia content featuring students and the processes for opting in or opting out of such activities.

Purpose:

This policy serves to protect the rights and privacy of students while facilitating the responsible use of multimedia materials for educational, promotional, and informational purposes by IT Expert System Inc.

Definitions:

1. Multimedia Content: Includes, but is not limited to, photographs, video recordings, audio recordings, digital images, and any other visual or audio representations.

Multimedia Consent:

1. **Opt-In Consent:** IT Expert System Inc may request students' consent to capture, use, and share multimedia content featuring them for specified purposes. Students may voluntarily opt into such activities by providing their written consent.
2. **Opt-Out Consent:** Students who do not wish to be included in multimedia materials must have the option to opt out by submitting a written request to the institution.

Opt-In Procedures:

1. IT Expert System Inc will request opt-in consent from students through a written release form that clearly outlines the intended use of the multimedia content.
2. Students who provide their written consent for the use of multimedia materials understand and agree to their images or likenesses being used for educational, promotional, and informational purposes as specified in the release form.
3. IT Expert System Inc will maintain records of students who have provided opt-in consent.

Opt-Out Procedures:

1. Students who wish to opt out of participation in multimedia activities must submit a written request to the institution specifying their decision.
2. Upon receiving an opt-out request, IT Expert System Inc will respond appropriately to ensure the student's image or likeness is not included in multimedia materials. This includes refraining from capturing or using the student's multimedia content for the specified purposes.
3. IT Expert System Inc will maintain records of students who have opted out of multimedia activities.

Use of Multimedia Materials:

1. Multimedia materials obtained with opt-in consent may be used for educational, promotional, and informational purposes by IT Expert System Inc in accordance with the specified purposes outlined in the release form.
2. Multimedia materials will be used in a manner that respects the privacy and dignity of the students featured.

Multimedia Opt-Out Form:

Example: MEDIA OPT-OUT FORM

All IT Expert students, faculty, staff, or visitors who do NOT want their image/photograph and/or video presence captured and used for communications, marketing, or publicity purposes can opt out. New students and new employees of IT Expert who do NOT give permission for their photo, audio, or video images or recordings to appear on the IT Expert website or other digital media communications, in print publications, and/or for other publicity purposes MUST complete and return this form to Office of Communications. This release shall remain in effect for the remainder of your time attending or employed by IT Expert or unless expressly revoked by you or otherwise stated in conjunction with policy change(s).

Please be advised that:

1. Images and videos taken in public spaces and/or at public events do not require authorization for publication.

2. If you are in a non-public area where photography and/or recording is taking place or is planned, it is your responsibility to notify the applicable personnel and camera operator(s) that you have signed the Media Opt-Out Form and to remove yourself from the area in which the photography or recording is taking place, when appropriate to do so.

☐ **PLEASE DO NOT PUBLISH OR IN ANY WAY USE MY IMAGE/PHOTO AND/OR VIDEO FOR MARKETING, COMMUNICATIONS, OR PUBLIC RELATIONS PURPOSES.** I understand that this Media Opt-Out Form does not apply to images or videos taken in public spaces and/or at public events. I also understand that if I am in a non-public area where photography and/or recording is taking place or is planned, it is my responsibility to

notify the applicable personnel and camera operator(s) that I have signed the Media Opt-Out Form and to remove myself from the area in which the photography or recording is taking place, when appropriate to do so. I further understand that my failure to take these actions may result in the publication of my image, photo, or video and may be treated as my consent for such publication.

I am a: ☐ student ☐ Employee ☐ Visitor

Name: _____

Signature: _____

Date: _____

Please return this completed form to the

IT Expert System Inc.
951 N. Plum Grove Rd. Suite A, C Schaumburg, IL, 60173
Ph: 847 350 9034 x option 1 Email: info@itexps.com

EMPLOYMENT VERIFICATION POLICY

Policy Statement

IT Expert System Inc. is committed to ensuring that all training programs provided to students are effective, impactful, and aligned with our educational goals and objectives. This policy outlines the procedures and responsibilities for assessing and improving the effectiveness of training programs offered by institutions.

Purpose

The purpose of this policy is to establish systematic guidelines for evaluating the effectiveness of training programs by regularly getting feedback from employers. IT Expert System Inc. aims to provide students with high-quality educational experiences that meet students' and employers' needs and expectations.

Waivers

At IT Expert System Inc., we utilize waivers for managing risk, protecting both students and the institution's interests, and ensuring that students understand and agree to certain terms and conditions.

Completion Waiver: Students who are unable to complete the program may be counted as a completion waiver if supporting documentation is provided to demonstrate their inability to graduate based on the following criteria:

- Death
- Incarceration

• Active military duty

• Serious medical illness

Job Placement Waiver: Students who have completed vocational programs but have waived placement assistance may be designated as placement waivers. To opt out from the placement program students need to provide a written waiver via email. Once we get the email for the waiver, students are not contacted by the institution regarding placement activity.

Guideline for Employment Classification

IT Expert System Inc verifies the classification of each graduate as employed in a training-related field and maintains internal verifiable employment records using the following guidelines.

1. The employment classification is appropriate and reasonable based on the educational objectives of the program.
2. Employment is for a reasonable period, is based on program objectives, and can be considered consistent and sustainable.
3. Employment is related to the program from which the individual graduated, aligns with most of the educational and training objectives of the program, and is a paid position.
4. The employment classification is verified by IT Expert System Inc as follows:
    a) **Full -Time (Regular) Employment**: A graduate is considered placed upon the completion of 60 days of continuous full-time employment which is in a training-related field.
        i. The school secures written documentation from the graduate verifying the employment and that the employment is related to the student's program of study at the school; or
        ii. The school secures written documentation from the employer verifying the employment and that the employment is related to the student's program of study at the school; or
        iii. In cases where a school can show diligent efforts have been made to secure such written documentation without success, the school maintains documentation of verbal verification that includes the following:
            1. Student Name
            2. Student Job Title
            3. Name of Employer
            4. Employer Contact Information
            5. A signature of school staff attesting to verbal employment verification with the graduate and the date of verification; and
            6. A signature of school staff attesting to verbal employment verification with the employer and the date of verification.
    b) **Part Time (Temp) Employment**: A graduate is considered as a Part Time placed if upon obtain a job, but some reason could not continue or retain the employment for 60 days.
    c) **Self-Employment**: At IT Expert System Inc Self-employment is a common vocational objective and it is informed and acknowledged to the student's time of enrollment.

The school secures written documentation from the self-employed graduate verifying that the employment is valid including, at a minimum, a statement signed by the graduate which includes the following:

• The graduate's name and contact information.

• An attestation that self-employment is aligned with the individual's employment goals, is vocational, is based on, related to, the education, and training received. • An attestation that the graduate is earning consistent training-related income.

Verification Process:

- Students are required to inform the institution about their job placements within [30] days of accepting employment. This notification should be sent to the designated department, typically [Career Services/Placement Office].
- Upon receiving the job placement information, the institution will initiate the verification process. The student's employer will be contacted to confirm the employment details.
- The verification process may include contacting the employer, supervisor, or human resources department to confirm the student's job title, employment start date, and any other relevant information.

Other Considerations:

- Students promptly provide accurate and complete job placement information to the institution.
- Institute should collect student's Employer information in 30 days from the date Student's inform that he/she got a job.
- Institute must secure written consent from student prior to contacting their employers.
- Institute must keep confidential share it with students entered during Employer's conversation, feedback or survey and must not share to student without their Employer's written consent.
- Collected Student's / Employer's information must be used for the indeed purpose only and never shared or distributed to any third party.
- If Employer or Student requests by written or verbal to remove or delete their collected information from the file, then Institute must remove their data.
- Only authorized Institute personnel may have access to the Students or their Employer information.

Data Privacy and Confidentiality:

The institution is committed to safeguarding the privacy and security of students' personal and employment information. All data collected during the verification process will be treated with the utmost confidentiality and used exclusively for verification and academic support purposes.

Consequences of Misrepresentation:

Providing false or misleading information during the job placement verification process is considered a breach of the institution's policies. Such behavior may lead to disciplinary actions, up to and including dismissal from the institution.

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

FACILITY'S SUPPORT SERVICES FOR STUDENTS

At IT EXPERT, we know that our students are training with a focus on landing that new job in the technology industry. Some of the more uncommon features that we offer to our students include:

- Lifetime Career Advice
- Unlimited one-on-one tutoring
- Test-Pass Assistance
- Live hands- on instruction
- Career Development & Employment Assistance
- Academic Advising

CAREER SUPPORT SERVICES

We offer a wide range of Staffing services to our clients. We believe finding talented IT consultants/staff is a time consuming and expensive adventure. We got you covered, we can partner with you, and bring you the top talent that your business needs at a very cost-effective price range, and in a timely manner, so you focus on your core business developments.

Resume Preparation Guide


Interview Preparation

Internship Guide


Job Support Services

The IT Expert System does not guarantee Placement/employment but will help into get their desired career in the IT Industry.

MATERIAL FOR ALL COURSES

- Textbook
- Instructor Notes
- Source code for projects
- Educational Videos
- Educational Articles

Computers are available for students to use when they are in our facility. Laptops are not provided.

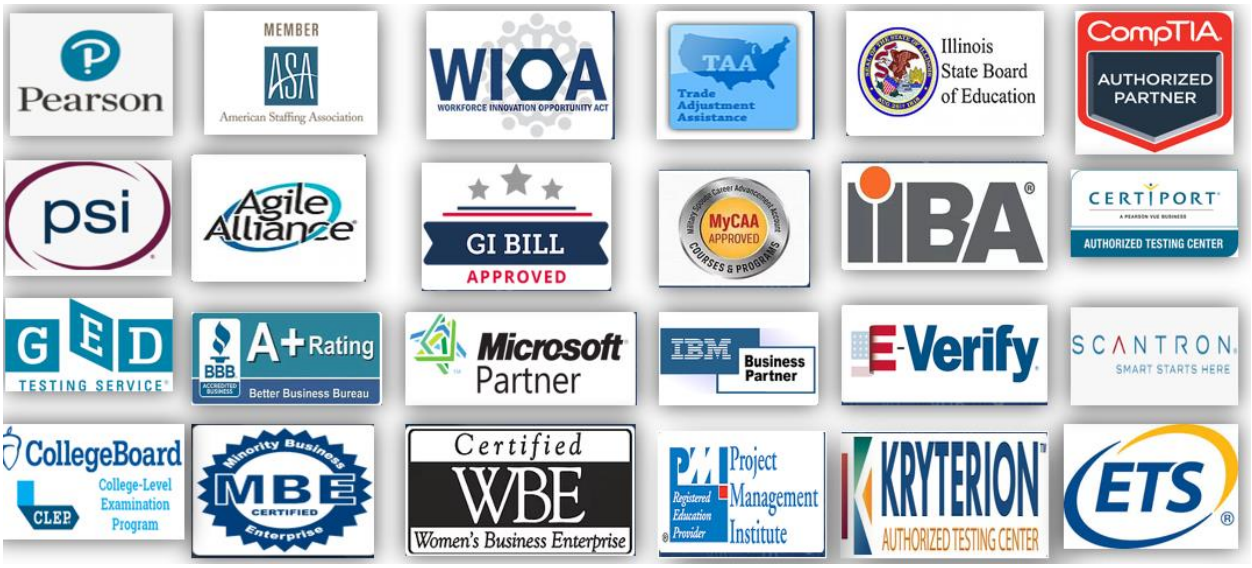
IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

IT EXPERT'S ACCREDITATION



IT EXPERT'S CLIENTS

IT EXPERT'S PROGRAM LIST

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Management

BIG Data

Quality Analysis

Office Admin

Software Asurance

Business Analyst

E-Commerce

System Admin

Data Analytics

Devops Combo

PROGRAM DESCRIPTION- OFFICE ADMINISTRATION

Objective: A program that prepares individuals to supervise and manage the operations and personnel of business offices and management-level divisions. Includes instruction in employee supervision, management, and labor relations; budgeting; scheduling and coordination; office systems operation and maintenance; office records management, organization, and security; office facilities design and space management; preparation and evaluation of business management data; and public relations. Students will

learn technical, administrative, interpersonal, supervisory/managerial, organizational, and communication skills using Microsoft Office (Word, Excel, PowerPoint, Access, SharePoint, Outlook, and Project) and accounting basics using Quick Books.

Length of Program / Program Duration: 34 Weeks / 204 Hours (6 hrs. per week - Theory/Labs/Practice).

Fees Structure:

Tuition – $8,000

Books – $600

Certifications/Tests – $1,200 (MS Word, MS Excel, MS Project)

Other Expenses – $200 (Tools, Software, and Lab Work)

Total Cost – $10,000

Module 1: Microsoft Office 365 – MS Word Certification

Understand the Office Admin's role and Responsibilities in a successful project.

About this Course:

This Microsoft Word Fundamentals course is designed for individuals who want to gain a solid foundation in using Microsoft Word for various personal, academic, and professional purposes. The course covers essential topics and practical exercises to ensure participants can efficiently create, format, edit, and manage documents using Microsoft Word.

What You'll Learn

- Getting Started with Microsoft Word
- Basic Text Editing and Formatting
- Page Layout and Document Design
- Tables and Lists
- Graphics and Multimedia
- Styles, Themes, and Templates
- Proofreading and Reviewing
- Document Organization and Navigation
- Mail Merge and Forms
- Advanced Features and Customization

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Hands-On Exercises

- Basic Text Editing and Formatting
- Proofreading and Reviewing
- Tables and Lists
- Graphics and Multimedia
- Mail Merge and Forms
- Advanced Features and Customization

Who Needs to Attend

- Office Professionals
- Students and Academics
- Business Owners and Entrepreneurs
- Job Seekers
- Nonprofit Organizations and Volunteers
- Legal and Medical Professionals
- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Microsoft Office experience is required. Basic computer literacy Familiarity with the Windows operating system. But it is not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Microsoft Word Fundamentals Certification.

Book:

Microsoft Office 365 for Beginners: 9 in 1. The Most Comprehensive Guide to Become a Pro in No Time | Includes Word, Excel, PowerPoint, OneNote, Access, Publisher, Outlook, One Drive, and Teams – Scott Burnett

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%

- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Microsoft Word

- Overview of Microsoft Word
- Navigating the Word interface
- Creating a new document
- Saving and opening documents
- Using templates

2. Text Editing and Formatting

- Entering and editing text
- Selecting, copying, and cutting text
- Basic text formatting (font, size, style)
- Paragraph formatting (alignment, line spacing, and indentation)

3. Page Layout and Design

- Setting up page margins and orientation
- Adding headers and footers
- Page numbering
- Inserting and formatting page breaks

4. Working with Tables and Lists

- Creating tables
- Formatting tables (borders, shading)
- Sorting and filtering data in tables
- Creating bulleted and numbered lists

5. Graphics and Multimedia

- Inserting images and clipart
- Positioning and resizing graphics.
- Adding shapes and text boxes
- Embedding and playing multimedia files

6. Styles and Themes

- Using predefined styles
- Creating custom styles
- Applying document themes
- Using the Format Painter

7. Proofreading and Reviewing

- Spell check and grammar check
- Tracking changes and comments
- Reviewing and accepting/rejecting changes
- Protecting documents with passwords

8. Document Organization and Navigation

- Creating and formatting headings
- Generating a table of contents
- Using bookmarks and hyperlinks
- Document navigation techniques

9. Mail Merge and Forms

- Creating mail merge documents
- Connecting to data sources
- Personalizing letters and envelopes
- Designing forms and collecting data

10. Advanced Features

- Creating and formatting columns
- Inserting and updating tables of figures and tables
- Using templates and macros
- Customizing the Word environment

Course Assessment:

- Weekly quizzes to assess understanding.
- Hands-on projects to apply knowledge.
- Final project: Create a professional document showcasing various Word skills.

Module 2: Microsoft Office 365 – MS Excel Certification

Understand the Office Admin's role and Responsibilities in a successful project.

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

About this Course:

This Microsoft Excel Master class is designed to provide participants with a comprehensive understanding of Microsoft Excel, from basic functions to advanced data analysis and automation techniques. Whether you are a beginner looking to build a solid foundation or an experienced user aiming to enhance your skills, this course will equip you with the knowledge and hands-on experience necessary to excel in Excel.

What You'll Learn

- Excel Fundamentals
- Formulas and Functions
- Data Visualization
- Data Management
- Advanced Excel Functions
- Data Analysis with PivotTables
- Data Visualization and Dash boarding
- Automation with Macros
- Collaboration and Data Sharing

Hands-On Exercises

- Basic Data Entry and Formatting
- Essential Cell Operations
- Creating Charts
- Sorting and Filtering
- Advanced Excel Functions
- PivotTables
- Data Visualization and Dash boarding
- Collaboration and Data Sharing

Who Needs to Attend

- Office Professionals
- Students and Academics
- Business Owners and Entrepreneurs
- Job Seekers
- Nonprofit Organizations and Volunteers
- Legal and Medical Professionals
- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Microsoft Office experience is required. Basic computer literacy Familiarity with the Windows operating system. But it is not mandatory.

Certification Programs and Certificate Tracks

- This course prepares you for Microsoft Excel Fundamentals Certification.

Book:

Microsoft Office 365 for Beginners: 9 in 1. The Most Comprehensive Guide to Become a Pro in No Time | Includes Word, Excel, PowerPoint, OneNote, Access, Publisher, Outlook, One Drive, and Teams – Scott Burnett

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Microsoft Excel

- Overview of Excel's interface
- Navigating workbooks and worksheets
- Entering and formatting data
- Basic cell operations (cut, copy, paste)

2. Excel Formulas and Functions

- Understanding cell references (absolute, relative, mixed)
- Common Excel functions (SUM, AVERAGE, COUNT, MAX, MIN)
- Creating and editing formulas
- Using the Formula Auditing tools

3. Data Visualization with Charts

- Creating several types of charts (bar, pie, line, etc.)
- Formatting and customizing charts.
- Adding data labels and titles
- Using Spark lines for in-cell mini-charts

4. Data Management Techniques

- Sorting and filtering data
- Data validation and drop-down lists
- Removing duplicates
- Working with tables and structured references

5. Advanced Excel Functions

- Logical functions (IF, AND, OR)
- Lookup and reference functions (VLOOKUP, HLOOKUP, INDEX, MATCH)
- Text functions (CONCATENATE, LEFT, and RIGHT, MID)

6. Data Analysis with PivotTables

- Creating PivotTables from large datasets
- Grouping and summarizing data
- Slicers and Pivot Charts
- Calculated fields and items

7. Data Analysis with What-If Analysis Tools

- Scenario Manager
- Goal Seek
- Data Tables
- Solver for optimization problems

8. Advanced Data Visualization

- Advanced charting techniques (combo charts, 3D charts)
- Customizing and formatting charts further
- Creating interactive dashboards
- Using Form Controls for user interactivity

9. Automation with Macros

- Introduction to Excel macros
- Recording and editing macros
- Assigning macros to buttons and objects
- Best practices for macros

10. Collaboration and Data Sharing

- Sharing workbooks and tracking changes
- Protecting worksheets and workbooks
- Introduction to Excel Online and co-authoring
- Excel add-ins and integration with other Office apps

Course Assessment:

- Weekly quizzes to assess understanding.
- Hands-on projects to apply knowledge.
- Final project: Create a professional document showcasing various Excel skills.

Module 3: Microsoft Office 365 – MS PowerPoint Certification

Understand the Office Admin's role and Responsibilities in a successful project.

About this Course:

This course is designed to help you become proficient in using Microsoft PowerPoint for creating compelling presentations. Whether you are a beginner or have some experience with PowerPoint, this course will cover everything from the basics to advanced features, enabling you to create stunning presentations for any purpose.

What You'll Learn

- Working with Images and Shapes
- Mastering Slide Design
- Adding Multimedia and Animation
- Collaborating and Sharing
- Advanced Features
- Automation and Macros

Hands-On Exercises

- Creating Your First Presentation
- Adding Visual Elements
- Creating a Multimedia Slide
- Applying Animations
- Collaboration and Sharing
- Advanced Features - Charts

Who Needs to Attend

- Office Professionals
- Students and Academics
- Business Owners and Entrepreneurs
- Job Seekers

- Nonprofit Organizations and Volunteers
- Legal and Medical Professionals
- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Microsoft Power Point experience is required. Basic computer literacy Familiarity with the Windows operating system. But it is not mandatory.

Certification Programs and Certificate Tracks

- This course prepares you for Microsoft Power Point Fundamentals Certification.

Book:

Microsoft Office 365 for Beginners: 9 in 1. The Most Comprehensive Guide to Become a Pro in No Time | Includes Word, Excel, PowerPoint, OneNote, Access, Publisher, Outlook, One Drive, and Teams – Scott Burnett

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to PowerPoint

- Getting Started with PowerPoint
  - Overview of PowerPoint interface
  - Creating and saving presentations
- Slides and Layouts
  - Inserting, deleting, and rearranging slides
  - Choosing appropriate slide layouts
- Adding and Formatting Text
  - Entering and editing text
  - Applying basic text formatting

2. Working with Images and Shapes

- Inserting Images and Graphics
  - Adding images and clipart
  - Adjusting image properties
- Shapes and Smart Art
  - Creating and customizing shapes
  - Working with Smart Art graphics
- Slide Transitions
  - Applying slide transitions for smooth presentations

3. Mastering Slide Design

- Themes and Templates
  - Applying themes to your presentation
  - Customizing templates
- Design Tips and Best Practices
  - Choosing colors and fonts
  - Creating visually appealing slides

4. Adding Multimedia and Animation

- Inserting Audio and Video
  - Embedding audio and video clips
  - Setting playback options
- Animation and Slide Timing
  - Applying animations to objects
  - Timing and sequencing animations

5. Collaborating and Sharing

- Collaborative Editing
  - Using PowerPoint in collaboration with others
  - Version history and comments
- Sharing and Exporting
  - Saving in different formats (PDF, video, etc.)
  - Sharing options (One Drive, Share Point, email)

6. Advanced Features

- Charts and Graphs
  - Creating and customizing charts
  - Visualizing data effectively
- Custom Slide Shows
  - Creating custom slide shows for specific audiences
  - Hiding slides and custom navigation

7. Automation and Macros

- Slide Masters
  - Working with slide master layouts
  - Applying consistent branding
- Introduction to Macros
  - Recording and running simple macros
  - Streamlining repetitive tasks

8. Final Projects and Tips

- Final Project - Create a Comprehensive Presentation
  - Apply all learned skills to create a complete presentation.
- Presentation Tips and Delivery
  - Effective presentation delivery techniques
  - Handling questions and feedback
- Review and Q&A
  - Review course highlights
  - Addressing student questions and concerns

Course Assessment:

- Weekly quizzes to assess understanding.
- Hands-on projects to apply knowledge.
- Project: Create a professional document showcasing various PowerPoint skills

Module 4: Microsoft Office 365 – MS Outlook Certification

Understand the Office Admin role and Responsibilities in a successful project.

About this Course:

This comprehensive Microsoft Outlook training course is designed to equip participants with the skills and knowledge necessary to become proficient in using Outlook for email management, calendar scheduling, task tracking, and more. Whether you are a beginner or an intermediate user, this course will help you unlock the full potential of Outlook for increased productivity and efficiency.

What You'll Learn

- Email Management
- Contacts and Address Book
- Calendar and Scheduling
- Tasks and To-Do Lists
- Notes and Journaling
- Outlook Rules and Automation
- Outlook Data Management and Security

- Integration and Collaboration
- Troubleshooting and Tips

Hands-On Exercises

- Navigating the Outlook Interface
- Sending and Receiving Emails
- Organizing Emails
- Calendar Management
- Task Management
- Outlook Rules and Automation
- Data Management and Security
- Integration and Collaboration
- Troubleshooting

Who Needs to Attend

- Office Professionals
- Students and Academics
- Business Owners and Entrepreneurs
- Job Seekers
- Nonprofit Organizations and Volunteers
- Legal and Medical Professionals
- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Microsoft Office experience is required. Basic computer literacy Familiarity with the Windows operating system. But it is not mandatory.

Certification Programs and Certificate Tracks

- This course prepares you for Microsoft Outlook Fundamentals Certification.

Book:

Microsoft Office 365 for Beginners: 9 in 1. The Most Comprehensive Guide to Become a Pro in No Time | Includes Word, Excel, PowerPoint, OneNote, Access, Publisher, Outlook, One Drive, and Teams – Scott Burnett

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Microsoft Outlook

- Overview of Microsoft Outlook
- Exploring the Outlook interface
- Customizing the Outlook interface

2. Email Management

- Creating, sending, and receiving emails
- Organizing and managing emails in folders
- Using flags, categories, and rules
- Managing attachments

3. Contacts and Address Book

- Creating and managing contacts
- Using the Address Book
- Contact groups and distribution lists.
- Importing and exporting contacts

4. Calendar and Scheduling

- Navigating the Outlook calendar
- Creating, editing, and deleting appointments and events
- Scheduling meetings and inviting attendees
- Sharing calendars and viewing others' calendars

5. Tasks and To-Do Lists

- Creating and managing tasks
- Setting task priorities and due dates
- Using task folders and categories
- Assigning tasks to others

6. Notes and Journaling

- Taking and organizing notes
- Using the Outlook Journal

- Linking items to journal entries
- Tracking activities and time management

7. Outlook Rules and Automation

- Creating advanced email rules
- Managing out-of-office messages
- Auto responders and templates
- Using Quick Steps for automation

8. Outlook Data Management and Security

- Backing up and archiving Outlook data
- Protecting Outlook with passwords
- Encrypting email messages
- Managing junk email and spam

9. Integration and Collaboration

- Integrating Outlook with other Microsoft Office applications
- Using Outlook with Microsoft Teams
- Collaboration features (sharing calendars, delegating access, etc.)

10. Troubleshooting and Tips

- Common Outlook issues and how to resolve them.
- Tips for optimizing Outlook performance.
- Resources for further learning and support

Course Assessment:

- Weekly quizzes to assess understanding.
- Hands-on projects to apply knowledge.
- Final project: Create a professional document showcasing various Outlook skills.

Module 5: Microsoft Office 365 – MS Access Certification

Understand the Office Admin's role and Responsibilities in a successful project.

About this Course:

This course is designed to help participants become proficient in Microsoft Access, a powerful relational database management system. Participants will learn how to design and create databases, manage data effectively, create forms and reports, and utilize Access for various business and data analysis tasks.

What You'll Learn

- Building Database Tables
- Establishing Relationships and Referential Integrity
- Querying Data
- Advanced Queries and Reporting
- Creating Forms
- Building Custom Forms
- Data Analysis with Access
- Database Security and Advanced Topics

Hands-On Exercises

- Create a New Database
- Setting Up Data Validation
- Establishing Relationships
- Basic Query Creation
- Crosstab Query
- Designing a Data Entry Form
- Adding Combo Boxes
- Basic Report Creation
- Exporting Data
- User-Level Security

Who Needs to Attend

- Office Professionals
- Students and Academics
- Business Owners and Entrepreneurs
- Job Seekers
- Nonprofit Organizations and Volunteers
- Legal and Medical Professionals
- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Microsoft Office experience is required. Basic computer literacy Familiarity with the Windows operating system. But it is not mandatory.

Certification Programs and Certificate Tracks

- This course prepares you for the Microsoft Access Fundamentals Certification.

Book:

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Microsoft Office 365 for Beginners: 9 in 1. The Most Comprehensive Guide to Become a Pro in No Time | Includes Word, Excel, PowerPoint, OneNote, Access, Publisher, Outlook, One Drive, and Teams – Scott Burnett

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Microsoft Access

- Understanding Databases and Access
- Access Interface and Ribbon
- Creating a New Database
- Tables and Data Types

2. Building Database Tables

- Creating Tables
- Setting Primary Keys
- Data Validation and Field Properties
- Importing Data from Excel and CSV

3. Relationships and Referential Integrity

- Understanding Relationships
- Establishing Relationships
- Referential Integrity
- Enforcing Data Integrity

4. Querying Data

- Introduction to Queries
- Creating Basic Queries
- Criteria and Sorting
- Calculated Fields and Expressions

5. Advanced Queries and Reporting

- Parameter Queries
- Crosstab Queries
- Action Queries (Update, Delete, Append)
- Introduction to Reports

6. Creating Forms

- Introduction to Forms
- Form Design Tools
- Creating Data Entry Forms
- Form Controls and Navigation

7. Building Custom Forms

- Combo Boxes and List Boxes
- Sub forms and Tab Controls
- Form Design Best Practices
- Form Macros

8. Introduction to Reports

- Creating Basic Reports
- Grouping and Sorting Data in Reports
- Calculated Controls in Reports
- Report Macros

9. Data Analysis with Access

- Exporting Data
- Introduction to PivotTables and Pivot Charts
- Using Access with Excel
- Importing and Exporting Data

10 Database Security and Advanced Topics

- User-Level Security
- Backup and Maintenance
- Introduction to VBA (Visual Basic for Applications)
- Course Review and Q&A

Course Assessment:

- Weekly quizzes to assess understanding.
- Hands-on projects to apply knowledge.
- Final project: Create a professional document showcasing various MS Access skills.

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Module 6: Microsoft Office 365 – MS Project Certification

Understand the Project Manager's role and Responsibilities in a successful project.

About this Course:

This Microsoft Project training course is designed to equip participants with the essential skills and knowledge required to effectively plan, manage, and track projects using Microsoft Project. Whether you are a beginner or an experienced user, this course will cover fundamental and advanced concepts to enhance your project management capabilities.

What You'll Learn

- Project Planning Basics
- Resource Management
- Task and Resource Calendars
- Tracking and Reporting
- Advanced Scheduling Techniques
- Project Communication and Collaboration
- Customizing Project
- Advanced Reporting and Analysis
- Project Consolidation and Master Projects
- Best Practices and Tips

Hands-On Exercises

- Creating a New Project
- Task Creation and Task Dependencies
- Resource Allocation and cost
- Progress Tracking and Chart Creation
- Creating Custom Fields and views
- Advanced Reporting and Data Visualization
- Managing Multiple Projects
- Subproject Linking

Who Needs to Attend

- Office Professionals
- Students and Academics
- Business Owners and Entrepreneurs
- Job Seekers
- Nonprofit Organizations and Volunteers
- Legal and Medical Professionals
- Career Changers, Entrepreneurs, Anyone Interested in Coding

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Prerequisites

- No prior Microsoft Office experience is required. Basic computer literacy Familiarity with the Windows operating system. But it is not mandatory.

Certification Programs and Certificate Tracks

- This course prepares you for Microsoft Project Fundamentals Certification.

Book:

Microsoft Office 365 for Beginners: 9 in 1. The Most Comprehensive Guide to Become a Pro in No Time | Includes Word, Excel, PowerPoint, OneNote, Access, Publisher, Outlook, One Drive, and Teams – Scott Burnett

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Microsoft Project

- Overview of Microsoft Project
- Interface and workspace
- Project management fundamentals

2. Project Planning Basics

- Creating a new project
- Setting project properties
- Building a project schedule
- Task dependencies and constraints

3. Resource Management

- Adding and defining resources
- Assigning resources to tasks
- Resource leveling
- Cost tracking and management

4. Task and Resource Calendars

- Customizing project and resource calendars
- Managing working hours and holidays
- Exceptions and adjustments

5. Tracking and Reporting

- Progress tracking and updates
- Gantt chart views
- Reports and dashboards
- Visualizing project data

6. Advanced Scheduling Techniques

- Task constraints and deadlines
- Task types (Fixed Work, Fixed Duration, Fixed Units)
- Critical Path Analysis
- Advanced scheduling options

7. Project Communication and Collaboration

- Sharing project files
- Collaborative features (SharePoint, Teams integration)
- Exporting and importing data

8. Customizing Project

- Creating custom fields and formulas
- Custom views and tables
- Templates and macros

9. Advanced Reporting and Analysis

- Advanced reporting tools
- Visualizing data with charts
- What-if analysis and scenarios

10. Project Consolidation and Master Projects

- Managing multiple projects
- Creating master projects
- Subproject linking and consolidation.

11. Best Practices and Tips

- Project management best practices
- Troubleshooting common issues

- Time-saving tips and shortcuts

12. Final Project

Participants will work on a final project applying the knowledge and skills acquired during the course.

Course Wrap-up and Q&A

- Review of key takeaways
- Open discussion and Q&A session
- Course evaluation and feedback

Course Assessment:

- Weekly quizzes to assess understanding.
- Hands-on projects to apply knowledge.
- Final project: Create a professional document showcasing various MS Project skills.

Module 7: QuickBooks

Understand Office Admin's role and Responsibilities in a successful project.

About this Course:

Are you ready to take control of your finances, streamline your business accounting, or enhance your career in finance and accounting? Look no further! Our "Mastering QuickBooks" course is designed to equip you with the essential skills and knowledge to become proficient in QuickBooks, one of the most popular and powerful accounting software tools available.

What You'll Learn

- **Navigation**: Get comfortable with the QuickBooks interface and learn how to customize it to suit your needs.
- **Recording Transactions**: Master the art of recording sales, expenses, invoices, and bills accurately.
- **Managing Customers and Vendors**: Efficiently manage your contacts and track payments and purchases.
- **Inventory and Assets**: Learn to track inventory, fixed assets, and depreciation.
- **Payroll Processing**: Understand how to set up and run payroll and handle related taxes and forms.
- **Financial Reporting**: Generate and analyze crucial financial reports to make informed decisions.
- **Budgeting and Forecasting**: Create budgets and forecasts to plan for the future of your business.
- **Advanced Topics**: Explore multi-currency transactions, class, and location tracking, and choose between QuickBooks Online and QuickBooks Desktop.

Hands-On Exercises

- Dashboard Customization

- Creating Invoices and Sales Receipts
- Tracking Customer Payments
- Running Payroll
- Generating Financial Reports
- Creating a Budget
- Multi-Currency Transactions

Who Needs to Attend

- Small business owners and entrepreneurs looking to manage their finances effectively.
- Aspiring accountants or finance professionals seeking to boost their career prospects.
- Anyone interested in gaining a solid understanding of QuickBooks for personal or professional use.

Prerequisites

- Basic computer skills
- Access to QuickBooks software (Online or Desktop)
- Internet connection for online resources and support

Certification Programs and Certificate Tracks

This course prepares you for QuickBooks Certification.

Book:

QuickBooks Online for Beginners 2023: The Ultimate Guide for Small Business Owners to Mastering QuickBooks and Speed Up Your Bookkeeping

-Thomas Worley

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to QuickBooks

- What is QuickBooks?
- Why use QuickBooks for accounting?

- Versions of QuickBooks (Online, Desktop, Self-Employed)
- Setting up your QuickBooks account

2. Navigating QuickBooks Interface

- Overview of QuickBooks Dashboard
- Customizing your Dashboard
- The Chart of Accounts
- Company Settings

3. Recording Financial Transactions

- Creating Invoices and Sales Receipts
- Recording Expenses and Bills
- Reconciling Bank and Credit Card Accounts
- Journal Entries

4. Managing Customers and Vendors

- Creating and Managing Customer Profiles
- Creating and Managing Vendor Profiles
- Tracking Customer Payments
- Managing Vendor Payments

5. Inventory and Asset Tracking

- Setting up Inventory Items
- Tracking Inventory Quantity
- Fixed Assets in QuickBooks

6. Payroll Processing

- Setting up Employees.
- Running Payroll
- Payroll Taxes and Forms
- Payroll Reporting

7. Reports and Analysis

- Generating Financial Reports (Profit & Loss, Balance Sheet, Cash Flow)
- Customizing Reports
- Interpreting Financial Data

8. Budgeting and Forecasting

- Creating Budgets in QuickBooks
- Monitoring Budget vs. Actuals

- Forecasting with QuickBooks

9. Advanced Topics

- Multi-Currency Transactions
- Class and Location Tracking
- QuickBooks Online vs. QuickBooks Desktop

10. Troubleshooting and Q&A

- Common QuickBooks Errors and Solutions
- Backup and Data Recovery
- Final Q&A and Course Wrap-Up

Final Project:

- Students will give a real or simulated business scenario and will be required to set up a complete accounting system in QuickBooks, including recording transactions, generating reports, and analysing financial data.

Assessment:

- Weekly quizzes or assignments
- Participation in discussion forums or live Q&A sessions
- Final project evaluation

PROGRAM DESCRIPTION- BIG DATA AND DATABASE MANAGEMENT

Administer, test, and implement computer databases, applying knowledge of database management systems. Coordinate changes to computer databases. May plan, coordinate, and implement security measures to safeguard computer databases.

Program Objective: This will enable students taking the program to excel in Database Management/Development related position such as Information Systems Manager, Management Information Systems Director (MIS Director), Programmer Analyst, Systems Manager, Database Administration Manager, Database Administrator (DBA), Database Analyst, Database Coordinator, and Database Programmer.

Length of Program / Program Duration: 48 Weeks/ 480 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam)

Fees Structure:

Tuition – $8000

Books – $600

Certifications/Tests – $1200(Linux, Oracle, AWS)

Other Expenses – $200 (Tools, Software, and Lab Work)

Total Cost – $10,000

Module 1: Database (Oracle)

Understand the Database Engineer's role and Responsibilities in a successful project.

About this Course:

This course is designed to provide students with a solid foundation in using SQL to work with Oracle databases. Participants will learn SQL concepts, syntax, and best practices, enabling them to retrieve and manipulate data efficiently from Oracle databases.

What You'll Learn

- Gain a deep understanding of Oracle Database architecture.
- Acquire proficiency in installation, configuration, and maintenance of Oracle Database.
- Develop skills to optimize database performance and ensure data integrity.
- Learn to manage security, user access, and privileges within the Oracle environment.
- Primary backup and recovery strategies to safeguard critical data.
- Explore advanced database features such as partitioning, data compression, and High Availability options.
- Be prepared for Oracle Database certification exams.

Hands-On Exercises

- Installation and Configuration
- Basic SQL Operations
- Backup and Recovery
- User Management
- Performance Tuning
- High Availability
- Advanced Features
- Security

Who Needs to Attend

- Data Analysts and Scientists
- Business Intelligence Professionals

- Data Enthusiasts
- Anyone seeking to harness data for better decision-making.

Prerequisites

- No prior Oracle Database experience is required.
- Basic understanding of databases and SQL. Familiarity with fundamental concepts of operating systems.but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Oracle Database Administrator Certification. (Oracle Certified Associate (OCA))

Book:

Study Guide for 1Z0-006: Oracle Database Foundations: Oracle Certification Prep

Matthew Morris

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Databases and Oracle

- Understanding Databases and Database Management Systems (DBMS)
- Introduction to Oracle Database
- Oracle SQL Developer Setup
- Connecting to the Oracle Database

2. SQL Basics

- Introduction to SQL
- SELECT Statement
- Filtering Data with WHERE Clause
- Sorting Data with ORDER BY
- Aliases for Column Names

3. Retrieving Data from Multiple Tables

- Understanding Table Joins
- INNER JOIN, LEFT JOIN, RIGHT JOIN
- CROSS JOIN, SELF JOIN
- USING Clause
- UNION and UNION ALL Operators

4. Filtering Data with Advanced Techniques

- Using the BETWEEN Operator
- Working with NULL Values
- Using IN and NOT IN Operators
- Combining Conditions with AND, OR, NOT
- Subqueries and Nested Queries

5. Data Modification and Transactions

- INSERT, UPDATE, and DELETE Statements
- COMMIT and ROLLBACK Statements
- Introduction to Transactions
- Save points.

6. Aggregating and Grouping Data

- GROUP BY Clause
- Aggregate Functions (SUM, AVG, COUNT, MAX, MIN)
- HAVING Clause
- GROUPING SETS and ROLLUP
- Cube and Grouping

7. Working with Date and Time Data

- Date and Time Data Types
- Date Functions (TO_DATE, TO_CHAR, TO_TIMESTAMP)
- Calculating Date Differences
- Extracting Date Components

8. Managing Data with DDL Statements

- Introduction to Data Definition Language (DDL)
- Creating and Altering Tables
- Constraints (PRIMARY KEY, FOREIGN KEY, UNIQUE, CHECK)
- Indexes

9. Views, Sequences, and Synonyms

- Creating Views
- Sequences
- Synonyms
- Privileges and Security

10. Advanced SQL Topics

- Analytic Functions (ROW_NUMBER, RANK, DENSE_RANK, LAG, LEAD)
- Working with Large Data Sets

Assessments and Projects:

- Weekly quizzes or assignments
- Midterm exam
- Final exam
- Hands-on projects (e.g., building a database application)

Module 2: BIG DATA (Hadoop Programming)

Understand the Big Data Analyst's role and Responsibilities in a successful project.

About this Course:

In this you will delve into the role and responsibilities of the Data analyst and leverage BIG Data Tools and Technology. Big Data will help to create new career growth opportunities for job seekers and growth for entirely new categories of companies, such as those that aggregate and analyses industry data. Many of these will be companies that sit in the middle of large information flows where data about products and services, buyers and suppliers, consumer preferences and intent can be captured and analyzed. Forward-thinking leaders across sectors should begin aggressively to build their organizations' Big Data capabilities.

What You'll Learn

- Learn how to aggregate large volumes of data.
- Learn how to process bulk data.
- How to setup BIG DATA Jobs
- How to generate data summary
- Orchestrate multiple jobs.
- Troubleshooting the Hadoop environment and programming issue

- Performance optimization for the better performance

Hands-On Exercises

- Setup Hadoop Cluster
- Access Hadoop cluster from your laptop
- Linux commands
- HDFS commands
- Write PIG Jobs
- Write Hive Jobs
- Write Sqoop Jobs
- HBASE commands
- End to End project

Who Needs to Attend

Systems analysts, data analysts, Database Administrators, Network Admin developers, software engineers, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers, testers, and QA specialists.

Prerequisites

-Associate college degree or equivalent training or work experience

Certification Programs and Certificate Tracks: N/A

Book:

Hadoop: The Definitive Guide: Storage and Analysis at Internet Scale Tom White (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

IT Expert System

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Course Outline

1. BIG DATA Foundation

- Database – overview, Oracle PL/SQL
- Data warehouse, ETL [Extract Transform Load]
- Data Warehouse vs BIG DATA
- BIG DATA Tools / Technology
- BIG DATA – Use case.
- LAB: Hadoop Installation
- Homework

2. HDFS commands

- Hadoop Architecture
- Hadoop key components
- Linux Overview
- Linux vs HDFS Commands
- Quiz one
- LAB
- Homework

3. PIG Programming

- PIG Architecture Overview
- PIG use cases
- PIG Programming Syntax
- LAB – Setup PIG Jobs
- Homework

4. Hive Programming

- HIVE Architecture Overview
- HIVE use cases

- HIVE Programming Syntax
- LAB – Setup HIVE Jobs
- Homework

5. Sqoop Programming

- Sqoop Architecture Overview
- Sqoop use cases.
- Sqoop Programming Syntax
- LAB – Setup Sqoop Jobs
- Homework

6. NO SQL Overview

- HBASE Overview
- OLAP vs OLTP.
- NO SQL vs SQL
- Mongo DB vs HBASE vs HIVE
- Zookeeper overview
- LAB – HBASE commands
- Homework

7. Spark Programming

- Spark Architecture Overview
- Spark Programming Syntax
- Spark vs Hadoop use cases.
- Quiz two
- LAB – HBASE commands
- Homework

8. Capstone Project

Module 3: Service Oriented Architecture

Understand the System Engineer role and Responsibilities.

About this Course:

This introduction to Microservices training course explains the benefits of microservices architecture and provides hands-on experience in the tools most popular for designing, building, monitoring, and maintaining microservices.

What You'll Learn

- Identify the characteristics of popular microservices and understand the design differences.
- Decompose monolithic application on single server into containerized application on multiple cloud instances.
- Build a simple single purpose serverless application.
- Expose an Application Program Interface for the application.
- Review various approaches to infrastructure used in deploying microservices.
- Monitor and maintain microservices in large ecosystems and the cloud.

Hands-On Exercises

- Design Web Service (REST and SOAP)
- Deploy Web Service in cloud.
- Consume Web Services using Web Application
- Design CI/CD Automation Pipeline
- Postman API Testing
- Performance Tuning

Who Needs to Attend

Systems analysts, Developer, Quality Analyst, Network Admin developers, software engineers, cloud engineer, Project Manager

Prerequisites

- Some Programming knowledge is preferred.

IT Expert System

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Certification Programs and Certificate Tracks:

N/A

Book:

Building Microservices: Designing Fine-Grained Systems 1st Edition

by Sam Newman (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

The Emergence of Microservices Architecture

- Web services Overview
- REST vs SOAP Overview
- Web Services use cases.
- Explore the ideal software development practice.
- Learn how fine-grained Service-Oriented Architecture (SOA) can help to achieve the ideal
- Learn how Micro service attempts to achieve the ideal
- SOA benefits

Microservice Design Principles

- Designing small microservices
- Designing independent microservices
- Designing resilient microservices

Integrating Microservices

- Understand design goals when integrating microservices.
- Explore effective message forms at sand lightweight inter-service communication approaches.
- Review the pros and cons of various service communication patterns.

Microservice Technologies

- Enable the development, deployment, and support of microservices using popular technologies.

Decomposing the Monolith

- Using monolithic decomposition as an approach toward application modernization
- Review successful decomposition patterns.
- Decompose monolithic application using helpful practices.

Deploying and Maintaining Microservices

- Explore the intersection of DevOps and microservices.
- Leverage virtual, cloud, and containerized environments for microservice deployment.
- Discover how to monitor a microservices environment and take appropriate action to enable scaling or react to system faults.

Capstone project

Module 4: Linux System Administration

Acquire skills to perform duties as a Linux System Engineer/Administrator

About this Course:

In this course you will delve into the role and responsibilities of Linux Systems Engineer and Administrator. You will learn the Linux operating system and tools that prepare you to perform your duties as a Linux System Administrator.

What You'll Learn

- Linux as an operating system
- Linux echo system
- Installing and configuring Linux
- User and Group management
- Software packaging and installation
- Linux shell
- Linux CLI
- Linux Shell Scripting
- Automating Linux tasks with shell scripting and corn
- Identifying and troubleshooting

- Deploying and configuring common server packages – Web Server, DHCP, DNS
- Linux networking

Hands-On Exercises

- Installing and configuring Debian Linux
- Linux Shell commands
- Linux Shell programming
- Linux corn
- Linux networking
- Installing, configuring, and updating packages
- Managing Linux services
- Troubleshooting

Who Needs to Attend

IT analysts, systems engineers, System Administrators, Programmers

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

None

Book:

A Self-study guide for the Linux Foundation Exam

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

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Email: info@itexps.com

Course Outline

1. Introduction to Linux operating system

- Overview and history of Linux operating System
- Roles and Responsibilities of Linux System engineer/Administrator
- Linux components – Kernel and Tools
- Lab: Installation and Configuration
- Linux file system
- Labs
- Homework

2. Linux Shell Commands

- Introduction to Linux shell
- Connecting with Linux machine with Putty
- Basic Linux commands for system
- Linux commands for file and user management
- Executing basic shell commands
- Introduction to VI editor
- **Labs**
- **Homework**

3. Linux advanced commands

- User and group management
- Monitoring Linux processes
- Linux pipes
- Advanced file search and operations commands
- **Labs**
- **Homework**

4. Linux Shell Scripting

- Introduction to Shell programming
- Basic constructs of shell programming
- Creating and executing basic shell scripts
- Variables
- Control statements – if/else, for, while case
- **Labs**
- **Homework**

5. Linux Shell Scripting and CRON jobs

- Writing useful scripts with Shell scripts
- Functions in shell scripts
- Error handling and logging in shell scripts
- Setting up CRON jobs for scheduling shell jobs
- **Labs**
- **Homework**

6. Software management in Linux systems

- Introduction to Linux software packaging
- Installing and configuring software packages using package manager
- Getting information of packages and content of the packages
- Removing software packages
- **Labs**
- **Homework**

7. Installing and managing common services in Linux

- Common server software – Http server, SSH, DHCP and DNS
- Installing and configuring Apache http server
- Understanding Linux startup and Service setup

- Running Apache server as service on Linux startup
- Installing and configuring SSH, DHCP and DNS on Linux
- Configuring Linux networking
- **Labs**
- **Homework**

8. Capstone Project

Module 5: AWS Certified Developer

Understand the System Engineer's role and Responsibilities in a successful project.

About this Course:

This AWS Cloud training course is designed to provide participants with a solid foundation in Amazon Web Services, equipping them with the skills and knowledge required to effectively use AWS services for various applications. From basic cloud concepts to advanced AWS services, this course covers a wide range of topics to help you become proficient in cloud computing.

What You'll Learn

- Cloud Computing and AWS
- Amazon EC2
- AWS Lambda and Server less Computing
- Amazon S3
- Amazon RDS
- Amazon VPC (Virtual Private Cloud)
- AWS Identity and Access Management (IAM)
- Scalability and High Availability
- Monitoring, Logging, and Cost Management
- AWS Best Practices and Well-Architected Framework

Hands-On Exercises

- Launching Your First EC2 Instance
- Load Balancing with ELB
- Creating and Deploying Lambda Functions
- Working with Amazon S3
- Launching an RDS Database Instance
- Creating and Configuring a VPC
- Managing IAM Users and Permissions

- Auto Scaling and Elastic Beanstalk
- Monitoring with AWS Cloud Watch
- AWS Cost Management
- Designing a Well-Architected AWS Solution

Who Needs to Attend

- IT Professionals
- Developers
- Business Leaders and Managers
- Data Scientists and Analysts
- Security Professionals
- AWS Partner Network (APN) Members
- Career Changers, Entrepreneurs, Anyone Interested in Cloud Computing

Prerequisites

- Basic knowledge of General IT Knowledge
- Familiarity with Computing Concepts

Certification Programs and Certificate Tracks

- This course prepares you for the AWS Cloud Practitioner Certification Exam.

Book:

AWS Certified Solutions Architect Study Guide with nine hundred Practice Test Questions

– Ben Piper

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Cloud Computing and AWS

1.1Introduction to Cloud Computing

- Understanding cloud computing concepts

- Benefits and challenges of cloud computing
- Cloud service models: IaaS, PaaS, SaaS

1.2 Getting Started with AWS

- Creating an AWS account
- AWS Management Console overview
- Setting up AWS CLI and AWS SDKs

2. Compute Services

2.1 Amazon EC2 (Elastic Compute Cloud)

- Launching and managing EC2 instances
- EC2 instance types and families
- Elastic Load Balancing (ELB)

2.2 AWS Lambda

- Server less computing with Lambda
- Creating and deploying Lambda functions
- Event-driven architecture

3. Storage and Database Services

3.1 Amazon S3 (Simple Storage Service)

- Object storage fundamentals
- Creating and managing S3 buckets
- S3 data management and versioning

3.2 Amazon RDS (Relational Database Service)

- Managed database services in AWS
- Creating and managing RDS instances
- Database backups and high availability

4. Networking and Security

4.1 Amazon VPC (Virtual Private Cloud)

- Networking fundamentals in AWS
- VPC setup and configuration
- Security groups and NACLs

4.2 AWS Identity and Access Management (IAM)

- IAM basics and policies

- Creating and managing IAM users and roles
- Securing AWS resources with IAM

5. Advanced AWS Services and Best Practices

5.1 AWS Services for Scalability and High Availability

- Auto Scaling and Elastic Load Balancing
- AWS Elastic Beanstalk for application deployment
- Designing for high availability

5.2 Monitoring, Logging, and Cost Management

- AWS Cloud Watch for monitoring
- AWS Cloud Trail for auditing
- Cost management best practices

5.3 AWS Best Practices and Well-Architected Framework

- Review of AWS Well-Architected Framework
- Security, reliability, performance efficiency, and cost optimization

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation.

Module6: Software Programming with Python

Understand the Python Programmer's role and Responsibilities in a successful project.

About this Course:

This course is designed for beginners with no prior programming experience. It covers the fundamentals of Python programming, including syntax, data types, control structures, functions, and basic problem-solving techniques.

What You'll Learn

- Control Structures
- Variables and Data Types
- Lists and Loops
- Functions
- Files and Exception Handling
- Dictionaries and Sets

- Object-Oriented Programming (OOP) Basics
- Modules and Libraries
- Data Structures

Hands-On Exercises

- Control Structures
- Variables and Data Types
- Lists and Loops
- Functions
- Files and Exception Handling
- Dictionaries and Sets
- Object-Oriented Programming (OOP) Basics

Who Needs to Attend

- Aspiring Programmers
- Software Developers
- Web Developers
- System Administrators
- Data Analysts
- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Python Programming experience is required. Basic familiarity with Fundamental Programming Concepts and Mathematical Aptitude is helpful but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Python Certification.

Book:

Python Programming for Beginners: Ultimate Crash Course from Zero to Hero in Just One Week– Oliver Morgan

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%

- Project: 30%

Course Outline

1. Introduction to Python

- Understanding programming concepts
- Setting up Python (installation)
- Your first Python program (Hello, World!)

2. Variables and Data Types

- Variables and data types (int, float, str, bool)
- Variable assignment and naming conventions
- Basic operations (arithmetic, string manipulation)

3. Control Structures

- Conditional statements (if, elf, else)
- Logical operators (and, or not)
- Loops (for, while)
- Handling user input

4. Lists and Loops

- Lists and list operations.
- Iterating through lists
- List comprehensions
- Troubleshooting common errors

5. Functions

- What are functions?
- Defining and calling functions
- Parameters and return values.
- Scope and lifetime of variables

6. Files and Exception Handling

- Reading and writing files
- Exception handling (try, except)
- Using 'with' statements for file handling

7. Dictionaries and Sets

- Dictionaries and dictionary operations
- Sets and sets operations.
- Practical applications

8. Object-Oriented Programming (OOP) Basics

- Introduction to OOP concepts
- Classes and objects
- Methods and attributes
- Inheritance and encapsulation

9. Modules and Libraries

- Importing modules
- Using standard libraries
- Installing and using third-party libraries (pip)

10. Introduction to Data Structures

- Stacks, queues, and linked lists
- Trees and graphs (basic concepts)
- Choosing the right data structure

11. Final Project

- Applying knowledge to a small project
- Independent coding and problem-solving
- Presentation and code review

Assessment:

- Weekly quizzes or assignments
- Midterm project
- Final project presentation and code review.

Module 7: Data Analytics

Understand the Data Analyst's role and Responsibilities in a successful project.

About this Course:

In this you will delve into the role and responsibilities of the Data Analyst and learn. Data Analytics means applying analytics/rules on data and find/organizing Big Data in meaningful form for business users to make data driven decisions. In predictive modeling (also called predictive analytics) we seek to predict the value of a variable of interest (purchase/no purchase, fraudulent/not fraudulent, malignant/benign, amount of spending, etc.) by using "training" data where the value of this variable is known. Once a statistical model is built with the training data ("trained"), it is then applied to data where the value is unknown.

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What You'll Learn

- Learn how to collect data.
- Learn how to perform ETL (Extract, Transfer, Load) Jobs
- Learn how to analyze data.
- Learn how to prepare data dashboard.
- Learn Data analysis automation jobs.

Hands-On Exercises

- Excel – Pivot Tables
- Excel – Linear Regression
- Excel – Data Analysis
- Excel – Solver
- Power BI Desktop
- R Programming
- Statistics Terms

Who Needs to Attend

Business analyst, data analysts, Database Administrators, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers.

Prerequisites

-Associate college degree or equivalent training or work experience

Certification Programs and Certificate Tracks:

Associate Certified Analytics Professional (aCAP®)

Book:

Everything Data Analytics A Beginner's Guide to Data Literacy: Understanding the Processes That Turn Data into Insights by Matthew Morris

Course Duration: 24 hours / 8 weeks, 3 hours / week

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Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Data Analysis Overview

- Database vs Information
- Data Story
- Data Analysis vs Business Intelligence
- How to present data
- How to collect data
- How to clean data
- Statistics Overview
- Data Analysis Use cases
- Data Analysis Tools and Technology (Excel, Python, Power BI, Tableau, R Programing)
- LAB: Data Analysis
- Homework

2. Data Analysis with Excel

- Data Analysis with Excel
- Linear Regression
- Correlation
- Excel Solver
- Forecasting
- Quiz one

- LAB
- Homework

3. Data Analysis with Power BI

- Power BI Desktop Overview
- Power BI Query Overview
- Data Cleansing
- Power BI Visualization
- Power BI Reports
- Power BI Dashboard
- Power BI DAX
- Group Project

4. Data Analysis with R Programming

- R Programming Syntax
- Vector vs Data Frame
- R Graphics Library
- AI/ML library: Association, Classification, Clustering, Decision Tree, Prediction, Recommendation
- LAB – Data Visualization
- Group Project

5. Data Analysis End to End Automation

- Data Analysis Pipeline
- Data Analysis Pipeline Best Practices
- Case Study
- Simplification and Automation
- Homework
- **Certification Preparation**

6. Capstone Project

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Module 8: Data Analysis with R Programming

Understand the Data Analyst's role and Responsibilities in a successful project.

About this Course:

This course is designed for beginners who want to learn R, a popular programming language for data analysis and statistics. Students will acquire fundamental programming skills in R and learn to manipulate data, create visualizations, and perform basic statistical analysis to leverage AI/ML algorithm to make data driven decisions.

What You'll Learn

- Working with Data in R
- Control Structures and Functions
- Data Visualization with ggplot2
- Data Analysis with dplyr
- Statistics with R
- R Projects and Reproducible Research
- Data Visualization Beyond ggplot2
- Machine Learning Library for clustering, classification, regression, decision tree, product recommendations

Hands-On Exercises

- Install R and R Studio on your computer.
- Write an R script to calculate the factorial of a number using a loop.
- Install and load the ggplot2 package.
- Load the dplyr package and practice filtering and selecting data.
- Set up a new R project and create an R Mark down document.
- Customize ggplot2 themes to change the appearance of your visualizations.
- Analyze a time series dataset, perform time-based operations, and visualize trends.

Who Needs to Attend

- Data Analysts
- Data Scientists
- Statisticians
- Business Analysts
- Professionals in Healthcare and Life Sciences
- Anyone Interested in Data Science

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Prerequisites

- Basic knowledge of General IT Knowledge
- Familiarity with Computing Concepts

Certification Programs and Certificate Tracks

- This course prepares you for **the R Programming Fundamentals Certificate** Exam.

Book:

- **Introduction to R Programming: A Practical Guide**

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Week 1: Introduction to R

- What is R?
- Installing R and R Studio
- Basic R syntax
- Variables and data types
- Simple calculations and operators

Week 2: Working with Data in R

- Data structures in R: vectors, matrices, and data frames
- Data input and output
- Subsetting and indexing data
- Basic data manipulation

Week 3: Control Structures and Functions

- Conditional statements (if-else)
- Loops (for, while)
- Writing and using functions
- Built-in functions in R

Week 4: Data Visualization with ggplot2

- Introduction to ggplot2
- Creating scatter plots, bar charts, and line graphs
- Customizing plot aesthetics
- Combining and faceting plots

Week 5: Data Analysis with dplyr

- Introduction to dplyr
- Filtering and selecting data.
- Grouping and summarizing data
- Joining datasets

Week 6: Introduction to Statistics with R

- Descriptive statistics
- Inferential statistics
- Hypothesis testing
- Linear regression
- AI/ML library with Association Rule, Clustering, Classification, Forecasting

Week 7: R Projects and Reproducible Research

- Organizing your R projects
- Version control with Git and GitHub
- Creating dynamic reports with R Markdown
- Sharing and collaborating on R projects

Week 8: Data Visualization Beyond ggplot2

- Customizing ggplot2 themes
- Interactive visualizations with Shiny
- Visualizing geographic data with leaflet
- Other R visualization libraries

Week 9: Final Projects and Course Wrap-up

- Students work on final projects applying what they have learned.
- Project presentations and peer review
- Course review and next steps in R programming

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation.

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PROGRAM DESCRIPTION: E-COMMERCE

Design, create, and modify web sites. Analyze user needs to implement web site content, graphics, performance, and capacity. Integrate web sites with other computer applications. Convert written, graphic, audio, and video components to compatible web formats by using software designed to facilitate the creation of web and multimedia content.

Program Objective: This will enable students taking the program to excel in development related position such as Web Designer, Web Developer, Webmaster, E-commerce Developer, Software Developer, Software Engineer, Java Programmer/Developer, Oracle Programmer/Specialist, Database Specialist, and Database Engineer.

Length of Program / Program Duration: 56 Weeks / 560 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam)

Fees Structure:

Tuition – $8000

Books – $600

Certifications/Tests – $1,200(Java, J2EE, and Oracle)

Other Expenses – $200 (Tools, Software, and Lab Work)

Total Cost – $10,000

Module 1: Database (Oracle)

Understand the Database Engineer's role and Responsibilities in a successful project.

About this Course:

This course is designed to provide students with a solid foundation in using SQL to work with Oracle databases. Participants will learn SQL concepts, syntax, and best practices, enabling them to retrieve and manipulate data efficiently from Oracle databases.

What You'll Learn

- Gain a deep understanding of Oracle Database architecture.
- Acquire proficiency in installation, configuration, and maintenance of Oracle Database.
- Develop skills to optimize database performance and ensure data integrity.

- Learn to manage security, user access, and privileges within the Oracle environment.
- Master backup and recovery strategies to safeguard critical data.
- Explore advanced database features such as partitioning, data compression, and High Availability options.
- Be prepared for Oracle Database certification exams.

Hands-On Exercises

- Installation and Configuration
- Basic SQL Operations
- Backup and Recovery
- User Management
- Performance Tuning
- High Availability
- Advanced Features
- Security

Who Needs to Attend

- Data Analysts and Scientists
- Business Intelligence Professionals
- Data Enthusiasts
- Anyone seeking to harness data for better decision-making.

Prerequisites

- No prior Oracle Database experience is required.
- Basic understanding of databases and SQL. Familiarity with fundamental concepts of operating systems.but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Oracle Database Administrator Certification. (Oracle Certified Associate (OCA))

Book:

Study Guide for 1Z0-006: Oracle Database Foundations: Oracle Certification Prep

Matthew Morris

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%

- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Databases and Oracle

- Understanding Databases and Database Management Systems (DBMS)
- Introduction to Oracle Database
- Oracle SQL Developer Setup
- Connecting to the Oracle Database

2. SQL Basics

- Introduction to SQL
- SELECT Statement
- Filtering Data with WHERE Clause
- Sorting Data with ORDER BY
- Aliases for Column Names

3. Retrieving Data from Multiple Tables

- Understanding Table Joins
- INNER JOIN, LEFT JOIN, RIGHT JOIN
- CROSS JOIN, SELF JOIN
- USING Clause
- UNION and UNION ALL Operators

4. Filtering Data with Advanced Techniques

- Using the BETWEEN Operator
- Working with NULL Values
- Using IN and NOT IN Operators
- Combining Conditions with AND, OR, NOT
- Subqueries and Nested Queries

5. Data Modification and Transactions

- INSERT, UPDATE, and DELETE Statements
- COMMIT and ROLLBACK Statements
- Introduction to Transactions
- Savepoints

6. Aggregating and Grouping Data

- GROUP BY Clause
- Aggregate Functions (SUM, AVG, COUNT, MAX, MIN)

- HAVING Clause
- GROUPING SETS and ROLLUP
- Cube and Grouping

7. Working with Date and Time Data

- Date and Time Data Types
- Date Functions (TO_DATE, TO_CHAR, TO_TIMESTAMP)
- Calculating Date Differences
- Extracting Date Components

8. Managing Data with DDL Statements

- Introduction to Data Definition Language (DDL)
- Creating and Altering Tables
- Constraints (PRIMARY KEY, FOREIGN KEY, UNIQUE, CHECK)
- Indexes

9. Views, Sequences, and Synonyms

- Creating Views
- Sequences
- Synonyms
- Privileges and Security

10. Advanced SQL Topics

- Analytic Functions (ROW_NUMBER, RANK, DENSE_RANK, LAG, LEAD)
- Working with Large Data Sets

Assessments and Projects:

- Weekly quizzes or assignments
- Midterm exam
- Final exam
- Hands-on projects (e.g., building a database application)

Module 2: BIG DATA (Hadoop Programming)

Understand the Big Data Analyst's role and Responsibilities in a successful project.

About this Course:

In this you will delve into the role and responsibilities of the Data analyst and leverage BIG Data Tools and Technology. Big Data will help to create new career growth opportunities for job seekers and growth for entirely new categories of companies, such as those that aggregate and

analyses industry data. Many of these will be companies that sit in the middle of large information flows where data about products and services, buyers and suppliers, consumer preferences and intent can be captured and analyzed. Forward-thinking leaders across sectors should begin aggressively to build their organizations' Big Data capabilities.

What You'll Learn

- Learn how to aggregate large volumes of data.
- Learn how to process bulk data.
- How to setup BIG DATA Jobs
- How to generate data summary
- Orchestrate multiple jobs.
- Troubleshooting the Hadoop environment and programming issue
- Performance optimization for the better performance

Hands-On Exercises

- Setup Hadoop Cluster
- Access Hadoop cluster from your laptop
- Linux commands
- HDFS commands
- Write PIG Jobs
- Write Hive Jobs
- Write Sqoop Jobs
- HBASE commands
- End to End project

Who Needs to Attend

Systems analysts, data analysts, Database Administrators, Network Admin developers, software engineers, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers, testers, and QA specialists.

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Prerequisites

-Associate college degree or equivalent training or work experience

Certification Programs and Certificate Tracks: N/A

Book:

Hadoop: The Definitive Guide: Storage and Analysis at Internet Scale Tom White (Author)

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. BIG DATA Foundation

- Database – overview, Oracle PL/SQL
- Data warehouse, ETL [Extract Transform Load]
- Data Warehouse vs BIG DATA
- BIG DATA Tools / Technology
- BIG DATA – Use case.
- LAB: Hadoop Installation
- Homework

2. HDFS commands

- Hadoop Architecture
- Hadoop key components
- Linux Overview

- Linux vs HDFS Commands
- Quiz one
- LAB
- Homework

3. PIG Programming

- PIG Architecture Overview
- PIG use cases
- PIG Programming Syntax
- LAB – Setup PIG Jobs
- Homework

4. Hive Programming

- HIVE Architecture Overview
- HIVE use cases
- HIVE Programming Syntax
- LAB – Setup HIVE Jobs
- Homework

5. Sqoop Programming

- Sqoop Architecture Overview
- Sqoop use cases.
- Sqoop Programming Syntax
- LAB – Setup Sqoop Jobs
- Homework

6. NO SQL Overview

- HBASE Overview
- OLAP vs OLTP.
- NO SQL vs SQL

- Mongo DB vs HBASE vs HIVE
- Zookeeper overview
- LAB – HBASE commands
- Homework

7. Spark Programming

- Spark Architecture Overview
- Spark Programming Syntax
- Spark vs Hadoop use cases.
- Quiz two
- LAB – HBASE commands
- Homework

8. Capstone Project

Module 3: Service Oriented Architecture

Understand the System Engineer role and Responsibilities.

About this Course:

This introduction to Microservices training course explains the benefits of microservices architecture and provides hands-on experience in the tools most popular for designing, building, monitoring, and maintaining microservices.

What You'll Learn

- Identify the characteristics of popular microservices and understand the design differences.
- Decompose monolithic application on single server into containerized application on multiple cloud instances.
- Build a simple single purpose serverless application.
- Expose an Application Program Interface for the application.
- Review various approaches to infrastructure used in deploying microservices.
- Monitor and maintain microservices in large ecosystems and the cloud.

Hands-On Exercises

- Design Web Service (REST and SOAP)
- Deploy Web Service in cloud.
- Consume Web Services using Web Application
- Design CI/CD Automation Pipeline
- Postman API Testing
- Performance Tuning

Who Needs to Attend

Systems analysts, Developer, Quality Analyst, Network Admin developers, software engineers, cloud engineer, Project Manager

Prerequisites

- Some Programming knowledge is preferred.

Certification Programs and Certificate Tracks:

N/A

Book:

Building Microservices: Designing Fine-Grained Systems 1st Edition

by Sam Newman (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

The Emergence of Microservices Architecture

- Web services Overview

- REST vs SOAP Overview
- Web Services use cases.
- Explore the ideal software development practice.
- Learn how fine-grained Service-Oriented Architecture (SOA) can help to achieve the ideal
- Learn how Micro service attempts to achieve the ideal
- SOA benefits

Microservice Design Principles

- Designing small microservices
- Designing independent microservices
- Designing resilient microservices

Integrating Microservices

- Understand design goals when integrating microservices.
- Explore effective message forms at sand lightweight inter-service communication approaches.
- Review the pros and cons of various service communication patterns.

Microservice Technologies

- Enable the development, deployment, and support of microservices using popular technologies.

Decomposing the Monolith

- Using monolithic decomposition as an approach toward application modernization
- Review successful decomposition patterns.
- Decompose monolithic application using helpful practices.

Deploying and Maintaining Microservices

- Explore the intersection of DevOps and microservices.
- Leverage virtual, cloud, and containerized environments for microservice deployment.
- Discover how to monitor a microservices environment and take appropriate action to enable scaling or react to system faults.

Capstone project

Module 4: Business Analysis

Understand the Business Analyst's role and Responsibilities in a successful project.

About this Course:

In this you will delve into the role and responsibilities of the business analyst (BA) - the communication link between all business areas and a critical player in project success. Learn tools and techniques for ensuring project success every step of the way-from identifying and

analyzing potential projects to making sure that the final project product meets the requirements you identified. Through hands-on exercises, you'll learn to define the scope of work and master requirements-gathering techniques that will work for a variety of projects and audiences. You will consider the unique needs of customers, stakeholders, and the IT department as you work toward building, documenting, communicating, and managing requirements.

What You'll Learn

- Role and importance of the BA
- Vocabulary standards and business analysis practices using the IIBA A Guide to the Business Analysis Body of Knowledge (BABOK Guide)
- Plan BA requirements activities
- Elicit requirements from stakeholders, with an emphasis on interviews.
- Analyze stated requirements, with an overview of modeling techniques.
- Document requirements for several types of projects
- Verify and validate requirements.
- Elements of requirements management and communication and the BA's role in them
- Elements of solution verification and validation and BA roles
- Enterprise analysis: choosing appropriate projects.
- Necessary competencies and best practices of BAs
- Waterfall, incremental, and agile lifecycles and how they change BA practices.

Hands-On Exercises

- Identify Business Analysis Concepts and Activities in Your Organization
- Review a Vision and Scope Document
- Plan Requirements Activities for a Project
- Conduct an Interview
- Choose Elicitation Techniques
- Analyze a Location Model

- Analyze a Workflow Model
- Analyze a Use Case Model
- Analyze a CRUD Matrix
- Identify Models that Answer Key Questions
- Review a Requirements Document
- Determine the Impact of a Proposed Change to a Requirements Set
- Write a Test Case Using a Use Case
- Walk Through the Steps of Enterprise Analysis for a Project
- Develop a Personal Action Plan to Improve Your BA Skills or Environment

Who Needs to Attend

Systems analysts, business analysts, requirements analysts, developers, software engineers, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers, testers, and QA specialists.

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

This course prepares for IIBA – Business Analysis Certification

Book:

A Guide to the Business Analysis Body of Knowledge (BABOK Guide)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

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Course Outline

1. Introduction to Business Analysis

- Importance of Effective Business Analysis
- Role of the BA
- Standardization and Adaptability

2. Requirements Planning

- Role of the BA in Requirements Planning
- Vision and Scope Document
- Types of Requirements
- Stakeholders
- Business Analysis Plan
- Homework

3. Requirements Elicitation

- Role of the BA in Requirements Elicitation
    - Investigative approach
    - Iterative approach
- Techniques
    - Interviews
    - Focus groups.
    - Requirements workshop: Requirements meeting.
    - Requirements workshop: JAD session
    - Brainstorming
    - Observation
    - Survey
    - Prototype
    - Document analysis

  - Business rules analysis
  - Reverse engineering
  - Product trials
  - Labs
- Group Project

4. Requirements Analysis & Design

- Need for Analysis
- Using Analysis to get Stakeholder Feedback and Verify and Validate Developing Requirements
- Value of Modeling Techniques in Analysis
- Modeling Techniques
  - Organizational model
  - Location model
  - Process/flow models
  - Use case models.
  - Data models
  - State model
- Types of Requirements
- Business Rules Analysis
- Prioritizing Requirements
- Verifying and Validating Requirements
- Group Project

5. Requirements Documentation (BRD)

- Formal and Informal Documentation and the, Level of Detail Required
- Writing for Usability and Comprehension
- Common Requirements Document Defects
- Components of a Formal Requirements Document

- Requirements Verification and Validation
- Requirements Sign-Off
- UML (Unified Modeling Language) - Labs
- Group Project

6. Requirements Management and Communication

- Throughout the Project and to Decommission
- Change Management
    - Define a baseline.
    - Define a change management process.
    - Identify the Change Authority
- Traceability and Its Uses
- Requirements Attributes
- Requirements Communication
- Group Discussion
- Case Study
- Group Project

7. Business Strategy Management

- Strategy Definition
- Why do Companies need Strategy?
- Strategy Formation
- LAB: SWOT Analysis
- Five Force Analysis
- How to define good Strategy?
- Strategy Execution
- Strategy Validation
- Strategy Implementation Challenge
- Case Studies: Amazon, Apple, and Google
- Homework

- Group Project

8. Enterprise Analysis

- Definition and Causes
- Role of the BA on the Enterprise Analysis Team
- Steps in Enterprise Analysis
    - Define the business need.
        - Techniques for root cause analysis
    - Assess capability gaps.
        - SWOT analysis
    - Determine the solution approach.
    - Define the solution scope.
    - Define the business case.
        - Contents of business case
        - Who does what? the BA's limited role in developing a business case?

9. Management Competencies, Best Practices, and Life Cycle Models

- Competency Proficiency
- Project Management
- Sope / Schedule / Cost Management
- BA Necessary Competencies
    - Analytical thinking and problem solving
    - Behavioral characteristics
    - Business knowledge
    - Communication skills
    - Interaction skills
    - Software application knowledge
- Best Practices

- Use iterative analysis.
- Focus on process improvement.
- Apply progressive elaboration.
- Check as you go.
- Use the investigative approach.
- Adopt traceability.
- Formalize business analysis through standardization.
- Improve communication through modeling.

- Life Cycle Models
  - Waterfall
  - Incremental
  - Agile Scrum Project Management
  - Effects on business analysis

10. BA Leadership skills

- Communication Skills
- Leadership Skills
- Critical Thinking Skills
- Business Knowledge
- IT Knowledge

11. Capstone Project

Module: 5 Software Programming with Java

Understand the Java Programmer's role and Responsibilities in a successful project.

About this Course:

This course is designed for beginners with little to no programming experience. It covers the fundamentals of Java programming, including basic syntax, data types, control structures, object-oriented programming (OOP), and file handling.

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

What You'll Learn

- Variables and Data Types
- Operators and Expressions
- Control Flow
- Arrays and Collections
- Object-Oriented Programming
- Inheritance and Polymorphism
- Exception Handling
- File Handling
- Java APIs
- Debugging and Testing

Hands-On Exercises

- Variable Declaration and Initialization
- Arithmetic Operations and relational and Logical Operators
- Conditional Statements and Looping Constructs
- Array Manipulation and Array List Operations
- Reading and Writing Files
- String Manipulation

Who Needs to Attend

- Aspiring Programmers
- Software Developers
- Web Developers
- System Administrators
- QA/Test Engineers
- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Java experience is required. Basic familiarity with Fundamental Programming Concepts and Mathematical Aptitude is helpful but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Oracle Java Certification.

Book:

Java: The Complete Reference, Twelfth Edition– Herbert Schildt

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Java

- Understanding the role of Java in the software development ecosystem
- Setting up the Java development environment (JDK, IDE)
- Writing and running your first Java program
- Basic Java syntax and structure

2. Variables and Data Types

- Declaring and initializing variables
- Primitive data types (int, double, char, Boolean)
- Reference data types (String)
- Type casting and conversions

3. Operators and Expressions

- Arithmetic, relational, and logical operators
- Expressions and precedence
- Using increment and decrement operators
- Working with conditional (ternary) operators

4. Control Flow

- Conditional statements (if, else, switch)
- Looping constructs (for, while, do-while)
- Breaking and continuing loops
- Handling user input with the Scanner class

5. Arrays and Collections

- Declaring and initializing arrays
- Array operations (access, modification, length)
- Introduction to collections (Array List, LinkedList)
- Iterating through collections

6. Object-Oriented Programming (OOP)

- Understanding OOP concepts (classes, objects, encapsulation, inheritance, polymorphism)
- Creating classes and objects
- Constructors and method overloading
- Access modifiers (public, private, protected)

7. Inheritance and Polymorphism

- Extending classes (inheritance)
- Overriding methods
- Implementing interfaces
- Using polymorphism and dynamic binding

8. Exception Handling

- Understanding exceptions and errors
- Handling exceptions with try-catch blocks.
- Custom exception classes
- Using the final block

9. File Handling

- Reading and writing text files
- Using File Reader and File Writer
- Exception handling in file operations
- Reading and writing binary files

10. Introduction to Java APIs

- Overview of Java Standard Library
- Using common APIs for string manipulation, date/time, and more
- Exploring additional libraries (e.g., Swing for GUI, JDBC for database access)

11. Debugging and Testing

- Debugging techniques
- Unit testing with JUnit
- Writing test cases and test suites

12. Final Project

- Apply learned concepts to develop a simple Java application.
- Present and demonstrate the project to peers.

Assessment:

- Quizzes and assignments throughout the course
- Final project evaluation

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Module 6: PMI ACP (Agile Certified Practitioner)

Understand the Agile Scrum master's role and Responsibilities in a successful project.

About this Course:

In today's fast-paced business environment, organizations must be agile and responsive to stay competitive. Agile Scrum has emerged as a leading framework for managing complex projects, enabling teams to deliver high-quality products quickly and adapt to changing requirements. This Agile Scrum Fundamentals Training course provides participants with a comprehensive introduction to the Agile Scrum methodology, equipping them with the skills and knowledge needed to successfully implement Scrum practices in their organizations.

What You'll Learn

- **Understanding Agile Principles: Explore** the core principles and values that underpin Agile methodologies, emphasizing customer collaboration, responsiveness to change, and iterative development.
- **Scrum Framework Overview**: Dive deep into the Scrum framework, its roles (Product Owner, Scrum Master, Development Team), events (Sprint, Daily Scrum, Sprint Review, Sprint Retrospective), and artifacts (Product Backlog, Sprint Backlog, Increment).
- **Roles and Responsibilities**: Gain insight into the specific roles and responsibilities within a Scrum team, enabling effective collaboration and clear accountability.
- **Backlog Management**: Learn how to create and manage a Product Backlog, prioritize user stories, and refine requirements to ensure a valuable product.
- **Sprint Planning**: Discover the art of Sprint Planning, including selecting items from the Product Backlog, setting sprint goals, and estimating work.
- **Daily Scrum**: Understand the purpose of the Daily Scrum, how it enhances team communication, and best practices for conducting daily stand-up meetings.
- **Sprint Execution**: Explore the mechanics of executing a Sprint, including the development work, managing impediments, and ensuring continuous integration.
- **Sprint Review and Retrospective**: Learn how to conduct effective Sprint Review and Retrospective meetings to inspect and adapt the product and the process.
- **Scrum Artifacts**: Explore Scrum artifacts such as the Sprint Burndown Chart, Release Burndown Chart, and Increment, and understand how they support transparency and progress tracking.
- **Scaling Agile**: Discover strategies for scaling Scrum to larger organizations and multi-team projects, including frameworks like Scrum of Scrums and LeSS (Large-Scale Scrum).
- **Agile Mindset**: Embrace the Agile mindset and its cultural implications, emphasizing continuous improvement, collaboration, and customer-centricity.
- **Practical Application**: Throughout the course, participants will engage in hands-on exercises, case studies, and simulations to apply Scrum principles and gain practical experience.

Hands-On Exercises

- User Story Writing Workshop
- Sprint Planning Simulation

- Daily Scrum Stand-up
- Scrum Board Setup
- Sprint Review and Retrospective
- Scrum of Scrums
- Value Stream Mapping
- Retrospective Action Planning
- Product Owner Prioritization Challenge

Who Needs to Attend

Systems analysts, business analysts, requirements analysts, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, and program managers.

Prerequisites

- Bachelor's Degree and at least six months of project management/leadership experience

Certification Programs and Certificate Tracks

This course prepares for PSM Certification (Professional Scrum Master)

Book:

Agile Scrum Crash Course: A Guide to Agile Project Management and Scrum Master Certification PSM 1 – Umer W

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Agile Mindset, Principles and Values

- Understanding Agile Manifesto
- Agile principles and how they apply to project management.
- Benefits of adopting Agile

2. Introduction to Scrum

- What is Scrum?
- History and evolution of Scrum
- Scrum vs. Waterfall
- Homework

3. Scrum Part I

Module 1: Scrum Roles

- Scrum Team
- Product Owner
- Scrum Master
- Stakeholders
- Responsibilities and characteristics of each role

Module 2: Scrum Artifacts

- Product Backlog
- Sprint Backlog
- Increment
- Definition of Done
- Understanding and managing artifacts

Module 3: Scrum Ceremonies

- Sprint Planning
- Daily Scrum
- Sprint Review
- Sprint Retrospective
- The purpose and format of each ceremony

Module 4: Sprint and Increment

- What is a Sprint?
- Sprint duration and goals
- The Increment as a potentially releasable product
- Sprint Burndown charts

4. Scrum II

Module 5: Sprint Planning and Backlog Refinement

- Creating a Product Backlog
- Estimating and prioritizing user stories
- Sprint Planning Meeting
- Backlog refinement best practices

Module 6: Daily Scrum

- The role of the Daily Scrum in team communication
- Structuring Daily Scrum meetings
- Common pitfalls and how to avoid them.

Module 7: Sprint Execution

- How the Scrum Team carries out work during a Sprint
- Self-organization and cross-functionality
- Handling scope changes during a Sprint

Module 8: Sprint Review and Retrospective

- Conducting effective Sprint Reviews
- Collecting feedback from stakeholders
- Continuous improvement through Sprint Retrospectives
- Retrospective formats and techniques

Module 9: Scaling Scrum

- Introduction to scaling frameworks (e.g., SAFe, LeSS, Nexus)
- Challenges and considerations when scaling Scrum.
- Combining multiple Scrum teams into larger initiatives

Module 10: Agile Metrics and Reporting

- Key Agile metrics (e.g., Velocity, Burndown charts)
- Using metrics to track progress and make data-driven decisions.
- Reporting and transparency in Agile

Module 11: Agile Scrum in the Real World

- Case studies and real-world examples of Scrum implementation
- Addressing shared challenges and roadblocks
- Best practices for sustaining Agile Scrum

5. Agile Scrum Certification

- Overview of Scrum certifications (e.g., Scrum Master, Product Owner)
- Preparing for certification exams
- Benefits of certification and career opportunities

6. Capstone Project

Module 7: JIRA Training

IT Expert System

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Email: info@itexps.com

Understand the Scrum Master's role and Responsibilities in a successful project.

About this Course:

This course is designed to take participants from beginner to advanced levels in Jira, a popular project and issue tracking tool. Whether you are a scrum master, business analyst, project manager, developer, or part of an agile team, this course will equip you with the knowledge and skills to effectively use Jira for project management, issue tracking, and collaboration.

What You'll Learn

- Introduction to Jira.
- Issue Management
- Agile Project Management with Jira
- Advanced Jira Features
- Jira Administration
- Jira Integrations and Best Practices

Hands-On Exercises

- Setting Up Your Jira Environment
- Navigating Jira
- Creating and Managing Projects
- Creating and Managing Issues
- Customizing Workflows
- Prioritizing and Organizing Issues
- Creating and Managing Agile Boards
- Managing Agile Teams
- Reporting and Dashboards
- User Management and Permissions
- Performance and Scalability

Who Needs to Attend

- Project Managers
- Software Developers
- Agile Teams
- Product Owners and Scrum Masters
- Quality Assurance (QA) Teams
- Entrepreneurs and Small Business Owners

Prerequisites

- Basic knowledge of General IT Knowledge
- Familiarity with Computing Concepts

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Certification Programs and Certificate Tracks

- This course prepares you for the Jira Agile Practitioner Certification Exam.

Book:

- "Jira Strategy Admin Workbook" -by Rachel Wright

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Week 1: Introduction to Jira

- **Introduction to Jira**
  - What is Jira?
  - Key features and benefits
  - Jira editions and pricing
- **Setting Up Your Jira Environment**
  - Installation and configuration
  - Understanding user roles and permissions
- **Navigating Jira**
  - Dashboard overview
  - Understanding the Jira interface
  - Personalizing your dashboard
- **Creating and Managing Projects**
  - Creating your first project
  - Configuring project settings
  - Project templates
- **Creating and Managing Issues**
  - Issue types and schemes
  - Creating issues
  - ssue search and filtering

Week 2: Issue Management

- **Issue Workflow and Lifecycle**
  - Customizing workflows

  - Transitions, statuses, and resolutions
  - Workflow best practices
- **Prioritizing and Organizing Issues**
  - Issue ranking and prioritization.
  - Agile boards (Kanban and Scrum)
  - Backlog management
- **Advanced Issue Attributes**
  - Components and versions
  - Labels and epics
  - Custom fields and configurations

Week 3: Agile Project Management with Jira

- **Introduction to Agile Methodologies**
  - Scrum, Kanban, and other agile frameworks
  - Agile project management concepts
- **Creating and Managing Agile Boards**
  - Scrum and Kanban boards
  - Board settings and configurations
  - Sprint and backlog planning
- **Managing Agile Teams**
  - Team roles and responsibilities
  - Velocity tracking and reporting
  - Burn down charts and sprint reviews.

Week 4: Advanced Jira Features

- **Customizing Jira with Workflows**
  - Workflow customization
  - Conditional and post functions
  - Workflow best practices
- **Automation in Jira**
  - Jira automation rules
  - Examples of automation
  - Custom automation rules
- **Reporting and Dashboards**
  - Creating custom reports
  - Jira dashboard customization
  - Integrating Jira with third-party reporting tools

Week 5: Jira Administration

- **User Management and Permissions**
  - Managing users and groups
  - Setting project permissions
  - Global permissions and security

- **Data Backup and Restoration**
  - Backup strategies and best practices
  - Restoring Jira data
  - Disaster recovery planning
- **Performance and Scalability**
  - Scaling Jira for large organizations
  - Performance optimization tips
  - Monitoring and troubleshooting

Week 6: Jira Integrations and Best Practices

- **Integrating Jira with Other Tools**
  - Jira integrations with popular software
  - Automation using APIs.
  - Building custom integrations
- **Jira Best Practices**
  - Best practices for issue management
  - Agile project management tips
  - Workflow and automation best practices
- **Final Project and Certification**
  - Hands-on project: Implement a Jira solution.
  - Course recap and Q&A
  - Course completion and certification

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation.

Module 8: Web Development with Java, Angular, and React

Understand the Java programmer's role and Responsibilities in a successful project.

About this Course:

The "Java Web Development" course is a comprehensive program designed to equip participants with the essential skills and knowledge required to develop robust web applications using Java Spring framework, Angular, and React. Throughout this course, students will dive into backend development with Java Spring, explore frontend development using Angular, and conclude with a deep dive into React for building interactive user interfaces.

What You'll Learn

- Dependency Injection and Inversion of Control (IoC)
- Spring MVC and RESTful Services

- Data Access and Security
- Fundamentals of Angular
- Advanced Angular Concepts
- Integration with Backend
- Introduction to React
- Advanced React Features

Hands-On Exercises

- Building a Spring MVC Application
- Implementing Spring Security
- Data Access with Spring Data JPA
- Creating Angular Components
- Form Validation in Angular
- State Management with Context API or Redux
- Integrating Frontend with Java Spring Backend

Who Needs to Attend

- Aspiring Programmers
- Software Developers
- Web Developers
- System Administrators
- Data Analysts
- Career Changers, Anyone Interested in Coding

Prerequisites

- Some Java Programming experience is required. Basic familiarity with Fundamental Programming Concepts and Mathematical Aptitude is helpful but not mandatory.

Certification Programs and Certificate Tracks

N/A

Book:

- React Up & Running: Building Web Applications - by Stoyan Stefanov
- Spring Boot and Angular: Hands-on full-stack web development with Java, Spring, and Angular - by Devlin Basilan Duldulao

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%

- Labs: 10%
- Project: 30%

Course Outline

Week 1-4: Java Spring Development

Week 1: Introduction to Java Spring

- Overview of Java Spring Framework
- Setting up a development environment (IDE, JDK, Spring Boot)
- Dependency Injection and IoC (Inversion of Control)

Week 2: Spring MVC

- Understanding Model-View-Controller Architecture in Spring
- Creating controllers and handling requests
- Working with views and templates

Week 3: Data Access with Spring

- JDBC Template and ORM with Spring Data JPA
- Configuring databases and performing CRUD operations
- Transactions and error handling

Week 4: Spring Security and RESTful APIs

- Implementing security features with Spring Security
- Creating RESTful APIs using Spring
- Authentication and authorization

Week 5-7: Angular Web Development

Week 5: Introduction to Angular

- Basics of Angular framework
- Setting up the Angular development environment
- Components, Modules, and Templates

Week 6: Advanced Angular Concepts

- Services and Dependency Injection
- Routing and Navigation
- Forms and form validation

Week 7: Interacting with Backend and Deployment

- Making HTTP requests and handling responses
- Integration of Angular frontend with Java Spring backend
- Deploying Angular applications

Week 8-9: React for Web Development

Week 8: Getting Started with React

- Introduction to React framework.
- Components and JSX
- State and Props

Week 9: Advanced React Concepts

- Handling events and forms in React.
- React Router for navigation.
- State management with Context API or Redux

Final Project: Week 10: Integration Project

- Integrating Java Spring backend with both Angular and React frontend.
- Developing a full-stack web application
- Testing and deployment strategies

Assessment:

- Weekly quizzes or assignments
- Midterm project
- Final project presentation and code review.

PROGRAM DESCRIPTION: MANAGEMENT PROGRAM

Plan, initiate, and manage information technology (IT) projects. Lead and guide the work of technical staff. Serve as liaison between business and technical aspects of projects. Plan project stages and assess business implications for each stage. Monitor progress to ensure deadlines, standards, and cost targets are met.

Program Objective: This will enable students taking the program to excel in Management related positions such as Manager, Software Manager, Technical Project Manager, Program Manager, Development Manager, Scrum Mater, Product Owner, and Product Manager.

IT Expert System

Website: http://www.itexps.net

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Length of Program / Program Duration: 40 Weeks/ 400 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam)

Fees Structure:

Tuition – $8,000

Books – $600

Certifications/Tests – $1,200(PMP, ACP, and ITIL)

Other Expenses – $200 (Tools, Software, and Lab Work)

Total Cost – $10,000

Module 1: PMP – Project Management Professional

Understand the Project Manager's role and Responsibilities in a successful project.

About this Course:

The goal of the "Project Management " course is to provide students with a thorough grasp of project management concepts, procedures, and best practices. This course will provide you with the skills and information needed to successfully plan, carry out, and oversee projects, whether you're an aspiring project manager or want to improve your project management abilities.

What You'll Learn

- Role and importance of the Project Manager.
- Vocabulary standards and **Project Management** practices using the PMP A Guide to the **Project Management** Body of Knowledge.
- Plan **Project Management** requirements activities
- Scope Management
- Schedule Management
- Cost Management
- Risk Management
- Communication Management
- Stakeholder Engagement

- Vendor Management
- Team Management

Who Needs to Attend

business analysts, requirements analysts, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers

Prerequisites

- Bachelor's degree and at least six month of project management / leadership experience

Certification Programs and Certificate Tracks

This course prepares for PMP Certification (Project Management Professional)

Book:

A Guide to the Project Management Professional Body of Knowledge

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Project Management Professional

- Definition of a project
- Project management processes and knowledge areas
- The role of a project manager
- Project life cycles and organizational structures
- Group Discussion

2. Project Management Function

- Role of the PM, Program Manager, PMO
- Key Stakeholders

- Types of Projects and its application
- Group Discussion
- Homework

3. Project Integration Management

- Developing a project charter
- Developing a project management plan
- Directing and managing project work
- Monitoring and controlling project work.
- Performing integrated change control
- Closing the project or phase
- Quiz 2
- Group Project

4. Scope Management

- Planning scope management
- Collecting requirements
- Defining scope
- Creating the Work Breakdown Structure (WBS)
- Validating and controlling scope
- Group Project

5. Schedule Management

- Planning schedule management
- Defining activities
- Sequencing activities
- Estimating activity resources and durations
- Developing and controlling the project schedule
- Group Project

6. Cost Management

- Planning cost management
- Estimating costs
- Determining the budget
- Controlling costs
- Group Project

7. Risk Management & Risk Management II

- Planning risk management
- Identifying risks

- Performing qualitative and quantitative risk analysis
- Developing risk responses
- Monitoring and controlling risks.
- Group Project

8. Quality Management

- Planning quality management
- Performing quality assurance
- Performing quality control
- Planning resource management
- Acquiring, developing, and managing the project team
- Managing the project team
- Quiz
- Homework

9.. Procurement Management

- Planning procurement management
- Conducting procurement
- Controlling procurement
- Closing procurement

12. Team and Stakeholder Communication

- Identifying stakeholders
- Planning stakeholder engagement
- Managing stakeholder engagement
- Monitoring stakeholder engagement
- Code of ethics and professional conduct
- Responsibility to stakeholders
- Balancing competing interests
- Group Discussion
- Quiz

11. PMP/CAPM Exam Preparation

- Tips and strategies for passing the PMP exam.
- Sample questions and practice exams & Quiz
- Test-taking strategies.

Module 2: PMP – PMI ACP (Agile Certified Practitioner)

Understand the Agile Scrum master's role and Responsibilities in a successful project.

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About this Course:

In today's fast-paced business environment, organizations must be agile and responsive to stay competitive. Agile Scrum has emerged as a leading framework for managing complex projects, enabling teams to deliver high-quality products quickly and adapt to changing requirements. This Agile Scrum Fundamentals Training course provides participants with a comprehensive introduction to the Agile Scrum methodology, equipping them with the skills and knowledge needed to successfully implement Scrum practices in their organizations.

What You'll Learn

- **Understanding Agile Principles: Explore** the core principles and values that underpin Agile methodologies, emphasizing customer collaboration, responsiveness to change, and iterative development.
- **Scrum Framework Overview**: Dive deep into the Scrum framework, its roles (Product Owner, Scrum Master, Development Team), events (Sprint, Daily Scrum, Sprint Review, Sprint Retrospective), and artifacts (Product Backlog, Sprint Backlog, Increment).
- **Roles and Responsibilities**: Gain insight into the specific roles and responsibilities within a Scrum team, enabling effective collaboration and clear accountability.
- **Backlog Management**: Learn how to create and manage a Product Backlog, prioritize user stories, and refine requirements to ensure a valuable product.
- **Sprint Planning**: Discover the art of Sprint Planning, including selecting items from the Product Backlog, setting sprint goals, and estimating work.
- **Daily Scrum**: Understand the purpose of the Daily Scrum, how it enhances team communication, and best practices for conducting daily stand-up meetings.
- **Sprint Execution**: Explore the mechanics of executing a Sprint, including the development work, managing impediments, and ensuring continuous integration.
- **Sprint Review and Retrospective**: Learn how to conduct effective Sprint Review and Retrospective meetings to inspect and adapt the product and the process.
- **Scrum Artifacts**: Explore Scrum artifacts such as the Sprint Burndown Chart, Release Burndown Chart, and Increment, and understand how they support transparency and progress tracking.
- **Scaling Agile**: Discover strategies for scaling Scrum to larger organizations and multi-team projects, including frameworks like Scrum of Scrums and LeSS (Large-Scale Scrum).
- **Agile Mindset**: Embrace the Agile mindset and its cultural implications, emphasizing continuous improvement, collaboration, and customer-centricity.
- **Practical Application**: Throughout the course, participants will engage in hands-on exercises, case studies, and simulations to apply Scrum principles and gain practical experience.

Hands-On Exercises

- User Story Writing Workshop
- Sprint Planning Simulation
- Daily Scrum Stand-up
- Scrum Board Setup
- Sprint Review and Retrospective

- Scrum of Scrums
- Value Stream Mapping
- Retrospective Action Planning
- Product Owner Prioritization Challenge

Who Needs to Attend

Systems analysts, business analysts, requirements analysts, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, and program managers.

Prerequisites

- Bachelor's Degree and at least six months of project management/leadership experience

Certification Programs and Certificate Tracks

This course prepares for PSM Certification (Professional Scrum Master)

Book:

Agile Scrum Crash Course: A Guide to Agile Project Management and Scrum Master Certification PSM 1 – Umer W

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Agile Mindset, Principles and Values

- Understanding Agile Manifesto
- Agile principles and how they apply to project management.
- Benefits of adopting Agile

2. Introduction to Scrum

- What is Scrum?
- History and evolution of Scrum
- Scrum vs. Waterfall

- Homework

3. Scrum Part I

Module 1: Scrum Roles

- Scrum Team
- Product Owner
- Scrum Master
- Stakeholders
- Responsibilities and characteristics of each role

Module 2: Scrum Artifacts

- Product Backlog
- Sprint Backlog
- Increment
- Definition of Done
- Understanding and managing artifacts

Module 3: Scrum Ceremonies

- Sprint Planning
- Daily Scrum
- Sprint Review
- Sprint Retrospective
- The purpose and format of each ceremony

Module 4: Sprint and Increment

- What is a Sprint?
- Sprint duration and goals
- The Increment as a potentially releasable product
- Sprint Burndown charts

4. Scrum II

Module 5: Sprint Planning and Backlog Refinement

- Creating a Product Backlog
- Estimating and prioritizing user stories
- Sprint Planning Meeting
- Backlog refinement best practices

Module 6: Daily Scrum

- The role of the Daily Scrum in team communication

- Structuring Daily Scrum meetings
- Common pitfalls and how to avoid them.

Module 7: Sprint Execution

- How the Scrum Team carries out work during a Sprint
- Self-organization and cross-functionality
- Handling scope changes during a Sprint

Module 8: Sprint Review and Retrospective

- Conducting effective Sprint Reviews
- Collecting feedback from stakeholders
- Continuous improvement through Sprint Retrospectives
- Retrospective formats and techniques

Module 9: Scaling Scrum

- Introduction to scaling frameworks (e.g., SAFe, LeSS, Nexus)
- Challenges and considerations when scaling Scrum.
- Combining multiple Scrum teams into larger initiatives

Module 10: Agile Metrics and Reporting

- Key Agile metrics (e.g., Velocity, Burndown charts)
- Using metrics to track progress and make data-driven decisions.
- Reporting and transparency in Agile

Module 11: Agile Scrum in the Real World

- Case studies and real-world examples of Scrum implementation
- Addressing shared challenges and roadblocks
- Best practices for sustaining Agile Scrum

5. Agile Scrum Certification

- Overview of Scrum certifications (e.g., Scrum Master, Product Owner)
- Preparing for certification exams
- Benefits of certification and career opportunities

6. Capstone Project

Module 3: JIRA Training

Understand the Scrum Master's role and Responsibilities in a successful project.

About this Course:

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

This course is designed to take participants from beginner to advanced levels in Jira, a popular project and issue tracking tool. Whether you are a scrum master, business analyst, project manager, developer, or part of an agile team, this course will equip you with the knowledge and skills to effectively use Jira for project management, issue tracking, and collaboration.

What You'll Learn

- Introduction to Jira.
- Issue Management
- Agile Project Management with Jira
- Advanced Jira Features
- Jira Administration
- Jira Integrations and Best Practices

Hands-On Exercises

- Setting Up Your Jira Environment
- Navigating Jira
- Creating and Managing Projects
- Creating and Managing Issues
- Customizing Workflows
- Prioritizing and Organizing Issues
- Creating and Managing Agile Boards
- Managing Agile Teams
- Reporting and Dashboards
- User Management and Permissions
- Performance and Scalability

Who Needs to Attend

- Project Managers
- Software Developers
- Agile Teams
- Product Owners and Scrum Masters
- Quality Assurance (QA) Teams
- Entrepreneurs and Small Business Owners

Prerequisites

- Basic knowledge of General IT Knowledge
- Familiarity with Computing Concepts

Certification Programs and Certificate Tracks

- This course prepares you for the Jira Agile Practitioner Certification Exam.

Book:

- "Jira Strategy Admin Workbook" -by Rachel Wright

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Week 1: Introduction to Jira

- **Introduction to Jira**
  - What is Jira?
  - Key features and benefits
  - Jira editions and pricing
- **Setting Up Your Jira Environment**
  - Installation and configuration
  - Understanding user roles and permissions
- **Navigating Jira**
  - Dashboard overview
  - Understanding the Jira interface
  - Personalizing your dashboard
- **Creating and Managing Projects**
  - Creating your first project
  - Configuring project settings
  - Project templates
- **Creating and Managing Issues**
  - Issue types and schemes
  - Creating issues
  - ssue search and filtering

Week 2: Issue Management

- **Issue Workflow and Lifecycle**
  - Customizing workflows
  - Transitions, statuses, and resolutions
  - Workflow best practices
- **Prioritizing and Organizing Issues**
  - Issue ranking and prioritization.
  - Agile boards (Kanban and Scrum)

    - Backlog management
- **Advanced Issue Attributes**
    - Components and versions
    - Labels and epics
    - Custom fields and configurations

Week 3: Agile Project Management with Jira

- **Introduction to Agile Methodologies**
    - Scrum, Kanban, and other agile frameworks
    - Agile project management concepts
- **Creating and Managing Agile Boards**
    - Scrum and Kanban boards
    - Board settings and configurations
    - Sprint and backlog planning
- **Managing Agile Teams**
    - Team roles and responsibilities
    - Velocity tracking and reporting
    - Burn down charts and sprint reviews.

Week 4: Advanced Jira Features

- **Customizing Jira with Workflows**
    - Workflow customization
    - Conditional and post functions
    - Workflow best practices
- **Automation in Jira**
    - Jira automation rules
    - Examples of automation
    - Custom automation rules
- **Reporting and Dashboards**
    - Creating custom reports
    - Jira dashboard customization
    - Integrating Jira with third-party reporting tools

Week 5: Jira Administration

- **User Management and Permissions**
    - Managing users and groups
    - Setting project permissions
    - Global permissions and security
- **Data Backup and Restoration**
    - Backup strategies and best practices
    - Restoring Jira data
    - Disaster recovery planning
- **Performance and Scalability**

- Scaling Jira for large organizations
- Performance optimization tips
- Monitoring and troubleshooting

Week 6: Jira Integrations and Best Practices

- **Integrating Jira with Other Tools**
  - Jira integrations with popular software
  - Automation using APIs.
  - Building custom integrations
- **Jira Best Practices**
  - Best practices for issue management
  - Agile project management tips
  - Workflow and automation best practices
- **Final Project and Certification**
  - Hands-on project: Implement a Jira solution.
  - Course recap and Q&A
  - Course completion and certification

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation.

Module 4: MS Project

Understand the Project Manager's role and Responsibilities in a successful project.

About this Course:

This Microsoft Project training course is designed to equip participants with the essential skills and knowledge required to effectively plan, manage, and track projects using Microsoft Project. Whether you are a beginner or an experienced user, this course will cover fundamental and advanced concepts to enhance your project management capabilities.

What You'll Learn

- Project Planning Basics
- Resource Management
- Task and Resource Calendars
- Tracking and Reporting
- Advanced Scheduling Techniques
- Project Communication and Collaboration
- Customizing Project

- Advanced Reporting and Analysis
- Project Consolidation and Master Projects
- Best Practices and Tips

Hands-On Exercises

- Creating a New Project
- Task Creation and Task Dependencies
- Resource Allocation and cost
- Progress Tracking and Chart Creation
- Creating Custom Fields and views
- Advanced Reporting and Data Visualization
- Managing Multiple Projects
- Subproject Linking

Who Needs to Attend

- Office Professionals
- Students and Academics
- Business Owners and Entrepreneurs
- Job Seekers
- Nonprofit Organizations and Volunteers
- Legal and Medical Professionals
- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Microsoft Office experience is required. Basic computer literacy Familiarity with the Windows operating system. But it is not mandatory.

Certification Programs and Certificate Tracks

- This course prepares you for Microsoft Project Fundamentals Certification.

Book:

Microsoft Office 365 for Beginners: 9 in 1. The Most Comprehensive Guide to Become a Pro in No Time | Includes Word, Excel, PowerPoint, OneNote, Access, Publisher, Outlook, One Drive, and Teams – Scott Burnett

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%

- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Microsoft Project

- Overview of Microsoft Project
- Interface and workspace
- Project management fundamentals

2. Project Planning Basics

- Creating a new project
- Setting project properties
- Building a project schedule
- Task dependencies and constraints

3. Resource Management

- Adding and defining resources
- Assigning resources to tasks
- Resource leveling
- Cost tracking and management

4. Task and Resource Calendars

- Customizing project and resource calendars
- Managing working hours and holidays
- Exceptions and adjustments

5. Tracking and Reporting

- Progress tracking and updates
- Gantt chart views
- Reports and dashboards
- Visualizing project data

6. Advanced Scheduling Techniques

- Task constraints and deadlines
- Task types (Fixed Work, Fixed Duration, Fixed Units)
- Critical Path Analysis
- Advanced scheduling options

7. Project Communication and Collaboration

- Sharing project files
- Collaborative features (SharePoint, Teams integration)
- Exporting and importing data

8. Customizing Project

- Creating custom fields and formulas
- Custom views and tables
- Templates and macros

9. Advanced Reporting and Analysis

- Advanced reporting tools
- Visualizing data with charts
- What-if analysis and scenarios

10. Project Consolidation and Master Projects

- Managing multiple projects
- Creating master projects
- Subproject linking and consolidation.

11. Best Practices and Tips

- Project management best practices
- Troubleshooting common issues
- Time-saving tips and shortcuts

12. Final Project

Participants will work on a final project applying the knowledge and skills acquired during the course.

Course Wrap-up and Q&A

- Review of key takeaways
- Open discussion and Q&A session
- Course evaluation and feedback

Course Assessment:

- Weekly quizzes to assess understanding.
- Hands-on projects to apply knowledge.
- Final project: Create a professional document showcasing various MS Project skills.

Module 5: IT Cloud Services and Support

Understand the IT Service Management Role in a successful project.

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

About this Course:

The course expands the scope of the world's leading best practice framework for IT to incorporate many new ways of working, including Agile, LEAN, DevOps, and other innovative approaches. In this course you will learn the core aspects of cloud services and their framework and how to use them to improve the quality of services you deliver to your customers.

What You'll Learn

- The Cloud Service Management System
- The Service Value Chain
- Continual Improvement best practices
- Key Guiding Principles
- Governance Requirements
- Key Cloud Practices, including:
    - Incident Management
    - Service Request Fulfillment
    - Service Level Management
    - Service Desk
    - Change Control
- Continual Improvement
- And many more

Hands-On Exercises

N/A

Who Needs to Attend

System Engineer, DevOps Engineer, Network Admin, IT Project Manager, Business Analyst

Prerequisites

-Associate college degree or equivalent training or work experience

Certification Programs and Certificate Tracks:

AWS Cloud Practitioner

AZURE Cloud Practitioner

Book:

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

AWS Certified Solutions Architect Study Guide with 900 Practice Test Questions: Associate (SAA-C03) Exam (Sybex Study Guide) 4th Edition

by Ben Piper

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1: Cloud Service Overview

- Introduction to Cloud Services
- Key Concepts of Cloud Services

2: The Cloud Services Framework

- The Four Dimensions of Service Management
- The Cloud Services Service Value System (SVS)
- Group discussion
- Homework

3: The Cloud Services Guiding Principles

- Focus on Value
- Start Where You Are
- Progress Iteratively with Feedback
- Collaborate and Promote Visibility
- Think and Work Holistically
- Keep It Simple and Practical
- Optimize and Automate
- Group discussion
- Homework

4. The Cloud Service Value System (SVS)

- Governance
- The Service Value Chain
- Continual Improvement

5: Key Cloud Services Practices

- Continual Improvement
- Service Level Management
- Change Control
- Incident Management
- Service Request Management
- Service Desk
- Problem Management
- Group discussion
- Homework

6: Other Cloud Services Practices

- General Management Practices
- Service Management Practices
- Technical Management Practices
- **Certification Preparation**

Module 6: Business Analysis

Understand the Business Analyst's role and Responsibilities in a successful project.

About this Course:

In this you will delve into the role and responsibilities of the business analyst (BA) - the communication link between all business areas and a critical player in project success. Learn tools and techniques for ensuring project success every step of the way-from identifying and analyzing potential projects to making sure that the final project product meets the requirements you identified. Through hands-on exercises, you'll learn to define the scope of work and master requirements-gathering techniques that will work for a variety of projects and audiences. You will consider the unique needs of customers, stakeholders, and the IT department as you work toward building, documenting, communicating, and managing requirements.

What You'll Learn

- Role and importance of the BA
- Vocabulary standards and business analysis practices using the IIBA A Guide to the Business Analysis Body of Knowledge (BABOK Guide)
- Plan BA requirements activities
- Elicit requirements from stakeholders, with an emphasis on interviews.
- Analyze stated requirements, with an overview of modeling techniques.
- Document requirements for several types of projects
- Verify and validate requirements.
- Elements of requirements management and communication and the BA's role in them
- Elements of solution verification and validation and BA roles
- Enterprise analysis: choosing appropriate projects.
- Necessary competencies and best practices of BAs
- Waterfall, incremental, and agile lifecycles and how they change BA practices.

Hands-On Exercises

- Identify Business Analysis Concepts and Activities in Your Organization
- Review a Vision and Scope Document
- Plan Requirements Activities for a Project
- Conduct an Interview
- Choose Elicitation Techniques
- Analyze a Location Model
- Analyze a Workflow Model
- Analyze a Use Case Model
- Analyze a CRUD Matrix
- Identify Models that Answer Key Questions
- Review a Requirements Document

- Determine the Impact of a Proposed Change to a Requirements Set
- Write a Test Case Using a Use Case
- Walk Through the Steps of Enterprise Analysis for a Project
- Develop a Personal Action Plan to Improve Your BA Skills or Environment

Who Needs to Attend

Systems analysts, business analysts, requirements analysts, developers, software engineers, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers, testers, and QA specialists.

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

This course prepares for IIBA – Business Analysis Certification

Book:

A Guide to the Business Analysis Body of Knowledge (BABOK Guide)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Curse Outline

1. Introduction to Business Analysis

- Importance of Effective Business Analysis
- Role of the BA
- Standardization and Adaptability

2. Requirements Planning

- Role of the BA in Requirements Planning
- Vision and Scope Document
- Types of Requirements
- Stakeholders
- Business Analysis Plan
- Homework

3. Requirements Elicitation

- Role of the BA in Requirements Elicitation
    - Investigative approach
    - Iterative approach
- Techniques
    - Interviews
    - Focus groups.
    - Requirements workshop: Requirements meeting.
    - Requirements workshop: JAD session
    - Brainstorming
    - Observation
    - Survey
    - Prototype
    - Document analysis
    - Business rules analysis
    - Reverse engineering
    - Product trials
    - Labs
- Group Project

4. Requirements Analysis & Design

- Need for Analysis
- Using Analysis to get Stakeholder Feedback and Verify and Validate Developing Requirements
- Value of Modeling Techniques in Analysis
- Modeling Techniques
    - Organizational model
    - Location model
    - Process/flow models
    - Use case models.
    - Data models
    - State model
- Types of Requirements
- Business Rules Analysis
- Prioritizing Requirements
- Verifying and Validating Requirements
- Group Project

5. Requirements Documentation (BRD)

- Formal and Informal Documentation and the, Level of Detail Required
- Writing for Usability and Comprehension
- Common Requirements Document Defects
- Components of a Formal Requirements Document
- Requirements Verification and Validation
- Requirements Sign-Off
- UML (Unified Modeling Language) - Labs
- Group Project

6. Requirements Management and Communication

- Throughout the Project and to Decommission

- Change Management
    - Define a baseline.
    - Define a change management process.
    - Identify the Change Authority
- Traceability and Its Uses
- Requirements Attributes
- Requirements Communication
- Group Discussion
- Case Study
- Group Project

7. Business Strategy Management

- Strategy Definition
- Why do Companies need Strategy?
- Strategy Formation
- LAB: SWOT Analysis
- Five Force Analysis
- How to define good Strategy?
- Strategy Execution
- Strategy Validation
- Strategy Implementation Challenge
- Case Studies: Amazon, Apple, and Google
- Homework
- Group Project

8. Enterprise Analysis

- Definition and Causes
- Role of the BA on the Enterprise Analysis Team
- Steps in Enterprise Analysis
    - Define the business need.

        - Techniques for root cause analysis
    - Assess capability gaps.
        - SWOT analysis
    - Determine the solution approach.
    - Define the solution scope.
    - Define the business case.
        - Contents of business case
        - Who does what? the BA's limited role in developing a business case?

9. Management Competencies, Best Practices, and Life Cycle Models

- Competency Proficiency
- Project Management
- Sope / Schedule / Cost Management
- BA Necessary Competencies
    - Analytical thinking and problem solving
    - Behavioral characteristics
    - Business knowledge
    - Communication skills
    - Interaction skills
    - Software application knowledge
- Best Practices
    - Use iterative analysis.
    - Focus on process improvement.
    - Apply progressive elaboration.
    - Check as you go.
    - Use the investigative approach.
    - Adopt traceability.

- Formalize business analysis through standardization.
- Improve communication through modeling.

- Life Cycle Models
  - Waterfall
  - Incremental
  - Agile Scrum Project Management
  - Effects on business analysis

10. BA Leadership skills

- Communication Skills
- Leadership Skills
- Critical Thinking Skills
- Business Knowledge
- IT Knowledge

11. Capstone Project

Module 7: Lean Six Sigma

Understand the Quality Lead role in a successful project.

About this Course:

Competition is forcing firms to eliminate non-value-added work and output inconsistency. While the concept of Lean addresses the former problem by removing process waste, the Six Sigma methodology solves the latter problem by minimizing process variation. This comprehensive course on all aspects of Lean and Six Sigma, gives you hands-on experience with essential quality improvement tools and techniques Students who successfully execute a Lean Six Sigma Project for an organization with documented evidence of process improvement results will also be eligible to receive a Lean Six Sigma Black Belt certification.

What You'll Learn

- Quality Concepts
- Data Driven problem solution.

- Quality processes
- Quality tools
- Manage Quality standards.
- Lead Quality Initiatives

Hands-On Exercises

N/A

Who Needs to Attend

Quality Analyst, Project Manager

Prerequisites

-Associate college degree or equivalent training or quality analyst work experience

Certification Programs and Certificate Tracks:

Six Sigma Green Belt Certification

Book:

Six Sigma Green Belt Study Guide: Test Prep and Practice Test Questions for the ASQ Six Sigma Green Belt Certification Exam [2nd Edition] by Tpb Publishing (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Define Phase

- Introduction to Six Sigma
- Six Sigma Fundamentals
- How to Select Projects
- Scoping Your Project (High-level process maps, COPIS)

- Project Mandates – Building Your Business Case
- Building Your Project Team

Measure Phase

- Process Mapping
- Root Cause Analysis (Fishbone Diagrams, Tree Diagrams, etc.)
- FMEAs
- Data Collection (Sampling Strategies, Sample Size, Data Collection Sheets)
- Static Statistics
- Graphical Tools (Pareto's, Histograms, Box Plots, etc.)
- Dynamic Statistics
- Process Capability (Cp, Cpk, Pp, Ppk)
- Measurement System Analysis/Gage R & R

Analyze Phase

- Multi-Vari Analysis
- Inferential Statistics
- Introduction to Hypothesis Testing
- Hypothesis Testing Normal Data (Z-, T-, and F-Tests; ANOVAs)
- Hypothesis Testing Non-Normal Data (1-Sample Sign, 1-Sample Wilcoxon, Mood's Median,
- Proportions tests)
- Hypothesis Testing Discrete Data (Goodness of Fit, Chi Square Contingency Tables)

Improve Phase

- Lean Tools (5S, Cellular Design, Plant Layout, POUS, Kanban, etc.)
- Correlation
- Simple Linear Regression
- Multiple Linear Regression
- Design of Experiments (Full Factorials)

Control Phase

- Human Side of Change
- Dealing with Resistance
- Improved Process Capability Analysis

- Poka-Yoke
- Risk Analysis
- Statistical Process Control (SPC)
- Six Sigma Control Plans

Certification Preparation

Module 8: Big Data Management and Data Analytics

Understand the Big Data Analyst's role and Responsibilities in a successful project.

About this Course:

In this you will delve into the role and responsibilities of the Data analyst and leverage BIG Data Tools and Technology. Big Data will help to create new career growth opportunities for job seekers and growth for entirely new categories of companies, such as those that aggregate and analyses industry data. Many of these will be companies that sit in the middle of large information flows where data about products and services, buyers and suppliers, consumer preferences and intent can be captured and analyzed. Forward-thinking leaders across sectors should begin aggressively to build their organizations' Big Data capabilities.

What You'll Learn

- Learn how to aggregate large volumes of data.
- Learn how to process bulk data.
- How to setup BIG DATA Jobs
- How to generate data summary
- Orchestrate multiple jobs.
- Troubleshooting the Hadoop environment and programming issue
- Performance optimization for the better performance

Hands-On Exercises

- Setup Hadoop Cluster
- Access Hadoop cluster from your laptop
- Linux commands

- HDFS commands
- Write PIG Jobs
- Write Hive Jobs
- Write Sqoop Jobs
- HBASE commands
- End to End project

Who Needs to Attend

Systems analysts, data analysts, Database Administrators, Network Admin developers, software engineers, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers, testers, and QA specialists.

Prerequisites

-Associate college degree or equivalent training or work experience

Certification Programs and Certificate Tracks: N/A

Book:

Hadoop: The Definitive Guide: Storage and Analysis at Internet Scale Tom White (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. BIG DATA Foundation

- Database – overview, Oracle PL/SQL
- Data warehouse, ETL [Extract Transform Load]
- Data Warehouse vs BIG DATA

- BIG DATA Tools / Technology
- BIG DATA – Use case.
- LAB: Hadoop Installation
- Homework

2. HDFS commands

- Hadoop Architecture
- Hadoop key components
- Linux Overview
- Linux vs HDFS Commands
- Quiz one
- LAB
- Homework

3. PIG Programming

- PIG Architecture Overview
- PIG use cases
- PIG Programming Syntax
- LAB – Setup PIG Jobs
- Homework

4. Hive Programming

- HIVE Architecture Overview
- HIVE use cases
- HIVE Programming Syntax
- LAB – Setup HIVE Jobs
- Homework

5. Sqoop Programming

- Sqoop Architecture Overview

- Sqoop use cases.
- Sqoop Programming Syntax
- LAB – Setup Sqoop Jobs
- Homework

6. NO SQL Overview

- HBASE Overview
- OLAP vs OLTP.
- NO SQL vs SQL
- Mongo DB vs HBASE vs HIVE
- Zookeeper overview
- LAB – HBASE commands
- Homework

7. Spark Programming

- Spark Architecture Overview
- Spark Programming Syntax
- Spark vs Hadoop use cases.
- Quiz two
- LAB – HBASE commands
- Homework

8. Capstone Project

PROGRAM DESCRIPTION- QUALITY ANALYSIS PROGRAM

A software quality analyst is responsible for applying the principles and practices of software quality assurance throughout the software development life cycle. Though often referred to as "quality assurance", software testing is only one part of the larger process of reducing errors.

Program Objective: This will enable students taking the program to excel in testing related position such as QA Test Engineer, QA Analyst, Quality Assurance Analyst,

QA Lead, Test Manager, Validation Engineer, and Software Quality Test.

Length of Program / Program Duration: 36 Weeks/ 360 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam)

Fees Structure:

Tuition – $8,000

Books – $600

Certifications/Tests – $1200 (ISTQB, Java and Oracle)

Other Expenses – $200 (Tools, Software, and Lab Work)

Total Cost – $10,000

Module 1: Software Quality Assurance Manual Testing Basics

Acquire skills to perform duties as a Manual Tester

About this Course:

In this course you will delve into the role and responsibilities of QA (manual) software tester. You will learn QA concepts and tools that prepare you to perform your duties as a QA manual tester.

What You'll Learn

- QA – Theory and concepts
- Roles and Responsibilities of QA tester
- Definition and Principle of testing
- Types and Levels of testing
- Testing techniques
- Test Plan, Test cases and test reports
- Defect management
- Lean and Agile tools

Hands-On Exercises

- Creating Test cases

- Creating Test Plan
- Applying Testing techniques
- Creating HTML forms
- Managing test data in JSON format
- Managing test data using XML format

Who Needs to Attend

IT analysts, QA aspirants, SDET aspirants

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

ISTQB – Foundation exam

Book:

A Self-study guide for the ISTQB Foundation Exam (CTFL)

Authors: Chhavi Raj Dosaj

Course Duration: 18 hours / 6 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to QA

- Overview of QA concepts
- Roles and Responsibilities of QA
- QA and QC

- Software development life cycle
- Software testing

2. QA Principles and Types of Testing

- Seven key principles of Software testing
- Causes of Software defects
- Types of tests – Functional and Non-functional testing
- Levels of testing – Unit, Integration, System and Acceptance tests
- Retest and Regression testing
- Lab
- Homework

3. Software Testing Lifecycle and Artifacts

- Inputs for Software testing
- Key phases of Software testing
- Understanding Software requirements
- Test Plan
- Test case designs
- Labs
- Homework

4. Advanced testing

- Test execution and defect management
- Testing techniques
- Boundary Value analysis
- Decision table testing
- State transition testing
- Branch testing

5. Understanding technologies and maintaining test data

- Introduction to HTML
- Lab: Creating HTML documentation
- Test Formats: CSV, XML, JSON
- Lab: Managing test data in CSV files
- Lab: Managing test data in JSON files
- Lab: Managing test data in XML files

6. Test management and lean methods

- Managing test artifacts using MS Office
- Managing test artifacts in Jira
- Agile testing methodology
- Role of QA in Agile testing
- Introduction to BDD and TDD
- Labs
- Homework

7. Project work

Module 2: Database (Oracle)

Understand the Database Engineer's role and Responsibilities in a successful project.

About this Course:

This course is designed to provide students with a solid foundation in using SQL to work with Oracle databases. Participants will learn SQL concepts, syntax, and best practices, enabling them to retrieve and manipulate data efficiently from Oracle databases.

What You'll Learn

- Gain a deep understanding of Oracle Database architecture.
- Acquire proficiency in installation, configuration, and maintenance of Oracle Database.
- Develop skills to optimize database performance and ensure data integrity.
- Learn to manage security, user access, and privileges within the Oracle environment.
- Primary backup and recovery strategies to safeguard critical data.

- Explore advanced database features such as partitioning, data compression, and High Availability options.
- Be prepared for Oracle Database certification exams.

Hands-On Exercises

- Installation and Configuration
- Basic SQL Operations
- Backup and Recovery
- User Management
- Performance Tuning
- High Availability
- Advanced Features
- Security

Who Needs to Attend

- Data Analysts and Scientists
- Business Intelligence Professionals
- Data Enthusiasts
- Anyone seeking to harness data for better decision-making.

Prerequisites

- No prior Oracle Database experience is required.
- Basic understanding of databases and SQL. Familiarity with fundamental concepts of operating systems.but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Oracle Database Administrator Certification. (Oracle Certified Associate (OCA))

Book:

Study Guide for 1Z0-006: Oracle Database Foundations: Oracle Certification Prep

Matthew Morris

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%

- Project: 30%

Course Outline

1. Introduction to Databases and Oracle

- Understanding Databases and Database Management Systems (DBMS)
- Introduction to Oracle Database
- Oracle SQL Developer Setup
- Connecting to the Oracle Database

2. SQL Basics

- Introduction to SQL
- SELECT Statement
- Filtering Data with WHERE Clause
- Sorting Data with ORDER BY
- Aliases for Column Names

3. Retrieving Data from Multiple Tables

- Understanding Table Joins
- INNER JOIN, LEFT JOIN, RIGHT JOIN
- CROSS JOIN, SELF JOIN
- USING Clause
- UNION and UNION ALL Operators

4. Filtering Data with Advanced Techniques

- Using the BETWEEN Operator
- Working with NULL Values
- Using IN and NOT IN Operators
- Combining Conditions with AND, OR, NOT
- Subqueries and Nested Queries

5. Data Modification and Transactions

- INSERT, UPDATE, and DELETE Statements
- COMMIT and ROLLBACK Statements
- Introduction to Transactions
- Savepoints

6. Aggregating and Grouping Data

- GROUP BY Clause
- Aggregate Functions (SUM, AVG, COUNT, MAX, MIN)
- HAVING Clause

- GROUPING SETS and ROLLUP
- Cube and Grouping

7. Working with Date and Time Data

- Date and Time Data Types
- Date Functions (TO_DATE, TO_CHAR, TO_TIMESTAMP)
- Calculating Date Differences
- Extracting Date Components

8. Managing Data with DDL Statements

- Introduction to Data Definition Language (DDL)
- Creating and Altering Tables
- Constraints (PRIMARY KEY, FOREIGN KEY, UNIQUE, CHECK)
- Indexes

9. Views, Sequences, and Synonyms

- Creating Views
- Sequences
- Synonyms
- Privileges and Security

10. Advanced SQL Topics

- Analytic Functions (ROW_NUMBER, RANK, DENSE_RANK, LAG, LEAD)
- Working with Large Data Sets

Assessments and Projects:

- Weekly quizzes or assignments
- Midterm exam
- Final exam
- Hands-on projects (e.g., building a database application)

Module 3: Java Programming

Understand the Java Programmer's role and Responsibilities in a successful project.

About this Course:

This course is designed for beginners with little to no programming experience. It covers the fundamentals of Java programming, including basic syntax, data types, control structures, object-oriented programming (OOP), and file handling.

What You'll Learn

- Variables and Data Types
- Operators and Expressions
- Control Flow
- Arrays and Collections
- Object-Oriented Programming
- Inheritance and Polymorphism
- Exception Handling
- File Handling
- Java APIs
- Debugging and Testing

Hands-On Exercises

- Variable Declaration and Initialization
- Arithmetic Operations and relational and Logical Operators
- Conditional Statements and Looping Constructs
- Array Manipulation and Array List Operations
- Reading and Writing Files
- String Manipulation

Who Needs to Attend

- Aspiring Programmers
- Software Developers
- Web Developers
- System Administrators
- QA/Test Engineers
- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Java experience is required. Basic familiarity with Fundamental Programming Concepts and Mathematical Aptitude is helpful but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Oracle Java Certification.

Book:

Java: The Complete Reference, Twelfth Edition– Herbert Schildt

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%

- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Java

- Understanding the role of Java in the software development ecosystem
- Setting up the Java development environment (JDK, IDE)
- Writing and running your first Java program
- Basic Java syntax and structure

2. Variables and Data Types

- Declaring and initializing variables
- Primitive data types (int, double, char, Boolean)
- Reference data types (String)
- Type casting and conversions

3. Operators and Expressions

- Arithmetic, relational, and logical operators
- Expressions and precedence
- Using increment and decrement operators
- Working with conditional (ternary) operators

4. Control Flow

- Conditional statements (if, else, switch)
- Looping constructs (for, while, do-while)
- Breaking and continuing loops
- Handling user input with the Scanner class

5. Arrays and Collections

- Declaring and initializing arrays
- Array operations (access, modification, length)
- Introduction to collections (Array List, LinkedList)
- Iterating through collections

6. Object-Oriented Programming (OOP)

- Understanding OOP concepts (classes, objects, encapsulation, inheritance, polymorphism)
- Creating classes and objects

- Constructors and method overloading
- Access modifiers (public, private, protected)

7. Inheritance and Polymorphism

- Extending classes (inheritance)
- Overriding methods
- Implementing interfaces
- Using polymorphism and dynamic binding

8. Exception Handling

- Understanding exceptions and errors
- Handling exceptions with try-catch blocks.
- Custom exception classes
- Using the final block

9. File Handling

- Reading and writing text files
- Using File Reader and File Writer
- Exception handling in file operations
- Reading and writing binary files

10. Introduction to Java APIs

- Overview of Java Standard Library
- Using common APIs for string manipulation, date/time, and more
- Exploring additional libraries (e.g., Swing for GUI, JDBC for database access)

11. Debugging and Testing

- Debugging techniques
- Unit testing with JUnit
- Writing test cases and test suites

12. Final Project

- Apply learned concepts to develop a simple Java application.
- Present and demonstrate the project to peers.

Assessment:

- Quizzes and assignments throughout the course
- Final project evaluation

Module 4: PMP – PMI ACP (Agile Certified Practitioner)

Understand the Agile Scrum master's role and Responsibilities in a successful project.

About this Course:

In today's fast-paced business environment, organizations must be agile and responsive to stay competitive. Agile Scrum has emerged as a leading framework for managing complex projects, enabling teams to deliver high-quality products quickly and adapt to changing requirements. This Agile Scrum Fundamentals Training course provides participants with a comprehensive introduction to the Agile Scrum methodology, equipping them with the skills and knowledge needed to successfully implement Scrum practices in their organizations.

What You'll Learn

- **Understanding Agile Principles: Explore** the core principles and values that underpin Agile methodologies, emphasizing customer collaboration, responsiveness to change, and iterative development.
- **Scrum Framework Overview**: Dive deep into the Scrum framework, its roles (Product Owner, Scrum Master, Development Team), events (Sprint, Daily Scrum, Sprint Review, Sprint Retrospective), and artifacts (Product Backlog, Sprint Backlog, Increment).
- **Roles and Responsibilities**: Gain insight into the specific roles and responsibilities within a Scrum team, enabling effective collaboration and clear accountability.
- **Backlog Management**: Learn how to create and manage a Product Backlog, prioritize user stories, and refine requirements to ensure a valuable product.
- **Sprint Planning**: Discover the art of Sprint Planning, including selecting items from the Product Backlog, setting sprint goals, and estimating work.
- **Daily Scrum**: Understand the purpose of the Daily Scrum, how it enhances team communication, and best practices for conducting daily stand-up meetings.
- **Sprint Execution**: Explore the mechanics of executing a Sprint, including the development work, managing impediments, and ensuring continuous integration.
- **Sprint Review and Retrospective**: Learn how to conduct effective Sprint Review and Retrospective meetings to inspect and adapt the product and the process.
- **Scrum Artifacts**: Explore Scrum artifacts such as the Sprint Burndown Chart, Release Burndown Chart, and Increment, and understand how they support transparency and progress tracking.
- **Scaling Agile**: Discover strategies for scaling Scrum to larger organizations and multi-team projects, including frameworks like Scrum of Scrums and LeSS (Large-Scale Scrum).
- **Agile Mindset**: Embrace the Agile mindset and its cultural implications, emphasizing continuous improvement, collaboration, and customer-centricity.
- **Practical Application**: Throughout the course, participants will engage in hands-on exercises, case studies, and simulations to apply Scrum principles and gain practical experience.

Hands-On Exercises

- User Story Writing Workshop
- Sprint Planning Simulation

- Daily Scrum Stand-up
- Scrum Board Setup
- Sprint Review and Retrospective
- Scrum of Scrums
- Value Stream Mapping
- Retrospective Action Planning
- Product Owner Prioritization Challenge

Who Needs to Attend

Systems analysts, business analysts, requirements analysts, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, and program managers.

Prerequisites

- Bachelor's Degree and at least six months of project management/leadership experience

Certification Programs and Certificate Tracks

This course prepares for PSM Certification (Professional Scrum Master)

Book:

Agile Scrum Crash Course: A Guide to Agile Project Management and Scrum Master Certification PSM 1 – Umer W

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Agile Mindset, Principles and Values

- Understanding Agile Manifesto
- Agile principles and how they apply to project management.
- Benefits of adopting Agile

2. Introduction to Scrum

- What is Scrum?
- History and evolution of Scrum
- Scrum vs. Waterfall
- Homework

3. Scrum Part I

Module 1: Scrum Roles

- Scrum Team
- Product Owner
- Scrum Master
- Stakeholders
- Responsibilities and characteristics of each role

Module 2: Scrum Artifacts

- Product Backlog
- Sprint Backlog
- Increment
- Definition of Done
- Understanding and managing artifacts

Module 3: Scrum Ceremonies

- Sprint Planning
- Daily Scrum
- Sprint Review
- Sprint Retrospective
- The purpose and format of each ceremony

Module 4: Sprint and Increment

- What is a Sprint?
- Sprint duration and goals
- The Increment as a potentially releasable product
- Sprint Burndown charts

4. Scrum II

Module 5: Sprint Planning and Backlog Refinement

- Creating a Product Backlog
- Estimating and prioritizing user stories
- Sprint Planning Meeting
- Backlog refinement best practices

Module 6: Daily Scrum

- The role of the Daily Scrum in team communication
- Structuring Daily Scrum meetings
- Common pitfalls and how to avoid them.

Module 7: Sprint Execution

- How the Scrum Team carries out work during a Sprint
- Self-organization and cross-functionality
- Handling scope changes during a Sprint

Module 8: Sprint Review and Retrospective

- Conducting effective Sprint Reviews
- Collecting feedback from stakeholders
- Continuous improvement through Sprint Retrospectives
- Retrospective formats and techniques

Module 9: Scaling Scrum

- Introduction to scaling frameworks (e.g., SAFe, LeSS, Nexus)
- Challenges and considerations when scaling Scrum.
- Combining multiple Scrum teams into larger initiatives

Module 10: Agile Metrics and Reporting

- Key Agile metrics (e.g., Velocity, Burndown charts)
- Using metrics to track progress and make data-driven decisions.
- Reporting and transparency in Agile

Module 11: Agile Scrum in the Real World

- Case studies and real-world examples of Scrum implementation
- Addressing shared challenges and roadblocks
- Best practices for sustaining Agile Scrum

5. Agile Scrum Certification

- Overview of Scrum certifications (e.g., Scrum Master, Product Owner)
- Preparing for certification exams
- Benefits of certification and career opportunities

6. Final Project

Module 5: JIRA Training

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Understand the Scrum Master's role and Responsibilities in a successful project.

About this Course:

This course is designed to take participants from beginner to advanced levels in Jira, a popular project and issue tracking tool. Whether you are a scrum master, business analyst, project manager, developer, or part of an agile team, this course will equip you with the knowledge and skills to effectively use Jira for project management, issue tracking, and collaboration.

What You'll Learn

- Introduction to Jira.
- Issue Management
- Agile Project Management with Jira
- Advanced Jira Features
- Jira Administration
- Jira Integrations and Best Practices

Hands-On Exercises

- Setting Up Your Jira Environment
- Navigating Jira
- Creating and Managing Projects
- Creating and Managing Issues
- Customizing Workflows
- Prioritizing and Organizing Issues
- Creating and Managing Agile Boards
- Managing Agile Teams
- Reporting and Dashboards
- User Management and Permissions
- Performance and Scalability

Who Needs to Attend

- Project Managers
- Software Developers
- Agile Teams
- Product Owners and Scrum Masters
- Quality Assurance (QA) Teams
- Entrepreneurs and Small Business Owners

Prerequisites

- Basic knowledge of General IT Knowledge
- Familiarity with Computing Concepts

IT Expert System

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Certification Programs and Certificate Tracks

- This course prepares you for the Jira Agile Practitioner Certification Exam.

Book:

- "Jira Strategy Admin Workbook" -by Rachel Wright

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Week 1: Introduction to Jira

- **Introduction to Jira**
  - What is Jira?
  - Key features and benefits
  - Jira editions and pricing
- **Setting Up Your Jira Environment**
  - Installation and configuration
  - Understanding user roles and permissions
- **Navigating Jira**
  - Dashboard overview
  - Understanding the Jira interface
  - Personalizing your dashboard
- **Creating and Managing Projects**
  - Creating your first project
  - Configuring project settings
  - Project templates
- **Creating and Managing Issues**
  - Issue types and schemes
  - Creating issues
  - Issue search and filtering

Week 2: Issue Management

- **Issue Workflow and Lifecycle**
  - Customizing workflows

  - Transitions, statuses, and resolutions
  - Workflow best practices
- **Prioritizing and Organizing Issues**
  - Issue ranking and prioritization.
  - Agile boards (Kanban and Scrum)
  - Backlog management
- **Advanced Issue Attributes**
  - Components and versions
  - Labels and epics
  - Custom fields and configurations

Week 3: Agile Project Management with Jira

- **Introduction to Agile Methodologies**
  - Scrum, Kanban, and other agile frameworks
  - Agile project management concepts
- **Creating and Managing Agile Boards**
  - Scrum and Kanban boards
  - Board settings and configurations
  - Sprint and backlog planning
- **Managing Agile Teams**
  - Team roles and responsibilities
  - Velocity tracking and reporting
  - Burn down charts and sprint reviews.

Week 4: Advanced Jira Features

- **Customizing Jira with Workflows**
  - Workflow customization
  - Conditional and post functions
  - Workflow best practices
- **Automation in Jira**
  - Jira automation rules
  - Examples of automation
  - Custom automation rules
- **Reporting and Dashboards**
  - Creating custom reports
  - Jira dashboard customization
  - Integrating Jira with third-party reporting tools

Week 5: Jira Administration

- **User Management and Permissions**
  - Managing users and groups
  - Setting project permissions
  - Global permissions and security

- **Data Backup and Restoration**
  - Backup strategies and best practices
  - Restoring Jira data
  - Disaster recovery planning
- **Performance and Scalability**
  - Scaling Jira for large organizations
  - Performance optimization tips
  - Monitoring and troubleshooting

Week 6: Jira Integrations and Best Practices

- **Integrating Jira with Other Tools**
  - Jira integrations with popular software
  - Automation using APIs.
  - Building custom integrations
- **Jira Best Practices**
  - Best practices for issue management
  - Agile project management tips
  - Workflow and automation best practices
- **Final Project and Certification**
  - Hands-on project: Implement a Jira solution.
  - Course recap and Q&A
  - Course completion and certification

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation.

Module 6: Service Oriented Architecture

Understand the System Engineer role and Responsibilities.

About this Course:

This introduction to Microservices training course explains the benefits of microservices architecture and provides hands-on experience in the tools most popular for designing, building, monitoring, and maintaining microservices.

What You'll Learn

- Identify the characteristics of popular microservices and understand the design differences.

- Decompose monolithic application on single server into containerized application on multiple cloud instances.
- Build a simple single purpose serverless application.
- Expose an Application Program Interface for the application.
- Review various approaches to infrastructure used in deploying microservices.
- Monitor and maintain microservices in large ecosystems and the cloud.

Hands-On Exercises

- Design Web Service (REST and SOAP)
- Deploy Web Service in cloud.
- Consume Web Services using Web Application
- Design CI/CD Automation Pipeline
- Postman API Testing
- Performance Tuning

Who Needs to Attend

Systems analysts, Developer, Quality Analyst, Network Admin developers, software engineers, cloud engineer, Project Manager

Prerequisites

- Some Programming knowledge is preferred.

Certification Programs and Certificate Tracks:

N/A

Book:

Building Microservices: Designing Fine-Grained Systems 1st Edition

by Sam Newman (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%

- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

The Emergence of Microservices Architecture

- Web services Overview
- REST vs SOAP Overview
- Web Services use cases.
- Explore the ideal software development practice.
- Learn how fine-grained Service-Oriented Architecture (SOA) can help to achieve the ideal
- Learn how Micro service attempts to achieve the ideal
- SOA benefits

Microservice Design Principles

- Designing small microservices
- Designing independent microservices
- Designing resilient microservices

Integrating Microservices

- Understand design goals when integrating microservices.
- Explore effective message forms at sand lightweight inter-service communication approaches.
- Review the pros and cons of various service communication patterns.

Microservice Technologies

- Enable the development, deployment, and support of microservices using popular technologies.

Decomposing the Monolith

- Using monolithic decomposition as an approach toward application modernization
- Review successful decomposition patterns.
- Decompose monolithic application using helpful practices.

Deploying and Maintaining Microservices

- Explore the intersection of DevOps and microservices.
- Leverage virtual, cloud, and containerized environments for microservice deployment.
- Discover how to monitor a microservices environment and take appropriate action to enable scaling or react to system faults.

Capstone project

IT Expert System

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Module 7: Business Analyst

Understand the Data Analyst role and Responsibilities in a successful project.

About this Course:

This comprehensive Tableau training course is designed to equip participants with the skills and knowledge needed to create powerful data visualizations and perform advanced analytics using Tableau Desktop. Participants will learn how to connect to various data sources, transform and clean data, create interactive dashboards, and share insights with others.

What You'll Learn

- **Tableau Fundamentals:** Dive into the world of Tableau by understanding its interface, basic functions, and data connection methods.
- **Data Preparation**: Learn how to clean, shape, and transform data to make it Tableau-ready for analysis and visualization.
- **Visualization Techniques:** Explore various visualization types, such as bar charts, line graphs, scatter plots, and maps, and master the art of creating compelling visualizations.
- **Dashboard Creation**: Discover how to design interactive dashboards that convey insights effectively to your audience.
- **Advanced Analytics**: Uncover Tableau's advanced features for statistical analysis, forecasting, and predictive modeling.
- **Data Storytelling:** Develop the skills to craft data-driven narratives that engage and inform stakeholders.
- **Tableau Server and Online**: Explore the deployment and sharing of Tableau workbooks on Tableau Server and Tableau Online.

Hands-On Exercises

- Getting Started with Tableau
- Data Preparation in Tableau
- Advanced Visualization Techniques
- Dashboard Creation
- Advanced Analytics with Tableau
- Data Storytelling with Tableau
- Publishing to Tableau Server or Tableau Online

Who Needs to Attend

- Data Analysts and Scientists
- Business Intelligence Professionals
- Data Enthusiasts
- Marketing and Sales Analysts
- Anyone seeking to harness data for better decision-making.

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Prerequisites

- No prior Tableau experience is required. Basic familiarity with data concepts and Microsoft Excel is helpful but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Tableau Certification.

Book:

Power BI, Excel, and Tableau - Business Intelligence Clinic: Create and Learn – Roger F. Silva

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Tableau

- Course Introduction and Tableau Overview
- Installing Tableau Desktop and Connecting to Data Sources
- Data Terminology and Tableau Data Types
- Data Preparation and Cleaning in Tableau

2. Basic Visualization Techniques

- Building Your First Visualization
- Exploring Marks, Filters, and Groups
- Mapping and Geographic Visualizations
- Sorting and Aggregating Data

3. Advanced Visualization Techniques

- Calculated Fields and Expressions
- Parameters and Sets
- Trend Lines, Reference Lines, and Forecasting
- Dual-Axis and Combo Charts

4. Interactive Dashboards and Sharing

- Creating Interactive Dashboards
- Dashboard Actions and Interactivity
- Publishing to Tableau Server and Tableau Online
- Final Projects and Course Review

Assessments and Projects:

- Weekly quizzes and assignments
- Mid-course project: Create a data visualization from scratch.
- Final project: Design an interactive dashboard using real-world data.
- Course project presentation and peer review

Module 8: Selenium Web Automation

Understand the Quality Engineer's role and Responsibilities in a successful project.

About this Course:

Selenium is a widely used open-source tool for automating web browsers. This comprehensive training course will provide you with the skills and knowledge necessary to automate web applications using Selenium Web Driver and related technologies. Whether you are a beginner or have some experience in automation testing, this course will take you from the basics to advanced automation techniques.

What You'll Learn

- Selenium Web Driver Basics
- Advanced Selenium Web Driver Techniques
- Test Automation Frameworks
- Selenium Grid and Advanced Topics

Hands-On Exercises

- Setting Up Selenium Environment
- Locating and Interacting with Elements
- Handling Waits and Synchronization
- Implementing the Page Object Model (POM)
- Handling Frames, Windows, and Cookies
- Test NG Integration and Data-Driven Testing
- Test Automation Best Practices
- Selenium Grid and Parallel Testing
- Continuous Integration (CI)

Who Needs to Attend

- Software Testers and QA Engineers
- Automation Engineers
- Software Developers

- Dev Ops Engineers
- Quality Assurance Managers
- Career Changers, Entrepreneurs, Anyone Interested in Automation

Prerequisites

- Basic knowledge of programming concepts (e.g., variables, loops, and functions)
- Familiarity with HTML and CSS
- Understanding of web browsers and web applications
- Experience with a programming language (e.g., Java, Python, C#)

Certification Programs and Certificate Tracks

- N/A.

Book:

Selenium with Java – A Beginner's Guide: Web Browser Automation for Testing using Selenium with Java (English Edition) – Pallavi Sharma

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Selenium

1.1. Introduction to Automation Testing

- What is automation testing?
- Advantages of automation testing

1.2. Introduction to Selenium

- History and evolution of Selenium
- Selenium components (Selenium Web Driver, Selenium IDE, Selenium Grid)

1.3. Setting up the Selenium Environment

- Installing Java Development Kit (JDK)

- Installing Selenium Web Driver
- Configuring Selenium Web Driver with different browsers

1.4. Writing Your First Selenium Script

- Creating a basic Selenium script
- Locating and interacting with web elements
- Running and debugging Selenium scripts

2. Selenium Web Driver Basics

2.1. Web Elements and Locators

- Understanding HTML elements
- Locating elements using various locators (e.g., ID, name, X Path, CSS selectors)

2.2. Handling Web Elements

- Interacting with text fields, buttons, checkboxes, and radio buttons
- Working with dropdowns and selecting elements.
- Managing alerts and pop-ups

2.3. Waits in Selenium

- Implicit vs. Explicit waits
- Handling synchronization issues

3. Advanced Selenium Web Driver Techniques

3.1. Page Object Model (POM) Design Pattern

- Introduction to POM
- Implementing POM in Selenium

3.2. Handling Frames and Windows

- Switching between frames
- Managing multiple browser windows and tabs

3.3. Handling Cookies

- Adding, deleting, and managing cookies

4. Test Automation Frameworks

4.1. Introduction to Test NG

- Installing and configuring Test NG
- Writing and running Test NG test cases

4.2. Data-Driven Testing

- Parameterizing test cases using Test NG data providers.
- Reading test data from external sources (e.g., Excel, CSV)

4.3. Test Automation Best Practices

- Maintaining code quality
- Handling exceptions and error handling
- Reporting and logging

5. Selenium Grid and Advanced Topics

5.1. Introduction to Selenium Grid

- Setting up a Selenium Grid
- Running tests in parallel on multiple browsers and machines

5.2. Continuous Integration (CI) Integration

- Integrating Selenium with popular CI tools (e.g., Jenkins, Travis CI)

5.3. Automation for Mobile Web and Cross-Browser Testing

- Overview of mobile web automation
- Cross-browser testing strategies

5.4. Final Project

- Building a comprehensive test automation project

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation and test automation review.

PROGRAM DESCRIPTION- SYSTEM ENGINEERING PROGRAM

Analyze, test, troubleshoot, and evaluate existing network systems, such as local area network (LAN), wide area network (WAN), and Internet systems or a segment of a network system. Perform network maintenance to ensure networks operate correctly with minimal interruption. Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet systems or a segment of a network system. Monitor network to ensure network availability to all system users and may perform necessary maintenance to support network availability. May monitor and test Web site performance to ensure Web sites operate correctly and without interruption. Assist in network modeling, analysis, planning,

and coordination between network and data communications hardware and software. Supervise computer user support specialists and computer network support specialists and administer network security measures.

Program Objective: This will enable students taking the program to excel in Networking related position such as Systems Administrator, Systems Engineer Information, Information Technology Manager (IT Manager), Information Technology Specialist (IT Specialist), Local Area Network Administrator (LAN Administrator), Network Administrator, Network Engineer, Network Manager, and Network Specialist.

Length of Program / Program Duration: 55 Weeks/ 550 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

Fees Structure:

Tuition – $8000

Books – $600

Certifications/Tests – $1200 (AWS, Linux, and Oracle)

Other Expenses – $200 (Tools, Software, and Lab Work)

Total Cost – $10,000

Module 1: Linux System Administration

Acquire skills to perform duties as a Linux System Engineer/Administrator

About this Course:

In this course you will delve into the role and responsibilities of Linux Systems Engineer and Administrator. You will learn the Linux operating system and tools that prepare you to perform your duties as a Linux System Administrator.

What You'll Learn

- Linux as an operating system
- Linux echo system
- Installing and configuring Linux
- User and Group management
- Software packaging and installation
- Linux shell
- Linux CLI
- Linux Shell Scripting

- Automating Linux tasks with shell scripting and corn
- Identifying and troubleshooting
- Deploying and configuring common server packages – Web Server, DHCP, DNS
- Linux networking

Hands-On Exercises

- Installing and configuring Debian Linux
- Linux Shell commands
- Linux Shell programming
- Linux corn
- Linux networking
- Installing, configuring, and updating packages
- Managing Linux services
- Troubleshooting

Who Needs to Attend

IT analysts, systems engineers, System Administrators, Programmers

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

None

Book:

A Self-study guide for the Linux Foundation Exam

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%

- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Linux operating system

- Overview and history of Linux operating System
- Roles and Responsibilities of Linux System engineer/Administrator
- Linux components – Kernel and Tools
- Lab: Installation and Configuration
- Linux file system
- Labs
- Homework

2. Linux Shell Commands

- Introduction to Linux shell
- Connecting with Linux machine with Putty
- Basic Linux commands for system
- Linux commands for file and user management
- Executing basic shell commands
- Introduction to VI editor
- **Labs**
- **Homework**

3. Linux advanced commands

- User and group management
- Monitoring Linux processes
- Linux pipes
- Advanced file search and operations commands
- **Labs**

- **Homework**

4. Linux Shell Scripting

- Introduction to Shell programming
- Basic constructs of shell programming
- Creating and executing basic shell scripts
- Variables
- Control statements – if/else, for, while case
- **Labs**
- **Homework**

5. Linux Shell Scripting and CRON jobs

- Writing useful scripts with Shell scripts
- Functions in shell scripts
- Error handling and logging in shell scripts
- Setting up CRON jobs for scheduling shell jobs
- **Labs**
- **Homework**

6. Software management in Linux systems

- Introduction to Linux software packaging
- Installing and configuring software packages using package manager
- Getting information of packages and content of the packages
- Removing software packages
- **Labs**
- **Homework**

7. Installing and managing common services in Linux

- Common server software – Http server, SSH, DHCP and DNS
- Installing and configuring Apache http server

- Understanding Linux startup and Service setup
- Running Apache server as service on Linux startup
- Installing and configuring SSH, DHCP and DNS on Linux
- Configuring Linux networking
- **Labs**
- **Homework**

Project Work

Module 2: Physical Networking

Understand the System Engineer role and Responsibilities.

About this Course:

This course is an introduction to the world of networking personal computers. It focuses on configuring, managing, and troubleshooting elements of the basic network infrastructure.

What You'll Learn

- Learn Cabling
- Learn network protocols.
- Learn networking devices.
- Learn how to secure a network.
- Learn to make RJ45 cables.
- Learn Types of Cables

Hands-On Exercises

- Build network using switch.
- Build Rack
- Prepare RJ45 cables.
- Networking commands
- Troubleshooting networks

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Who Needs to Attend

Systems analysts, Network Admin developers, software engineers, cloud engineer, Project Manager

Prerequisites

- Basic computer knowledge is preferred.

Certification Programs and Certificate Tracks:

N/A

Book:

Networking Made Easy: Get Yourself Connected (Computers Made Easy) Paperback – September 2, 2018

by James Bernstein (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Networking concepts

- Identify basic networking concepts, including how a network works. Content should be included.
- network access, protocol, network interface cards, full duplex, cablingtwisted pair, coaxial, fiberoptic.
- Identify procedures for swapping and configuring network interface cards.
- Identify the ramifications of repairs on the network. Content should include reduced bandwidth, loss of data, and network slowdown.
- Identify the networking capabilities of DOS and Windows including procedures for connecting to the network. Identify concepts and capabilities relating to the Internet and basic procedures for setting up a system for Internet access. Content should include TCP/IP, E-mail, html, http, ftp, domain names (Web sites), ISP, and dial-up access.

- Labs
- Homework

Summarize the basics of networking fundamentals, including technologies, devices and protocols

- Basics of configuring IP addressing and TCP/IP properties (DHCP, DNS)
- Bandwidth and latency
- Status indicators
- Protocols (TCP/IP, NETBIOS)
- Full-duplex, half-duplex
- Basics of workgroups and domains
- Common ports: HTTP, FTP, POP, SMTP, TELNET, HTTPS
- LAN / WAN
- Hub, switch, and router
- Identify Virtual Private Networks (VPN)
- Basics class identification
- Labs
- Homework

Categorize network cables and connectors and their implementations.

- Cables
- Plenum / PVC
- UTP (e.g., CAT3, CAT5 / 5e, CAT6)
- STP
- Fiber
- Coaxial cable
- Labs
- Homework

Connectors

- RJ45
- RJ11
- Labs
- Homework

Compare and contrast the different network types.

- Broadband

- DSL
- Cable
- Satellite
- Homework

Module 3: Active Directory Administration

Understand the System Admin's role and Responsibilities in a successful project.

About this Course:

This comprehensive Active Directory Administration and Management course provides participants with the essential knowledge and hands-on skills needed to effectively deploy, configure, and manage Active Directory in enterprise environments. Designed for IT professionals, system administrators, and network engineers, this course covers a broad spectrum of topics ranging from the fundamentals of directory services to advanced concepts such as security, replication, and integration with cloud services.

What You'll Learn

- Installation and Configuration
- Managing Users and Groups
- Organizational Units (OUs) and Group Policy
- Active Directory Security
- Active Directory Replication and Disaster Recovery
- Active Directory Federation Services (ADFS) and Cloud Integration
- Active Directory in Cloud Environments
- Best Practices and Troubleshooting

Hands-On Exercises

- Active Directory Installation and Configuration
- User and Group Management
- Organizational Units (OUs) and Group Policy
- Active Directory Security
- Active Directory Replication and Disaster Recovery
- Active Directory Federation Services (ADFS) and Cloud Integration
- Active Directory Lightweight Directory Services
- Active Directory Certificate Services
- Performance Optimization
- Troubleshooting Scenarios

Who Needs to Attend

- System Administrators
- Network Administrators
- Security Professionals

- IT Consultants
- Network Engineers
- Cloud Administrators
- Anyone Interested in Learning Active Directory

Prerequisites

- Basic understanding of networking concepts and Windows Server operating system.

Certification Programs and Certificate Tracks

- This course prepares you for the Microsoft Active Directory Administration Certification.

Book:

Active Directory Administration Cookbook: Actionable, proven solutions to identity management and authentication on servers and in the cloud

– Sander berkouwer

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Active Directory

1.1 Overview of Directory Services

- Definition and Purpose of Directory Services
- Role of Active Directory in Enterprise Environments
- Importance of Directory Services in Network Management

1.2 Evolution of Active Directory

- Windows NT Domains vs. Active Directory
- Historical Development and Versions of Active Directory
- Key Features and Improvements over the Years

1.3 Active Directory Components

- Understanding Forests, Domains, and Trees
- Organizational Units (OUs) and their Role
- Global Catalog and Schema

2. Active Directory Installation and Configuration

2.1 Preparing for Installation

- Hardware and Software Requirements
- DNS Considerations and Best Practices

2.2 Installing Active Directory

- Using the Active Directory Domain Services Installation Wizard
- Promoting a Server to a Domain Controller
- Configuring Additional Domain Controller Options

2.3 Configuring Forests and Domains

- Creating and Configuring Forests and Domains
- Understanding Domain Functional Levels
- Considerations for Upgrading Domain Functional Levels

3. Managing Users and Groups

3.1 Creating and Managing User Accounts

- User Account Properties and Attributes
- User Lifecycle Management
- Best Practices for User Account Administration

3.2 Group Management

- Security and Distribution Groups
- Creating and Managing Groups
- Group Nesting and Group Scope

3.3 Delegating Administration

- Delegating Control in Active Directory
- Customizing Administrative Roles
- Best Practices for Delegation

4. Organizational Units (OUs) and Group Policy

4.1 Understanding Organizational Units (OUs)

- Purpose and Benefits of OUs
- Designing an OU Hierarchy
- Strategies for Organizing Objects in OUs

4.2 Group Policy Overview

- Introduction to Group Policy Objects (GPOs)
- Applying GPOs to OUs, Domains, and Sites
- Troubleshooting Group Policy Application

5. Active Directory Security

5.1 Securing Domain Controllers

- Physical Security Considerations
- Configuring DC Security Settings
- Best Practices for Securing Domain Controllers

5.2 Authentication and Authorization

- Kerberos Authentication Process
- Configuring Access Control through Permissions
- Role-Based Access Control (RBAC)

5.3 Auditing and Monitoring

- Enabling and Configuring Auditing
- Monitoring Tools (Event Viewer, Performance Monitor)
- Responding to Security Incidents

6. Active Directory Replication

6.1 Understanding Replication

- Replication Topology
- Inter-Site and Intra-Site Replication
- Troubleshooting Replication Issues

6.2 Disaster Recovery Planning

- Backup Strategies for Active Directory
- Authoritative and Non-Authoritative Restores
- Documenting and Testing Recovery Procedures

7. Active Directory Federation Services (ADFS)

7.1 Introduction to ADFS

- Single Sign-On (SSO) Concepts

- ADFS Components and Roles
- Implementing Federated Identity Management

7.2 Implementing ADFS

- Configuring Trust Relationships
- Integrating ADFS with Web Applications
- Troubleshooting ADFS Issues

8. Active Directory in Cloud Environments

8.1 Azure Active Directory (Azure AD)

- Integration with On-Premises AD
- Azure AD Features and Benefits

8.2 Hybrid Identity Solutions

- Azure AD Connect
- Managing Identities in a Hybrid Environment
- Best Practices for Hybrid Deployments

9. Advanced Topics

9.1 Active Directory Lightweight Directory Services (AD LDS)

- Introduction and Use Cases
- Configuration and Management

9.2 Active Directory Certificate Services (ADCS)

- Public Key Infrastructure (PKI) Basics
- Configuring and Managing AD CS
- Implementing Certificate Templates

10. Best Practices and Troubleshooting

10.1 Best Practices for Active Directory Administration

- Performance Optimization
- Security Best Practices
- Scaling Active Directory for Large Environments

10.2 Common Issues and Troubleshooting

- Troubleshooting Tools and Techniques
- Resolving Common Active Directory Problems
- Case Studies and Real-World Scenarios

11. Future Trends and Updates

11.1 Current Trends in Directory Services

- Emerging Technologies (Block chain, AI)
- Keeping Active Directory Up to Date
- Microsoft's Roadmap for Active Directory

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation.

Module 4: Cyber security Fundamentals

Understand the Security Engineer role and Responsibilities.

About this Course:

The Cyber security Fundamentals course will provide learners with principles of data and technology that frame and define cyber security. Learners will gain insight into the importance of cyber security and the integral role of cyber security professionals. The interactive, self-guided format will provide a dynamic learning experience where users can explore foundational cyber security principles, security architecture, risk management, attacks, incidents, and emerging IT and IS technologies.

What You'll Learn

- Learn Security Engineering Role
- Security BEST practices
- Security Role and Responsibilities
- Application Security
- Data Security
- Platform Security

- Use Security
- Security Tools and Technology

Hands-On Exercises

- Create Virtual Machine
- Linux Commands
- Networking Commands
- Network Architecture
- PGP Security
- Thread Model
- Firewall configuration
- CI / CD deployment

Who Needs to Attend

Systems analysts, Network Admin developers, software engineers, cloud engineer, Project Manager

Prerequisites

- Basic computer knowledge is preferred.

Certification Programs and Certificate Tracks:

Certificate of Cloud Security Knowledge (CCSK) | CSA

Book:

CCSK Certificate of Cloud Security Knowledge All-in-One Exam Guide 1st Edition

by Graham Thompson (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%

- Project: 30%

Course Outline

- **DOMAIN 1 - Cloud Computing Concepts and Architecture**
  - NIST Definition of Cloud Computing (Essential Characteristics, Cloud Service
  - Models, Cloud Deployment Models)
  - Multi-Tenancy
  - CSA Cloud Reference Model
  - Jericho Cloud Cube Model
  - Cloud Security Reference Model
  - Cloud Service Brokers
  - Quiz
  - LAB
  - Homework
- **DOMAIN 2 - Governance and Enterprise Risk Management**
  - Contractual Security Requirements
  - Enterprise and Information Risk Management
  - Third Party Management Recommendations
  - Supply chain examination
  - Use of Cost Savings for Cloud
  - Quiz
  - LAB
  - Homework
- **DOMAIN 3 - Legal Issues, Contracts, and Electronic Discovery**
  - Contractual Security Requirements
  - Enterprise and Information Risk Management
  - Third Party Management Recommendations
  - Supply chain examination
  - Use of Cost Savings for Cloud
  - Quiz
  - LAB
  - Homework
- **DOMAIN 4 - Compliance and Audit Management**
  - Definition of Compliance
  - Right to audit
  - Compliance impact on cloud contracts
  - Audit scope and compliance scope
  - Compliance analysis requirements
  - Auditor requirements
  - Quiz
  - LAB
  - Homework

- **DOMAIN 5 - Information Governance & Data Security**
  - Six phases of the Data Security Lifecycle and their key elements
  - Volume storage
  - Object storage
  - Logical vs physical locations of data
  - Three valid options for protecting data.
  - Data Loss Prevention
  - Detection Data Migration to the Cloud
  - Encryption in IaaS, PaaS & SaaS
  - Database Activity Monitoring and File Activity Monitoring
  - Data Backup
  - Data Dispersion
  - Data Fragmentation
  - Quiz
  - LAB
  - Homework
- **DOMAIN 6 – Data Center + Infrastructure Security**
  - Relation to Cloud Controls Matrix
  - Queries run by data center operators.
  - Technical aspects of a Provider's data center operations customers should understand.
  - Logging and report generation in multi-site clouds
  - Quiz
  - LAB
  - Homework
- **DOMAIN 7 - Virtualization and Containers**
  - Security concerns for hypervisor architecture
  - VM guest hardening, blind spots, VM Sprawl, data comingling, instant-on gaps
  - In-Motion VM characteristics that can create a serious complexity for audits
  - How can virtual machine communications bypass network security controls?
  - VM attack surfaces
  - Compartmentalization of VMs
  - Quiz
  - LAB
  - Homework
- **DOMAIN 8 - Incident Response**
  - Factor allowing for more efficient and effective containment and recovery in a cloud.
  - Main data source for detection and analysis of an incident
  - Investigating and containing an incident in an Infrastructure as a Service environment
  - Reducing the occurrence of application-level incidents
  - How often should incident response testing occur?
  - Offline analysis of potential incidents
  - Quiz
  - LAB

- Homework

- **DOMAIN 9 - Application Security**
  - identity, entitlement, and access management (IdEA)
  - SDLC impact and implications
  - Differences in S-P-I models
  - Consideration when performing a remote vulnerability test of a cloud-based application.
  - Categories of security monitoring for applications
  - Entitlement matrix
  - Quiz
  - LAB
  - Homework

- **DOMAIN 10 - Identity, Entitlement and Access Management**
  - Relationship between identities and attributes
  - Identity Federation
  - Relationship between Policy Decision Point (PDP) and Policy Enforcement Point
  - (PEP)
  - SAML and WS-Federation
  - Provisioning and authoritative sources
  - Quiz
  - LAB
  - Homework

- **DOMAIN 11 - Security as a Service**
  - Barriers to developing full confidence in security as a service (SECaaS)
  - When deploying Security as a Service in a highly regulated industry or environment, what should both parties agree on in advance and include in the SLA?
  - Logging and reporting implications
  - How can web security as a service be deployed?
  - What measures do Security as a Service provider take to earn the trust of their customers?
  - Quiz
  - LAB
  - Homework

- **DOMAIN 12 - Related Technologies**
  - BIG DATA
  - Mobile Devices
  - IOT Devices
  - Micro Services
  - Certification Preparation
  - Quiz

Module 5: Windows Administration

Understand the System Engineer role and Responsibilities.

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

About this Course:

Students will learn how to manage Windows machines and Servers. Students will learn how to configure Windows machines, install software, monitor resources, and secure systems. The course also covers Windows Virtualization.

What You'll Learn

- Manage Window Machine
- Protect System
- Configure User Access
- Fire Wall Management
- Device and Driver management
- Configure Virtualization

Hands-On Exercises

- Install Windows
- Create Users and Groups
- Configure Firewall
- Monitor System
- Configure Windows
- Data Security
- Performance Tuning

Who Needs to Attend

Systems analysts, Network Admin developers, software engineers, cloud engineer, Project Manager

Prerequisites

- Basic computer knowledge is preferred.

Certification Programs and Certificate Tracks:

Exam MD-100: Windows Client

Book:

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Windows 10, Essentials for Administration, 2nd Edition (It Pro Solutions) 2nd ed. Edition

by William R Stanek (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

GETTING STARTED USING WINDOWS

- Introducing Windows 7
- A First Look at the Windows Desktop
- Working with User Accounts
- Users, Passwords & Permissions
- Exploring Log O& Power Options
- Quiz
- Homework

CUSTOMIZING THE WINDOWS DESKTOP

- Using Icons & Shortcuts
- Adding Gadgets
- Customizing Backgrounds & Window Appearance
- Customizing Sounds, Screensavers & Icons
- Changing Screen Resolution

ACCESSING THE START MENU

- Using Start Menu Options
- Customizing the Start Menu
- Finding Programs, Files & Settings
- Quiz
- Homework

EXPLORING THE REVISED TASK BAR

- Customizing the Notification Area
- Exploring Buttons on the Taskbar
- Taking Advantage of Jump Lists
- Setting Taskbar Properties
- Labs
- Homework

OPTIMIZING THE WINDOWS USER EXPERIENCE

- Moving & Sizing Windows
- Window Navigation Using Breadcrumbs
- Window Navigation & Customization
- Accessing & Configuring Libraries
- Organizing, Rating & Tagging Files
- Indexing & Search Options
- Searching for Files
- Sharing Files & Folders
- Quiz
- Homework

EXAMINING HARDWARE & SOFTWARE

- Viewing Devices & Printers
- The Device Manager, Drivers & Power Management
- Setting Default Actions & Programs
- Installing & Uninstalling Software
- Alternate Hardware & Software Tools: Touch
- Speech Recognition
- Live Essentials & Services
- Labs
- Homework

Enjoying Media

- Playing Audio & Video Using the Media Player
- Ripping CDs & Creating Playlists

- Experiencing the Next Level with the Windows Media Center
- Tapping into the Windows 7 Gaming Experience

Connecting to a network

- Networking Overview
- Getting Started with Windows 7 Networking
- Working with the Network Adaptor
- Viewing the Network Map & Changing the Workgroup
- Mapping a Network Drive
- Labs
- Homework

Maintaining your system

- Optimizing Performance
- Using Troubleshooters & the Action Center
- Using the Problem Steps Recorder
- Keeping Current with Windows Update

Securing your System & Data

- Working with System Restore & Shadow Copies
- Executing Backup & Restore
- Implementing BitLocker & BitLocker to Go Credits
- Labs
- Homework

Building security policies

- Documenting server security
- Composing optimal Group Policies

Auditing the server

- Diagnosing security issues
- Creating an audit trail
- Filtering the security log

Optimizing Server Performance

- Assessing workloads
- Balancing applications and server roles
- Evaluating hardware and software components
- Reconfiguring the operating system

Monitoring server performance

- Analyzing system behavior with Resource Monitor
- Establishing baselines with Performance Monitor
- Designing Data Collector Sets

Detecting and resolving performance concerns

- Identifying Performance Monitor counters
- Solving the challenge of memory leaks
- Exploring the effect of services on server performance

Implementing a High-Availability Environment Windows in the cloud

- Preparing Windows features for the cloud
- Producing a disaster recovery plan
- Scheduling Windows backups
- Clustering Windows servers
- Meeting failover clustering requirements
- Recognizing the role of Quorums
- Vitalizing servers
- Increasing scalability potential with Hyper-V
- Speeding up recovery with replicas
- Maintaining high availability with live migration
- Labs
- Homework

Module 6: AWS Certified Developer Associate

Understand the System Engineer's role and Responsibilities in a successful project.

About this Course:

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

This AWS Cloud training course is designed to provide participants with a solid foundation in Amazon Web Services, equipping them with the skills and knowledge required to effectively use AWS services for various applications. From basic cloud concepts to advanced AWS services, this course covers a wide range of topics to help you become proficient in cloud computing.

What You'll Learn

- Cloud Computing and AWS
- Amazon EC2
- AWS Lambda and Server less Computing
- Amazon S3
- Amazon RDS
- Amazon VPC (Virtual Private Cloud)
- AWS Identity and Access Management (IAM)
- Scalability and High Availability
- Monitoring, Logging, and Cost Management
- AWS Best Practices and Well-Architected Framework

Hands-On Exercises

- Launching Your First EC2 Instance
- Load Balancing with ELB
- Creating and Deploying Lambda Functions
- Working with Amazon S3
- Launching an RDS Database Instance
- Creating and Configuring a VPC
- Managing IAM Users and Permissions
- Auto Scaling and Elastic Beanstalk
- Monitoring with AWS Cloud Watch
- AWS Cost Management
- Designing a Well-Architected AWS Solution

Who Needs to Attend

- IT Professionals
- Developers
- Business Leaders and Managers
- Data Scientists and Analysts
- Security Professionals
- AWS Partner Network (APN) Members
- Career Changers, Entrepreneurs, Anyone Interested in Cloud Computing

Prerequisites

- Basic knowledge of General IT Knowledge

- Familiarity with Computing Concepts

Certification Programs and Certificate Tracks

- This course prepares you for the AWS Cloud Practitioner Certification Exam.

Book:

AWS Certified Solutions Architect Study Guide with 900 Practice Test Questions

– Ben Piper

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Cloud Computing and AWS

1.1Introduction to Cloud Computing

- Understanding cloud computing concepts
- Benefits and challenges of cloud computing
- Cloud service models: IaaS, PaaS, SaaS

1.2 Getting Started with AWS

- Creating an AWS account
- AWS Management Console overview
- Setting up AWS CLI and AWS SDKs

2. Compute Services

2.1 Amazon EC2 (Elastic Compute Cloud)

- Launching and managing EC2 instances
- EC2 instance types and families
- Elastic Load Balancing (ELB)

2.2 AWS Lambda

- Server less computing with Lambda
- Creating and deploying Lambda functions
- Event-driven architecture

3. Storage and Database Services

3.1 Amazon S3 (Simple Storage Service)

- Object storage fundamentals
- Creating and managing S3 buckets
- S3 data management and versioning

3.2 Amazon RDS (Relational Database Service)

- Managed database services in AWS
- Creating and managing RDS instances
- Database backups and high availability

4. Networking and Security

4.1 Amazon VPC (Virtual Private Cloud)

- Networking fundamentals in AWS
- VPC setup and configuration
- Security groups and NACLs

4.2 AWS Identity and Access Management (IAM)

- IAM basics and policies
- Creating and managing IAM users and roles
- Securing AWS resources with IAM

5. Advanced AWS Services and Best Practices

5.1 AWS Services for Scalability and High Availability

- Auto Scaling and Elastic Load Balancing
- AWS Elastic Beanstalk for application deployment
- Designing for high availability

5.2 Monitoring, Logging, and Cost Management

- AWS Cloud Watch for monitoring
- AWS Cloud Trail for auditing
- Cost management best practices

5.3 AWS Best Practices and Well-Architected Framework

- Review of AWS Well-Architected Framework
- Security, reliability, performance efficiency, and cost optimization

Assessment:

- Weekly quizzes or assignments
- Mid-term project

Final project present

Module 7: DevOps

Acquire skills to perform duties as a DevOps engineer in Its organization.

About this Course:

In this you will delve into the role and responsibilities of DevOps engineer. DevOps is all about automating and managing organizations IT infrastructure in desired state. You will learn tools and technologies involved in completing all phases of DevOps lifecycle. As part of this course, you will learn concepts, challenges, and solutions to implement optimal DevOps solution based on Organizations' IT requirement.

What You'll Learn

- DevOps – Concepts, culture, and Principles
- DevOps – Roles and Responsibilities
- DevOps Practices – Version Control, Automated build and deployments, Test Automation deployments
- Continuous integration with Jenkins
- Containerization with Docker
- Continuous deployment with Kubernetes and Helm charts
- Infrastructure monitoring with Prometheus and Graphana
- IT Service Management principles and practices
- Implementing DevOps in cloud (AWS/Azure)

Hands-On Exercises

- Source code version control using Git and GitHub

- Branching strategies and reviews in Git
- Installing pre-requisite software for Continuous integrations
- Setting up CI pipeline with Jenkins
- Installing Docker components
- Containerizing Python application
- Installing Kubernetes components
- Deploying containerized python application on Kubernetes cluster
- Learning Kubernetes commands to manage deployed applications.
- Monitoring infrastructure using Prometheus.
- Using Graphana to proactively identify and resolve infrastructure issues.
- Create a DevOps pipeline in Azure/AWS cloud to manage cloud application.

Who Needs to Attend

System administrators, Network Administrators, Software engineers, IT analysts, developers, and infrastructure architects

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

None

Book:

The DevOps handbook

Authors: Gene Kim, Jez Humble, Patrick Debois, John All spaw and John Willis

Effective DevOps

Authors: Jennifer Davis and Ryn Daniels

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%

- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. DevOps – Theory and Concepts

- DevOps culture
- Overview of DevOps tools and technologies
- DevOps methodology
- DevOps practices
- Tenets of DevOps

2. Version control using GIT

- Introduction to Source code version control systems
- Distributed Version control using Git and GitHub
- Setting up a Source code repository
- Git Commands to manage artifacts – in it, clone, commit, push, pull.
- Creating and managing multiple versions of source files
- Effective branching strategies
- Creating and managing branches using git
- Implementing effective review process using git
- Homework

3. Continuous integration using Jenkins

- Introduction to continuous integration
- Overview of Jenkins architecture
- Setting up Jenkins for continuous integration
- Create pipeline for deploying application from source code repository.

- Setting up security in Jenkins
- Automatic build, test and deployment using Jenkins.
- Handling application build and deployment failures in Jenkins CI
- Homework
- Project for CI

4. Application containerization using Docker

- Introduction to containerization
- Role of containerized apps in DevOps
- Overview and architecture of Docker containerization platform
- Installing Docker
- Basic docker commands
- Key docker objects
- Building docker images and creating containers
- Steps to containerize application using docker.
- Provisioning and managing container storage.
- Automating docker image builds in CI pipeline.
- Homework
- Group Project

5. Managing continuous deployment using Kubernetes

- Introduction to continuous deployment
- Overview of Kubernetes architecture
- Installing Kubernetes
- Configuring Kubernetes
- Key concepts – Contexts, namespaces, pods
- Workflow for container deployments
- High level abstractions – Deployments, Replica Sets and Services

- Performing Rolling updates of application
- Blue / Green deployment strategy for ITSM
- Homework

6. Managing continuous deployment using Kubernetes and Helm charts

- Managing environment using Kubernetes secrets
- Managing storage in Kubernetes using mount volumes
- Introduction and Overview of Helm charts
- Structural differences between Kubernetes and helm charts
- Installing helm charts
- Basic commands for managing deployed versions using helm charts.
- Creating templates with parameters
- Supplying values to helm chart at the time of deployment.
- Creating helm repo for managing continuous deployments
- Homework
- Project

7. Monitoring infrastructure using Prometheus and Grafana

- Overview of infrastructure monitoring
- Importance of events and alerts in proactive monitoring
- Introduction to Prometheus
- Installing Prometheus
- Feature and architecture of Prometheus
- Setting up monitoring for containers
- Understanding data model
- Configuring and discovery
- Using Prometheus Query Language
- Installing and configuring Grafana
- Setting up infrastructure dashboards in Grafana
- Setting up alerts in Grafana

- Homework
- Project

8. DevOps in Cloud environments

- Overview of Cloud
- Introduction to Cloud services (Azure)
- Overview of Azure DevOps
- Setting up Project dashboard in Azure
- Integrating/setting git repositories in Azure
- Configuring CI pipelines in Azure
- Using Azure collaboration services
- Overview and importance of IT Cloud Services
- Homework

Module 8: Cisco Switches and Routers

Understand the System Engineer's role and Responsibilities in a successful project.

About this Course:

This course is designed to provide a comprehensive understanding of Cisco routers and their configuration. Students will learn the fundamentals of routing, how to configure and troubleshoot Cisco routers and gain hands-on experience with real-world scenarios.

What You'll Learn

- Introduction to Networking and Cisco Routers
- Routing Fundamentals
- Cisco Router Configuration
- Advanced Router Configuration
- Router Redundancy and High Availability
- Router Security
- Troubleshooting and Real-world Scenarios

Hands-On Exercises

- Basic Router Configuration
- Static Routing Setup

- Dynamic Routing Configuration
- Access Control Lists (ACLs)
- NAT and PAT Configuration
- Router Redundancy (HSRP or VRRP)
- VPN Configuration
- Troubleshooting Scenarios
- Real-World Network Design
- Router and Switch
- AWS cloud Account
- Packet tracer

Who Needs to Attend

- Network Administrators and Engineers
- IT Managers
- System Administrators
- Network Security Specialists
- Network Support Technicians
- Anyone Interested in Networking

Prerequisites

- No prior Oracle Database experience is required. Basic understanding of Networking Knowledge. Familiarity with fundamental concepts of Mathematics and Logical Thinking. but not mandatory.

Certification Programs and Certificate Tracks

- **This course prepares you for Cisco Certified Network Associate Certification.**

Book:

CCNA Routing and Switching Complete Study Guide - by Todd Lammle

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Week 1-2: Introduction to Networking and Cisco Routers

- Overview of Computer Networks
- Introduction to Cisco Routers and Their Role
- Router Hardware and Software
- Basic Router Configuration
- Lab/Homework

Week 3-4: Routing Fundamentals

- Introduction to Routing
- Types of Routing (Static, Dynamic)
- Routing Tables and Routing Protocols
- Routing Metrics and Algorithms
- Lab/Homework

Week 5-6: Cisco Router Configuration

- Accessing the Router (Console, SSH, Telnet)
- Passwords and Security
- Basic Configuration using CLI.
- Saving Configuration
- Lab/Homework

Week 7-8: Advanced Router Configuration

- Subnetting and IP Addressing
- Static Routing Configuration
- Dynamic Routing Protocols (RIP, OSPF, EIGRP)
- Route Redistribution
- Lab/Homework

Week 9-10: Router Redundancy and High Availability

- High Availability Concepts
- HSRP and VRRP Configuration
- Load Balancing with GLBP
- IP SLA and Object Tracking

Week 11: Router Security

- Access Control Lists (ACLs)
- NAT and PAT Configuration
- VPN Configuration
- Router Hardening Best Practices

Week 12: Troubleshooting and Real-world Scenarios

- Troubleshooting Tools and Techniques
- Common Router Issues and Solutions
- Case Studies and Hands-on Labs
- Capstone Project

Assessments and Projects:

- Weekly quizzes and assignments
- Mid-term examination
- Final project: Configuring a Network with Cisco Routers
- Final examination

PROGRAM DESCRIPTION- DATABASE AND DATA ANALYTICS COMBO

Program Objective: This program is very comprehensive and includes courses for Database management and learners aspiring to make a career in big data. The program includes ample labs, quizzes, group discussions/ exercises, project work, and internal/ external internship opportunities. The program includes ECBA / CBAP and PSM certifications.

Length of Program / Program Duration: 16 Weeks/ 160 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

Fees Structure:

Tuition – $6500

Books – $700

Certifications/Tests – $800 (SQL, Tableau)

Total Cost – $8,000

Module 1: Oracle - Database

Understand the Database Engineer's role and Responsibilities in a successful project.

About this Course:

This course is designed to provide students with a solid foundation in using SQL to work with Oracle databases. Participants will learn SQL concepts, syntax, and best practices, enabling them to retrieve and manipulate data efficiently from Oracle databases.

What You'll Learn

- Gain a deep understanding of Oracle Database architecture.
- Acquire proficiency in installation, configuration, and maintenance of Oracle Database.
- Develop skills to optimize database performance and ensure data integrity.

- Learn to manage security, user access, and privileges within the Oracle environment.
- Primary backup and recovery strategies to safeguard critical data.
- Explore advanced database features such as partitioning, data compression, and High Availability options.
- Be prepared for Oracle Database certification exams.

Hands-On Exercises

- Installation and Configuration
- Basic SQL Operations
- Backup and Recovery
- User Management
- Performance Tuning
- High Availability
- Advanced Features
- Security

Who Needs to Attend

- Data Analysts and Scientists
- Business Intelligence Professionals
- Data Enthusiasts
- Anyone seeking to harness data for better decision-making.

Prerequisites

- No prior Oracle Database experience is required.
- Basic understanding of databases and SQL. Familiarity with fundamental concepts of operating systems.but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Oracle Database Administrator Certification. (Oracle Certified Associate (OCA))

Book:

Study Guide for 1Z0-006: Oracle Database Foundations: Oracle Certification Prep

Matthew Morris

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%

- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Databases and Oracle

- Understanding Databases and Database Management Systems (DBMS)
- Introduction to Oracle Database
- Oracle SQL Developer Setup
- Connecting to the Oracle Database

2. SQL Basics

- Introduction to SQL
- SELECT Statement
- Filtering Data with WHERE Clause
- Sorting Data with ORDER BY
- Aliases for Column Names

3. Retrieving Data from Multiple Tables

- Understanding Table Joins
- INNER JOIN, LEFT JOIN, RIGHT JOIN
- CROSS JOIN, SELF JOIN
- USING Clause
- UNION and UNION ALL Operators

4. Filtering Data with Advanced Techniques

- Using the BETWEEN Operator
- Working with NULL Values
- Using IN and NOT IN Operators
- Combining Conditions with AND, OR, NOT
- Subqueries and Nested Queries

5. Data Modification and Transactions

- INSERT, UPDATE, and DELETE Statements
- COMMIT and ROLLBACK Statements
- Introduction to Transactions
- Savepoints

6. Aggregating and Grouping Data

- GROUP BY Clause
- Aggregate Functions (SUM, AVG, COUNT, MAX, MIN)

- HAVING Clause
- GROUPING SETS and ROLLUP
- Cube and Grouping

7. Working with Date and Time Data

- Date and Time Data Types
- Date Functions (TO_DATE, TO_CHAR, TO_TIMESTAMP)
- Calculating Date Differences
- Extracting Date Components

8. Managing Data with DDL Statements

- Introduction to Data Definition Language (DDL)
- Creating and Altering Tables
- Constraints (PRIMARY KEY, FOREIGN KEY, UNIQUE, CHECK)
- Indexes

9. Views, Sequences, and Synonyms

- Creating Views
- Sequences
- Synonyms
- Privileges and Security

10. Advanced SQL Topics

- Analytic Functions (ROW_NUMBER, RANK, DENSE_RANK, LAG, LEAD)
- Working with Large Data Sets

Assessments and Projects:

- Weekly quizzes or assignments
- Midterm exam
- Final exam
- Hands-on projects (e.g., building a database application)

Module 2: Tableau

Understand the Data Analyst role and Responsibilities in a successful project.

About this Course:

This comprehensive Tableau training course is designed to equip participants with the skills and knowledge needed to create powerful data visualizations and perform advanced analytics using Tableau Desktop.

Participants will learn how to connect to various data sources, transform and clean data, create interactive dashboards, and share insights with others.

What You'll Learn

- **Tableau Fundamentals:** Dive into the world of Tableau by understanding its interface, basic functions, and data connection methods.
- **Data Preparation**: Learn how to clean, shape, and transform data to make it Tableau-ready for analysis and visualization.
- **Visualization Techniques:** Explore various visualization types, such as bar charts, line graphs, scatter plots, and maps, and master the art of creating compelling visualizations.
- **Dashboard Creation**: Discover how to design interactive dashboards that convey insights effectively to your audience.
- **Advanced Analytics**: Uncover Tableau's advanced features for statistical analysis, forecasting, and predictive modeling.
- **Data Storytelling:** Develop the skills to craft data-driven narratives that engage and inform stakeholders.
- **Tableau Server and Online**: Explore the deployment and sharing of Tableau workbooks on Tableau Server and Tableau Online.

Hands-On Exercises

- Getting Started with Tableau
- Data Preparation in Tableau
- Advanced Visualization Techniques
- Dashboard Creation
- Advanced Analytics with Tableau
- Data Storytelling with Tableau
- Publishing to Tableau Server or Tableau Online

Who Needs to Attend

- Data Analysts and Scientists
- Business Intelligence Professionals
- Data Enthusiasts
- Marketing and Sales Analysts
- Anyone seeking to harness data for better decision-making.

Prerequisites

- No prior Tableau experience is required. Basic familiarity with data concepts and Microsoft Excel is helpful but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Tableau Certification.

IT Expert System

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Book:

Power BI, Excel, and Tableau - Business Intelligence Clinic: Create and Learn – Roger F. Silva

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Tableau

- Course Introduction and Tableau Overview
- Installing Tableau Desktop and Connecting to Data Sources
- Data Terminology and Tableau Data Types
- Data Preparation and Cleaning in Tableau

2. Basic Visualization Techniques

- Building Your First Visualization
- Exploring Marks, Filters, and Groups
- Mapping and Geographic Visualizations
- Sorting and Aggregating Data

3. Advanced Visualization Techniques

- Calculated Fields and Expressions
- Parameters and Sets
- Trend Lines, Reference Lines, and Forecasting
- Dual-Axis and Combo Charts

4. Interactive Dashboards and Sharing

- Creating Interactive Dashboards
- Dashboard Actions and Interactivity
- Publishing to Tableau Server and Tableau Online
- Final Projects and Course Review

Assessments and Projects:

- Weekly quizzes and assignments
- Mid-course project: Create a data visualization from scratch.
- Final project: Design an interactive dashboard using real-world data.
- Course project presentation and peer review

Module 3: Data Analytics

Understand the Data Analyst's role and Responsibilities in a successful project.

About this Course:

In this you will delve into the role and responsibilities of the Data Analyst and learn. Data Analytics means applying analytics/rules on data and find/organize Big Data in meaningful form for business users to make data driven decisions. In predictive modeling (also called predictive analytics) we seek to predict the value of a variable of interest (purchase/no purchase, fraudulent/not fraudulent, malignant/benign, amount of spending, etc.) by using "training" data where the value of this variable is known. Once a statistical model is built with the training data ("trained"), it is then applied to data where the value is unknown.

What You'll Learn

- Learn how to collect data.
- Learn how to perform ETL (Extract, Transfer, Load) Jobs
- Learn how to analyze data.
- Learn how to prepare data dashboard.
- Learn Data analysis automation jobs.

Hands-On Exercises

- Excel – Pivot Tables
- Excel – Linear Regression
- Excel – Data Analysis
- Excel – Solver
- Power BI Desktop
- R Programming
- Statistics Terms

Who Needs to Attend

Business analyst, data analysts, Database Administrators, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers.

Prerequisites

-Associate college degree or equivalent training or work experience

Certification Programs and Certificate Tracks:

Associate Certified Analytics Professional (aCAP®)

Book:

Everything Data Analytics A Beginner's Guide to Data Literacy: Understanding the Processes That Turn Data into Insights by Matthew Morris

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Data Analysis Overview

- Database vs Information
- Data Story
- Data Analysis vs Business Intelligence
- How to present data
- How to collect data
- How to clean data
- Statistics Overview
- Data Analysis Use cases
- Data Analysis Tools and Technology (Excel, Python, Power BI, Tableau, R Programing)

- LAB: Data Analysis
- Homework

2. Data Analysis with Excel

- Data Analysis with Excel
- Linear Regression
- Correlation
- Excel Solver
- Forecasting
- Quiz one
- LAB
- Homework

3. Data Analysis with Power BI

- Power BI Desktop Overview
- Power BI Query Overview
- Data Cleansing
- Power BI Visualization
- Power BI Reports
- Power BI Dashboard
- Power BI DAX
- Group Project

4. Data Analysis with R Programming

- R Programming Syntax
- Vector vs Data Frame
- R Graphics Library
- AI/ML library: Association, Classification, Clustering, Decision Tree, Prediction, Recommendation
- LAB – Data Visualization

- Group Project

5. Data Analysis End to End Automation

- Data Analysis Pipeline
- Data Analysis Pipeline Best Practices
- Case Study
- Simplification and Automation
- Homework
- Certification Preparation

5. **Capstone Project**

Module 4: Big DATA Programming

Understand the Big Data Analyst's role and Responsibilities in a successful project.

About this Course:

In this you will delve into the role and responsibilities of the Data analyst and leverage BIG Data Tools and Technology. Big Data will help to create new career growth opportunities for job seekers and growth for entirely new categories of companies, such as those that aggregate and analyses industry data. Many of these will be companies that sit in the middle of large information flows where data about products and services, buyers and suppliers, consumer preferences and intent can be captured and analyzed. Forward-thinking leaders across sectors should begin aggressively to build their organizations' Big Data capabilities.

What You'll Learn

- Learn how to aggregate large volumes of data.
- Learn how to process bulk data.
- How to setup BIG DATA Jobs
- How to generate data summary
- Orchestrate multiple jobs.

- Troubleshooting the Hadoop environment and programming issue
- Performance optimization for the better performance

Hands-On Exercises

- Setup Hadoop Cluster
- Access Hadoop cluster from your laptop
- Linux commands
- HDFS commands
- Write PIG Jobs
- Write Hive Jobs
- Write Sqoop Jobs
- HBASE commands
- End to End project

Who Needs to Attend

Systems analysts, data analysts, Database Administrators, Network Admin developers, software engineers, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers, testers, and QA specialists.

Prerequisites

-Associate college degree or equivalent training or work experience

Certification Programs and Certificate Tracks: N/A

Book:

Hadoop: The Definitive Guide: Storage and Analysis at Internet Scale Tom White (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%

- Project: 30%

Course Outline

1. BIG DATA Foundation

- Database – overview, Oracle PL/SQL
- Data warehouse, ETL [Extract Transform Load]
- Data Warehouse vs BIG DATA
- BIG DATA Tools / Technology
- BIG DATA – Use case.
- LAB: Hadoop Installation
- Homework

2. HDFS commands

- Hadoop Architecture
- Hadoop key components
- Linux Overview
- Linux vs HDFS Commands
- Quiz one
- LAB
- Homework

3. PIG Programming

- PIG Architecture Overview
- PIG use cases
- PIG Programming Syntax
- LAB – Setup PIG Jobs
- Homework

4. Hive Programming

- HIVE Architecture Overview

- HIVE use cases
- HIVE Programming Syntax
- LAB – Setup HIVE Jobs
- Homework

5. Sqoop Programming

- Sqoop Architecture Overview
- Sqoop use cases.
- Sqoop Programming Syntax
- LAB – Setup Sqoop Jobs
- Homework

6. NO SQL Overview

- HBASE Overview
- OLAP vs OLTP.
- NO SQL vs SQL
- Mongo DB vs HBASE vs HIVE
- Zookeeper overview
- LAB – HBASE commands
- Homework

7. Spark Programming

- Spark Architecture Overview
- Spark Programming Syntax
- Spark vs Hadoop use cases.
- Quiz two
- LAB – HBASE commands
- Homework

8. Capstone Project

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Module 5: Power BI

Understand the Database Engineer's role and Responsibilities in a successful project.

About this Course:

This course is designed to take participants from Power BI novices to advanced users. You will learn to harness the power of Power BI for data analysis, visualization, and reporting. Each module will build on the previous one, ensuring a solid foundation and mastery of Power BI by the end of the course.

What You'll Learn

- Data Transformation and Modeling
- Creating Basic Visualizations
- Advanced Visualizations
- DAX - Data Analysis Expressions
- Power BI Desktop Advanced Features
- Power BI Service and Collaboration
- Advanced Topics and Real-world Projects

Hands-On Exercises

- Import data from an Excel file into Power BI Desktop.
- Connect to a web data source (e.g., a public dataset) and load it into Power BI.
- Use Power Query to clean and transform the imported data.
- Remove duplicates, filter rows, and merge queries.
- Build a simple table visualization with the imported data.
- Add a basic bar chart and customize its appearance.
- Create relationships between tables.
- Introduce calculated tables to your model.
- Use the Power Query Editor to apply more complex transformations, such as unpivoting and aggregations.
- Create custom columns using DAX expressions.
- Create a matrix visualization with conditional formatting.
- Build a line chart with multiple measures and a slicer.
- Create a simple dashboard with the visualizations you have made.
- Add a date filter to the dashboard.
- Create a map visual using geographical data.
- Customize the map by adding reference layers.
- Install a custom visual from the Power BI marketplace.
- Use the custom visual in your report.
- Create a measure to calculate total sales.
- Add measures for average, minimum, and maximum values.

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Who Needs to Attend

- Data Analysts and Scientists
- Business Intelligence Professionals
- Data Enthusiasts
- Anyone seeking to harness data for better decision-making.

Prerequisites

- No prior Power BI experience is required.
- Basic understanding of databases. Familiarity with fundamental concepts of operating systems. but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for the Mastering Power BI certificate.

Book:

Power BI, Excel, and Tableau - Business Intelligence Clinic: Create and Learn

- Roger F. Silva

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Week 1: Introduction to Power BI

- Introduction to Power BI
- Power BI Components (Power BI Desktop, Power BI Service)
- Installation and setup
- Connecting to data sources

Week 2: Data Transformation and Modeling

- Data import and transformation
- Query editor
- Data modeling concepts

- Relationships in Power BI
- Lab /Homework

Week 3: Creating Basic Visualizations

- Creating tables and matrices
- Building bar and column charts
- Line charts
- Pie and donut charts
- Labs / Homework

Week 4: Advanced Visualizations

- Scatter and bubble charts
- Map visualizations
- Cards and KPIs
- Slicers and filters
- Lab/Homework

Week 5: DAX - Data Analysis Expressions

- Introduction to DAX
- DAX functions and formulas
- Measures and calculated columns
- Time intelligence functions
- Lab/Homework

Week 6: Power BI Desktop Advanced Features

- Custom visuals and marketplace
- Custom themes and layouts
- Bookmarks and drill-through
- Power Query Editor advanced functions
- Lab/Homework

Week 7: Power BI Service and Collaboration

- Publishing reports to Power BI Service
- Sharing and collaboration
- Data gateways and data refresh
- Power BI Mobile
- Lab/Homework

Week 8: Advanced Topics and Real-world Projects

- Row-level security
- API integration

- Power BI Embedded
- Real-world projects and case studies

Assessments and Projects:

- Weekly quizzes or assignments
- Participants will work on a comprehensive Power BI project throughout the course. The project will involve connecting to real-world data, performing data transformations, creating advanced visualizations, and sharing the report on Power BI Service.

Module 6: Data Analysis with R Programming

Understand the Data Analyst's role and Responsibilities in a successful project.

About this Course:

This course is designed for beginners who want to learn R, a popular programming language for data analysis and statistics. Students will acquire fundamental programming skills in R and learn to manipulate data, create visualizations, and perform basic statistical analysis to leverage AI/ML algorithm to make data driven decisions.

What You'll Learn

- Working with Data in R
- Control Structures and Functions
- Data Visualization with ggplot2
- Data Analysis with dplyr
- Statistics with R
- R Projects and Reproducible Research
- Data Visualization Beyond ggplot2
- Machine Learning Library for clustering, classification, regression, decision tree, product recommendations

Hands-On Exercises

- Install R and R Studio on your computer.
- Write an R script to calculate the factorial of a number using a loop.
- Install and load the ggplot2 package.
- Load the dplyr package and practice filtering and selecting data.
- Set up a new R project and create an R Mark down document.
- Customize ggplot2 themes to change the appearance of your visualizations.
- Analyze a time series dataset, perform time-based operations, and visualize trends.

Who Needs to Attend

- Data Analysts
- Data Scientists

- Statisticians
- Business Analysts
- Professionals in Healthcare and Life Sciences
- Anyone Interested in Data Science

Prerequisites

- Basic knowledge of General IT Knowledge
- Familiarity with Computing Concepts

Certification Programs and Certificate Tracks

- This course prepares you for **the R Programming Fundamentals Certificate** Exam.

Book:

- **Introduction to R Programming: A Practical Guide**

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Week 1: Introduction to R

- What is R?
- Installing R and R Studio
- Basic R syntax
- Variables and data types
- Simple calculations and operators

Week 2: Working with Data in R

- Data structures in R: vectors, matrices, and data frames
- Data input and output
- Subsetting and indexing data
- Basic data manipulation

Week 3: Control Structures and Functions

- Conditional statements (if-else)
- Loops (for, while)
- Writing and using functions
- Built-in functions in R

Week 4: Data Visualization with ggplot2

- Introduction to ggplot2
- Creating scatter plots, bar charts, and line graphs
- Customizing plot aesthetics
- Combining and faceting plots

Week 5: Data Analysis with dplyr

- Introduction to dplyr
- Filtering and selecting data.
- Grouping and summarizing data
- Joining datasets

Week 6: Introduction to Statistics with R

- Descriptive statistics
- Inferential statistics
- Hypothesis testing
- Linear regression
- AI/ML library with Association Rule, Clustering, Classification, Forecasting

Week 7: R Projects and Reproducible Research

- Organizing your R projects
- Version control with Git and GitHub
- Creating dynamic reports with R Markdown
- Sharing and collaborating on R projects

Week 8: Data Visualization Beyond ggplot2

- Customizing ggplot2 themes
- Interactive visualizations with Shiny
- Visualizing geographic data with leaflet
- Other R visualization libraries

Week 9: Final Projects and Course Wrap-up

- Students work on final projects applying what they have learned.
- Project presentations and peer review
- Course review and next steps in R programming

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Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation.

PROGRAM DESCRIPTION- BUSINESS ANALYTICS COMBO

Program Objective: This program is very comprehensive and includes courses on Business Strategy and Analysis, Agile Scrum Master, Agile Scrum Product Owner, Scaled Agile, XP Principles, Lean, Kanban, JIRA, Database Management, SQL, Data Analysis, Visualization tools and Tableau to prepare students to become technically savvy Business Analyst. The program includes ample labs, quizzes, group discussions/ exercises, project work, and internal/ external internship opportunities. The program includes ECBA / CBAP and PSM certifications.

Length of Program / Program Duration: 16 Weeks/ 160 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

Fees Structure:

Tuition – $6500

Books – $700

Certifications/Tests – $800 (ECBA/CBAP, PSM I)

Total Cost – $8,000

Module 1: Business Analysis (ECBA / CBAP - Certification)

Understand the Business Analyst's role and Responsibilities in a successful project.

About this Course:

In this you will delve into the role and responsibilities of the business analyst (BA) - the communication link between all business areas and a critical player in project success. Learn tools and techniques for ensuring project success every step of the way-from identifying and analyzing potential projects to making sure that the final project product meets the requirements you identified. Through hands-on exercises, you'll learn to define the scope of work and master requirements-gathering techniques that will work for a variety of projects and audiences. You will consider the unique needs of customers, stakeholders, and the IT

department as you work toward building, documenting, communicating, and managing requirements.

What You'll Learn

- Role and importance of the BA
- Vocabulary standards and business analysis practices using the IIBA A Guide to the Business Analysis Body of Knowledge (BABOK Guide)
- Plan BA requirements activities
- Elicit requirements from stakeholders, with an emphasis on interviews.
- Analyze stated requirements, with an overview of modeling techniques.
- Document requirements for several types of projects
- Verify and validate requirements.
- Elements of requirements management and communication and the BA's role in them
- Elements of solution verification and validation and BA roles
- Enterprise analysis: choosing appropriate projects.
- Necessary competencies and best practices of BAs
- Waterfall, incremental, and agile lifecycles and how they change BA practices.

Hands-On Exercises

- Identify Business Analysis Concepts and Activities in Your Organization
- Review a Vision and Scope Document
- Plan Requirements Activities for a Project
- Conduct an Interview
- Choose Elicitation Techniques
- Analyze a Location Model
- Analyze a Workflow Model
- Analyze a Use Case Model
- Analyze a CRUD Matrix

- Identify Models that Answer Key Questions
- Review a Requirements Document
- Determine the Impact of a Proposed Change to a Requirements Set
- Write a Test Case Using a Use Case
- Walk Through the Steps of Enterprise Analysis for a Project
- Develop a Personal Action Plan to Improve Your BA Skills or Environment

Who Needs to Attend

Systems analysts, business analysts, requirements analysts, developers, software engineers, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, program managers, testers, and QA specialists.

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

This course prepares for IIBA – Business Analysis Certification

Book:

A Guide to the Business Analysis Body of Knowledge (BABOK Guide)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Business Analysis

- Importance of Effective Business Analysis
- Role of the BA

- Standardization and Adaptability

2. Requirements Planning

- Role of the BA in Requirements Planning
- Vision and Scope Document
- Types of Requirements
- Stakeholders
- Business Analysis Plan
- Homework

3. Requirements Elicitation

- Role of the BA in Requirements Elicitation
    - Investigative approach
    - Iterative approach
- Techniques
    - Interviews
    - Focus groups.
    - Requirements workshop: Requirements meeting.
    - Requirements workshop: JAD session
    - Brainstorming
    - Observation
    - Survey
    - Prototype
    - Document analysis
    - Business rules analysis
    - Reverse engineering
    - Product trials
    - Labs

- Group Project

4. Requirements Analysis & Design

- Need for Analysis
- Using Analysis to get Stakeholder Feedback and Verify and Validate Developing Requirements
- Value of Modeling Techniques in Analysis
- Modeling Techniques
    - Organizational model
    - Location model
    - Process/flow models
    - Use case models.
    - Data models
    - State model
- Types of Requirements
- Business Rules Analysis
- Prioritizing Requirements
- Verifying and Validating Requirements
- Group Project

5. Requirements Documentation (BRD)

- Formal and Informal Documentation and the, Level of Detail Required
- Writing for Usability and Comprehension
- Common Requirements Document Defects
- Components of a Formal Requirements Document
- Requirements Verification and Validation
- Requirements Sign-Off
- UML (Unified Modeling Language) - Labs
- Group Project

6. Requirements Management and Communication

- Throughout the Project and to Decommission
- Change Management
    - Define a baseline.
    - Define a change management process.
    - Identify the Change Authority
- Traceability and Its Uses
- Requirements Attributes
- Requirements Communication
- Group Discussion
- Case Study
- Group Project

7. Business Strategy Management

- Strategy Definition
- Why do Companies need Strategy?
- Strategy Formation
- LAB: SWOT Analysis
- Five Force Analysis
- How to define good Strategy?
- Strategy Execution
- Strategy Validation
- Strategy Implementation Challenge
- Case Studies: Amazon, Apple, and Google
- Homework
- Group Project

8. Enterprise Analysis

- Definition and Causes
- Role of the BA on the Enterprise Analysis Team

- Steps in Enterprise Analysis
    - Define the business need.
        - Techniques for root cause analysis
    - Assess capability gaps.
        - SWOT analysis
    - Determine the solution approach.
    - Define the solution scope.
    - Define the business case.
        - Contents of business case
        - Who does what? the BA's limited role in developing a business case?

9. Management Competencies, Best Practices, and Life Cycle Models

- Competency Proficiency
- Project Management
- Sope / Schedule / Cost Management
- BA Necessary Competencies
    - Analytical thinking and problem solving
    - Behavioral characteristics
    - Business knowledge
    - Communication skills
    - Interaction skills
    - Software application knowledge
- Best Practices
    - Use iterative analysis.
    - Focus on process improvement.
    - Apply progressive elaboration.
    - Check as you go.

- Use the investigative approach.
- Adopt traceability.
- Formalize business analysis through standardization.
- Improve communication through modeling.

- Life Cycle Models
  - Waterfall
  - Incremental
  - Agile Scrum Project Management
  - Effects on business analysis

10. BA Leadership skills

- Communication Skills
- Leadership Skills
- Critical Thinking Skills
- Business Knowledge
- IT Knowledge

11. Capstone Project

Module 2: Agile Scrum Master Certification

Understand the Agile Scrum master's role and Responsibilities in a successful project.

About this Course:

In today's fast-paced business environment, organizations must be agile and responsive to stay competitive. Agile Scrum has emerged as a leading framework for managing complex projects, enabling teams to deliver high-quality products quickly and adapt to changing requirements. This Agile Scrum Fundamentals Training course provides participants with a comprehensive introduction to the Agile Scrum methodology, equipping them with the skills and knowledge needed to successfully implement Scrum practices in their organizations.

What You'll Learn

- **Understanding Agile Principles: Explore** the core principles and values that underpin Agile methodologies, emphasizing customer collaboration, responsiveness to change, and iterative development.
- **Scrum Framework Overview**: Dive deep into the Scrum framework, its roles (Product Owner, Scrum Master, Development Team), events (Sprint, Daily Scrum, Sprint Review, Sprint Retrospective), and artifacts (Product Backlog, Sprint Backlog, Increment).
- **Roles and Responsibilities**: Gain insight into the specific roles and responsibilities within a Scrum team, enabling effective collaboration and clear accountability.
- **Backlog Management**: Learn how to create and manage a Product Backlog, prioritize user stories, and refine requirements to ensure a valuable product.
- **Sprint Planning**: Discover the art of Sprint Planning, including selecting items from the Product Backlog, setting sprint goals, and estimating work.
- **Daily Scrum**: Understand the purpose of the Daily Scrum, how it enhances team communication, and best practices for conducting daily stand-up meetings.
- **Sprint Execution**: Explore the mechanics of executing a Sprint, including the development work, managing impediments, and ensuring continuous integration.
- **Sprint Review and Retrospective**: Learn how to conduct effective Sprint Review and Retrospective meetings to inspect and adapt the product and the process.
- **Scrum Artifacts**: Explore Scrum artifacts such as the Sprint Burndown Chart, Release Burndown Chart, and Increment, and understand how they support transparency and progress tracking.
- **Scaling Agile**: Discover strategies for scaling Scrum to larger organizations and multi-team projects, including frameworks like Scrum of Scrums and LeSS (Large-Scale Scrum).
- **Agile Mindset**: Embrace the Agile mindset and its cultural implications, emphasizing continuous improvement, collaboration, and customer-centricity.
- **Practical Application**: Throughout the course, participants will engage in hands-on exercises, case studies, and simulations to apply Scrum principles and gain practical experience.

Hands-On Exercises

- User Story Writing Workshop
- Sprint Planning Simulation
- Daily Scrum Stand-up
- Scrum Board Setup
- Sprint Review and Retrospective
- Scrum of Scrums
- Value Stream Mapping
- Retrospective Action Planning
- Product Owner Prioritization Challenge

Who Needs to Attend

Systems analysts, business analysts, requirements analysts, IT project managers, project managers, project analysts, project leaders, senior project managers, team leaders, and program managers.

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Prerequisites

- Bachelor's Degree and at least six months of project management/leadership experience

Certification Programs and Certificate Tracks

This course prepares for PSM Certification (Professional Scrum Master)

Book:

Agile Scrum Crash Course: A Guide to Agile Project Management and Scrum Master Certification PSM 1 – Umer W

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Agile Mindset, Principles and Values

- Understanding Agile Manifesto
- Agile principles and how they apply to project management.
- Benefits of adopting Agile

2. Introduction to Scrum

- What is Scrum?
- History and evolution of Scrum
- Scrum vs. Waterfall
- Homework

3. Scrum Part I

Module 1: Scrum Roles

- Scrum Team
- Product Owner
- Scrum Master
- Stakeholders

- Responsibilities and characteristics of each role

Module 2: Scrum Artifacts

- Product Backlog
- Sprint Backlog
- Increment
- Definition of Done
- Understanding and managing artifacts

Module 3: Scrum Ceremonies

- Sprint Planning
- Daily Scrum
- Sprint Review
- Sprint Retrospective
- The purpose and format of each ceremony

Module 4: Sprint and Increment

- What is a Sprint?
- Sprint duration and goals
- The Increment as a potentially releasable product
- Sprint Burndown charts

4. Scrum II

Module 5: Sprint Planning and Backlog Refinement

- Creating a Product Backlog
- Estimating and prioritizing user stories
- Sprint Planning Meeting
- Backlog refinement best practices

Module 6: Daily Scrum

- The role of the Daily Scrum in team communication
- Structuring Daily Scrum meetings
- Common pitfalls and how to avoid them.

Module 7: Sprint Execution

- How the Scrum Team carries out work during a Sprint
- Self-organization and cross-functionality
- Handling scope changes during a Sprint

Module 8: Sprint Review and Retrospective

- Conducting effective Sprint Reviews
- Collecting feedback from stakeholders
- Continuous improvement through Sprint Retrospectives
- Retrospective formats and techniques

Module 9: Scaling Scrum

- Introduction to scaling frameworks (e.g., SAFe, LeSS, Nexus)
- Challenges and considerations when scaling Scrum.
- Combining multiple Scrum teams into larger initiatives

Module 10: Agile Metrics and Reporting

- Key Agile metrics (e.g., Velocity, Burndown charts)
- Using metrics to track progress and make data-driven decisions.
- Reporting and transparency in Agile

Module 11: Agile Scrum in the Real World

- Case studies and real-world examples of Scrum implementation
- Addressing shared challenges and roadblocks
- Best practices for sustaining Agile Scrum

5. Agile Scrum Certification

- Overview of Scrum certifications (e.g., Scrum Master, Product Owner)
- Preparing for certification exams
- Benefits of certification and career opportunities

6. Final Project

Module 3: JIRA Training

Understand the Scrum Master's role and Responsibilities in a successful project.

About this Course:

This course is designed to take participants from beginner to advanced levels in Jira, a popular project and issue tracking tool. Whether you are a scrum master, business analyst, project manager, developer, or part of an agile team, this course will equip you with the knowledge and skills to effectively use Jira for project management, issue tracking, and collaboration.

What You'll Learn

- Introduction to Jira.
- Issue Management
- Agile Project Management with Jira

- Advanced Jira Features
- Jira Administration
- Jira Integrations and Best Practices

Hands-On Exercises

- Setting Up Your Jira Environment
- Navigating Jira
- Creating and Managing Projects
- Creating and Managing Issues
- Customizing Workflows
- Prioritizing and Organizing Issues
- Creating and Managing Agile Boards
- Managing Agile Teams
- Reporting and Dashboards
- User Management and Permissions
- Performance and Scalability

Who Needs to Attend

- Project Managers
- Software Developers
- Agile Teams
- Product Owners and Scrum Masters
- Quality Assurance (QA) Teams
- Entrepreneurs and Small Business Owners

Prerequisites

- Basic knowledge of General IT Knowledge
- Familiarity with Computing Concepts

Certification Programs and Certificate Tracks

- This course prepares you for the Jira Agile Practitioner Certification Exam.

Book:

- “Jira Strategy Admin Workbook" -by Rachel Wright

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%

- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

Week 1: Introduction to Jira

- **Introduction to Jira**
  - What is Jira?
  - Key features and benefits
  - Jira editions and pricing
- **Setting Up Your Jira Environment**
  - Installation and configuration
  - Understanding user roles and permissions
- **Navigating Jira**
  - Dashboard overview
  - Understanding the Jira interface
  - Personalizing your dashboard
- **Creating and Managing Projects**
  - Creating your first project
  - Configuring project settings
  - Project templates
- **Creating and Managing Issues**
  - Issue types and schemes
  - Creating issues
  - Issue search and filtering

Week 2: Issue Management

- **Issue Workflow and Lifecycle**
  - Customizing workflows
  - Transitions, statuses, and resolutions
  - Workflow best practices
- **Prioritizing and Organizing Issues**
  - Issue ranking and prioritization.
  - Agile boards (Kanban and Scrum)
  - Backlog management
- **Advanced Issue Attributes**
  - Components and versions
  - Labels and epics
  - Custom fields and configurations

Week 3: Agile Project Management with Jira

- **Introduction to Agile Methodologies**
  - Scrum, Kanban, and other agile frameworks
  - Agile project management concepts
- **Creating and Managing Agile Boards**
  - Scrum and Kanban boards
  - Board settings and configurations
  - Sprint and backlog planning
- **Managing Agile Teams**
  - Team roles and responsibilities
  - Velocity tracking and reporting
  - Burn down charts and sprint reviews.

Week 4: Advanced Jira Features

- **Customizing Jira with Workflows**
  - Workflow customization
  - Conditional and post functions
  - Workflow best practices
- **Automation in Jira**
  - Jira automation rules
  - Examples of automation
  - Custom automation rules
- **Reporting and Dashboards**
  - Creating custom reports
  - Jira dashboard customization
  - Integrating Jira with third-party reporting tools

Week 5: Jira Administration

- **User Management and Permissions**
  - Managing users and groups
  - Setting project permissions
  - Global permissions and security
- **Data Backup and Restoration**
  - Backup strategies and best practices
  - Restoring Jira data
  - Disaster recovery planning
- **Performance and Scalability**
  - Scaling Jira for large organizations
  - Performance optimization tips
  - Monitoring and troubleshooting

eek 6: Jira Integrations and Best Practices

- **Integrating Jira with Other Tools**
  - Jira integrations with popular software
  - Automation using APIs.
  - Building custom integrations
- **Jira Best Practices**
  - Best practices for issue management
  - Agile project management tips
  - Workflow and automation best practices
- **Final Project and Certification**
  - Hands-on project: Implement a Jira solution.
  - Course recap and Q&A
  - Course completion and certification

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation.

Module 4: Oracle - Database

Understand the Database Engineer's role and Responsibilities in a successful project.

About this Course:

This course is designed to provide students with a solid foundation in using SQL to work with Oracle databases. Participants will learn SQL concepts, syntax, and best practices, enabling them to retrieve and manipulate data efficiently from Oracle databases.

What You'll Learn

- Gain a deep understanding of Oracle Database architecture.
- Acquire proficiency in installation, configuration, and maintenance of Oracle Database.
- Develop skills to optimize database performance and ensure data integrity.
- Learn to manage security, user access, and privileges within the Oracle environment.
- Primary backup and recovery strategies to safeguard critical data.
- Explore advanced database features such as partitioning, data compression, and High Availability options.
- Be prepared for Oracle Database certification exams.

Hands-On Exercises

- Installation and Configuration
- Basic SQL Operations
- Backup and Recovery
- User Management
- Performance Tuning

- High Availability
- Advanced Features
- Security

Who Needs to Attend

- Data Analysts and Scientists
- Business Intelligence Professionals
- Data Enthusiasts
- Anyone seeking to harness data for better decision-making.

Prerequisites

- No prior Oracle Database experience is required.
- Basic understanding of databases and SQL. Familiarity with fundamental concepts of operating systems.but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Oracle Database Administrator Certification. (Oracle Certified Associate (OCA))

Book:

Study Guide for 1Z0-006: Oracle Database Foundations: Oracle Certification Prep

Matthew Morris

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Databases and Oracle

- Understanding Databases and Database Management Systems (DBMS)
- Introduction to Oracle Database
- Oracle SQL Developer Setup
- Connecting to the Oracle Database

2. SQL Basics

- Introduction to SQL
- SELECT Statement
- Filtering Data with WHERE Clause
- Sorting Data with ORDER BY
- Aliases for Column Names

3. Retrieving Data from Multiple Tables

- Understanding Table Joins
- INNER JOIN, LEFT JOIN, RIGHT JOIN
- CROSS JOIN, SELF JOIN
- USING Clause
- UNION and UNION ALL Operators

4. Filtering Data with Advanced Techniques

- Using the BETWEEN Operator
- Working with NULL Values
- Using IN and NOT IN Operators
- Combining Conditions with AND, OR, NOT
- Subqueries and Nested Queries

5. Data Modification and Transactions

- INSERT, UPDATE, and DELETE Statements
- COMMIT and ROLLBACK Statements
- Introduction to Transactions
- Savepoints

6. Aggregating and Grouping Data

- GROUP BY Clause
- Aggregate Functions (SUM, AVG, COUNT, MAX, MIN)
- HAVING Clause
- GROUPING SETS and ROLLUP
- Cube and Grouping

7. Working with Date and Time Data

- Date and Time Data Types
- Date Functions (TO_DATE, TO_CHAR, TO_TIMESTAMP)
- Calculating Date Differences
- Extracting Date Components

8. Managing Data with DDL Statements

- Introduction to Data Definition Language (DDL)
- Creating and Altering Tables
- Constraints (PRIMARY KEY, FOREIGN KEY, UNIQUE, CHECK)
- Indexes

9. Views, Sequences, and Synonyms

- Creating Views
- Sequences
- Synonyms
- Privileges and Security

10. Advanced SQL Topics

- Analytic Functions (ROW_NUMBER, RANK, DENSE_RANK, LAG, LEAD)
- Working with Large Data Sets

Assessments and Projects:

- Weekly quizzes or assignments
- Midterm exam
- Final exam
- Hands-on projects (e.g., building a database application)

Module 5: Tableau

Understand the Data Analyst role and Responsibilities in a successful project.

About this Course:

This comprehensive Tableau training course is designed to equip participants with the skills and knowledge needed to create powerful data visualizations and perform advanced analytics using Tableau Desktop. Participants will learn how to connect to various data sources, transform and clean data, create interactive dashboards, and share insights with others.

What You'll Learn

- **Tableau Fundamentals:** Dive into the world of Tableau by understanding its interface, basic functions, and data connection methods.
- **Data Preparation**: Learn how to clean, shape, and transform data to make it Tableau-ready for analysis and visualization.
- **Visualization Techniques:** Explore various visualization types, such as bar charts, line graphs, scatter plots, and maps, and master the art of creating compelling visualizations.
- **Dashboard Creation**: Discover how to design interactive dashboards that convey insights effectively to your audience.

- **Advanced Analytics**: Uncover Tableau's advanced features for statistical analysis, forecasting, and predictive modeling.
- **Data Storytelling:** Develop the skills to craft data-driven narratives that engage and inform stakeholders.
- **Tableau Server and Online**: Explore the deployment and sharing of Tableau workbooks on Tableau Server and Tableau Online.

Hands-On Exercises

- Getting Started with Tableau
- Data Preparation in Tableau
- Advanced Visualization Techniques
- Dashboard Creation
- Advanced Analytics with Tableau
- Data Storytelling with Tableau
- Publishing to Tableau Server or Tableau Online

Who Needs to Attend

- Data Analysts and Scientists
- Business Intelligence Professionals
- Data Enthusiasts
- Marketing and Sales Analysts
- Anyone seeking to harness data for better decision-making.

Prerequisites

- No prior Tableau experience is required. Basic familiarity with data concepts and Microsoft Excel is helpful but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Tableau Certification.

Book:

Power BI, Excel, and Tableau - Business Intelligence Clinic: Create and Learn – Roger F. Silva

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%

- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Tableau

- Course Introduction and Tableau Overview
- Installing Tableau Desktop and Connecting to Data Sources
- Data Terminology and Tableau Data Types
- Data Preparation and Cleaning in Tableau

2. Basic Visualization Techniques

- Building Your First Visualization
- Exploring Marks, Filters, and Groups
- Mapping and Geographic Visualizations
- Sorting and Aggregating Data

3. Advanced Visualization Techniques

- Calculated Fields and Expressions
- Parameters and Sets
- Trend Lines, Reference Lines, and Forecasting
- Dual-Axis and Combo Charts

4. Interactive Dashboards and Sharing

- Creating Interactive Dashboards
- Dashboard Actions and Interactivity
- Publishing to Tableau Server and Tableau Online
- Final Projects and Course Review

Assessments and Projects:

- Weekly quizzes and assignments
- Mid-course project: Create a data visualization from scratch.
- Final project: Design an interactive dashboard using real-world data.
- Course project presentation and peer review

PROGRAM DESCRIPTION- SOFTWARE QUALITY ASSURANCE AND TEST AUTOMATION COMBO

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Program Objective: This is customized program with a holistic approach to cover major dimensions of Quality Assurance along with supporting courses so that the student has an edge as a Quality Assurance professional. With increasing demand in software automation testing, this course prepares learners to acquire software automation skills along with core quality assurance concepts and practices.

Length of Program / Program Duration: 16 Weeks/ 160 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

Fees Structure:

Tuition – $6500

Books – $700

Certifications/Tests – $800 (ISTQB, PSM I)

Total Cost – $8,000

Module 1: Quality Assurance Manual Tester

Acquire skills to perform duties as a Manual Tester

About this Course:

In this course you will delve into the role and responsibilities of QA (manual) software tester. You will learn QA concepts and tools that prepare you to perform your duties as a QA manual tester.

What You'll Learn

- QA – Theory and concepts
- Roles and Responsibilities of QA tester
- Definition and Principle of testing
- Types and Levels of testing
- Testing techniques
- Test Plan, Test cases and test reports
- Defect management
- Lean and Agile tools

Hands-On Exercises

- Creating Test cases

- Creating Test Plan
- Applying Testing techniques
- Creating HTML forms
- Managing test data in JSON format
- Managing test data using XML format

Who Needs to Attend

IT analysts, QA aspirants, SDET aspirants

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

ISTQB – Foundation exam

Book:

A Self-study guide for the ISTQB Foundation Exam (CTFL)

Authors: Chhavi Raj Dosaj

Course Duration: 18 hours / 6 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to QA

- Overview of QA concepts
- Roles and Responsibilities of QA
- QA and QC

- Software development life cycle
- Software testing

2. QA Principles and Types of Testing

- Seven key principles of Software testing
- Causes of Software defects
- Types of tests – Functional and Non-functional testing
- Levels of testing – Unit, Integration, System and Acceptance tests
- Retest and Regression testing
- Lab
- Homework

3. Software Testing Lifecycle and Artifacts

- Inputs for Software testing
- Key phases of Software testing
- Understanding Software requirements
- Test Plan
- Test case designs
- Labs
- Homework

4. Advanced testing

- Test execution and defect management
- Testing techniques
- Boundary Value analysis
- Decision table testing
- State transition testing
- Branch testing

5. Understanding technologies and maintaining test data

- Introduction to HTML
- Lab: Creating HTML documentation
- Test Formats: CSV, XML, JSON
- Lab: Managing test data in CSV files
- Lab: Managing test data in JSON files
- Lab: Managing test data in XML files

6. Test management and lean methods

- Managing test artifacts using MS Office
- Managing test artifacts in Jira
- Agile testing methodology
- Role of QA in Agile testing
- Introduction to BDD and TDD
- Labs
- Homework

7. Project work

Module 2: Selenium Web Automation Testing

Understand the Quality Engineer's role and Responsibilities in a successful project.

About this Course:

Selenium is a widely used open-source tool for automating web browsers. This comprehensive training course will provide you with the skills and knowledge necessary to automate web applications using Selenium Web Driver and related technologies. Whether you are a beginner or have some experience in automation testing, this course will take you from the basics to advanced automation techniques.

What You'll Learn

- Selenium Web Driver Basics
- Advanced Selenium Web Driver Techniques
- Test Automation Frameworks

- Selenium Grid and Advanced Topics

Hands-On Exercises

- Setting Up Selenium Environment
- Locating and Interacting with Elements
- Handling Waits and Synchronization
- Implementing the Page Object Model (POM)
- Handling Frames, Windows, and Cookies
- Test NG Integration and Data-Driven Testing
- Test Automation Best Practices
- Selenium Grid and Parallel Testing
- Continuous Integration (CI)

Who Needs to Attend

- Software Testers and QA Engineers
- Automation Engineers
- Software Developers
- Dev Ops Engineers
- Quality Assurance Managers
- Career Changers, Entrepreneurs, Anyone Interested in Automation

Prerequisites

- Basic knowledge of programming concepts (e.g., variables, loops, and functions)
- Familiarity with HTML and CSS
- Understanding of web browsers and web applications
- Experience with a programming language (e.g., Java, Python, C#)

Certification Programs and Certificate Tracks

- N/A.

Book:

Selenium with Java – A Beginner's Guide: Web Browser Automation for Testing using Selenium with Java (English Edition) – Pallavi Sharma

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%

- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Selenium

1.1. Introduction to Automation Testing

- What is automation testing?
- Advantages of automation testing

1.2. Introduction to Selenium

- History and evolution of Selenium
- Selenium components (Selenium Web Driver, Selenium IDE, Selenium Grid)

1.3. Setting up the Selenium Environment

- Installing Java Development Kit (JDK)
- Installing Selenium Web Driver
- Configuring Selenium Web Driver with different browsers

1.4. Writing Your First Selenium Script

- Creating a basic Selenium script
- Locating and interacting with web elements
- Running and debugging Selenium scripts

2. Selenium Web Driver Basics

2.1. Web Elements and Locators

- Understanding HTML elements
- Locating elements using various locators (e.g., ID, name, X Path, CSS selectors)

2.2. Handling Web Elements

- Interacting with text fields, buttons, checkboxes, and radio buttons
- Working with dropdowns and selecting elements.
- Managing alerts and pop-ups

2.3. Waits in Selenium

- Implicit vs. Explicit waits
- Handling synchronization issues

3. Advanced Selenium Web Driver Techniques

3.1. Page Object Model (POM) Design Pattern

- Introduction to POM
- Implementing POM in Selenium

3.2. Handling Frames and Windows

- Switching between frames
- Managing multiple browser windows and tabs

3.3. Handling Cookies

- Adding, deleting, and managing cookies

4. Test Automation Frameworks

4.1. Introduction to Test NG

- Installing and configuring Test NG
- Writing and running Test NG test cases

4.2. Data-Driven Testing

- Parameterizing test cases using Test NG data providers.
- Reading test data from external sources (e.g., Excel, CSV)

4.3. Test Automation Best Practices

- Maintaining code quality
- Handling exceptions and error handling
- Reporting and logging

5. Selenium Grid and Advanced Topics

5.1. Introduction to Selenium Grid

- Setting up a Selenium Grid
- Running tests in parallel on multiple browsers and machines

5.2. Continuous Integration (CI) Integration

- Integrating Selenium with popular CI tools (e.g., Jenkins, Travis CI)

5.3. Automation for Mobile Web and Cross-Browser Testing

- Overview of mobile web automation
- Cross-browser testing strategies

5.4. Final Project

- Building a comprehensive test automation project

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation and test automation review.

Module 3: Java Programming

Understand the Java Programmer's role and Responsibilities in a successful project.

About this Course:

This course is designed for beginners with little to no programming experience. It covers the fundamentals of Java programming, including basic syntax, data types, control structures, object-oriented programming (OOP), and file handling.

What You'll Learn

- Variables and Data Types
- Operators and Expressions
- Control Flow
- Arrays and Collections
- Object-Oriented Programming
- Inheritance and Polymorphism
- Exception Handling
- File Handling
- Java APIs
- Debugging and Testing

Hands-On Exercises

- Variable Declaration and Initialization
- Arithmetic Operations and relational and Logical Operators
- Conditional Statements and Looping Constructs
- Array Manipulation and Array List Operations
- Reading and Writing Files
- String Manipulation

Who Needs to Attend

- Aspiring Programmers
- Software Developers
- Web Developers
- System Administrators
- QA/Test Engineers

- Career Changers, Entrepreneurs, Anyone Interested in Coding

Prerequisites

- No prior Java experience is required. Basic familiarity with Fundamental Programming Concepts and Mathematical Aptitude is helpful but not mandatory.

Certification Programs and Certificate Tracks

This course prepares you for Oracle Java Certification.

Book:

Java: The Complete Reference, Twelfth Edition– Herbert Schildt

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Java

- Understanding the role of Java in the software development ecosystem
- Setting up the Java development environment (JDK, IDE)
- Writing and running your first Java program
- Basic Java syntax and structure

2. Variables and Data Types

- Declaring and initializing variables
- Primitive data types (int, double, char, Boolean)
- Reference data types (String)
- Type casting and conversions

3. Operators and Expressions

- Arithmetic, relational, and logical operators
- Expressions and precedence
- Using increment and decrement operators
- Working with conditional (ternary) operators

4. Control Flow

- Conditional statements (if, else, switch)
- Looping constructs (for, while, do-while)
- Breaking and continuing loops
- Handling user input with the Scanner class

5. Arrays and Collections

- Declaring and initializing arrays
- Array operations (access, modification, length)
- Introduction to collections (Array List, LinkedList)
- Iterating through collections

6. Object-Oriented Programming (OOP)

- Understanding OOP concepts (classes, objects, encapsulation, inheritance, polymorphism)
- Creating classes and objects
- Constructors and method overloading
- Access modifiers (public, private, protected)

7. Inheritance and Polymorphism

- Extending classes (inheritance)
- Overriding methods
- Implementing interfaces
- Using polymorphism and dynamic binding

8. Exception Handling

- Understanding exceptions and errors
- Handling exceptions with try-catch blocks.
- Custom exception classes
- Using the final block

9. File Handling

- Reading and writing text files
- Using File Reader and File Writer
- Exception handling in file operations
- Reading and writing binary files

10. Introduction to Java APIs

- Overview of Java Standard Library
- Using common APIs for string manipulation, date/time, and more
- Exploring additional libraries (e.g., Swing for GUI, JDBC for database access)

11. Debugging and Testing

- Debugging techniques
- Unit testing with JUnit
- Writing test cases and test suites

12. Final Project

- Apply learned concepts to develop a simple Java application.
- Present and demonstrate the project to peers.

Assessment:

- Quizzes and assignments throughout the course
- Final project evaluation

Module 4: Microservice Course

Understand the System Engineer role and Responsibilities.

About this Course:

This introduction to Microservices training course explains the benefits of microservices architecture and provides hands-on experience in the tools most popular for designing, building, monitoring, and maintaining microservices.

What You'll Learn

- Identify the characteristics of popular microservices and understand the design differences.
- Decompose monolithic application on single server into containerized application on multiple cloud instances.
- Build a simple single purpose serverless application.
- Expose an Application Program Interface for the application.
- Review various approaches to infrastructure used in deploying microservices.
- Monitor and maintain microservices in large ecosystems and the cloud.

Hands-On Exercises

- Design Web Service (REST and SOAP)
- Deploy Web Service in cloud.
- Consume Web Services using Web Application

- Design CI/CD Automation Pipeline
- Postman API Testing
- Performance Tuning

Who Needs to Attend

Systems analysts, Developer, Quality Analyst, Network Admin developers, software engineers, cloud engineer, Project Manager

Prerequisites

- Some Programming knowledge is preferred.

Certification Programs and Certificate Tracks:

N/A

Book:

Building Microservices: Designing Fine-Grained Systems 1st Edition

by Sam Newman (Author)

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

The Emergence of Microservices Architecture

- Web services Overview
- REST vs SOAP Overview
- Web Services use cases.
- Explore the ideal software development practice.
- Learn how fine-grained Service-Oriented Architecture (SOA) can help to achieve the ideal
- Learn how Micro service attempts to achieve the ideal

- SOA benefits

Microservice Design Principles

- Designing small microservices
- Designing independent microservices
- Designing resilient microservices

Integrating Microservices

- Understand design goals when integrating microservices.
- Explore effective message forms at sand lightweight inter-service communication approaches.
- Review the pros and cons of various service communication patterns.

Microservice Technologies

- Enable the development, deployment, and support of microservices using popular technologies.

Decomposing the Monolith

- Using monolithic decomposition as an approach toward application modernization
- Review successful decomposition patterns.
- Decompose monolithic application using helpful practices.

Deploying and Maintaining Microservices

- Explore the intersection of DevOps and microservices.
- Leverage virtual, cloud, and containerized environments for microservice deployment.
- Discover how to monitor a microservices environment and take appropriate action to enable scaling or react to system faults.

Capstone project

PROGRAM DESCRIPTION- DEVOPS AND DOCKER COMBO

Program Objective: This is a very comprehensive program that prepares learners for starting or enhancing their career in DevOps. DevOps is a new program and very much in demand for 21st century IT skills. This program focuses on automation of IT operations like release integration, deployment, testing, and monitoring of IT assets.

Length of Program / Program Duration: 16 Weeks/ 160 Hours (10 hrs. per week - Theory/Labs/Practice/ In-Class and Simulation Exam

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Fees Structure:

Tuition – $6500

Books – $700

Certifications/Tests – $800 (AWS, Linux)

Total Cost – $8,000

Module 1: Linux Administration

Acquire skills to perform duties as a Linux System Engineer/Administrator

About this Course:

In this course you will delve into the role and responsibilities of Linux Systems Engineer and Administrator. You will learn the Linux operating system and tools that prepare you to perform your duties as a Linux System Administrator.

What You'll Learn

- Linux as an operating system
- Linux echo system
- Installing and configuring Linux
- User and Group management
- Software packaging and installation
- Linux shell
- Linux CLI
- Linux Shell Scripting
- Automating Linux tasks with shell scripting and corn
- Identifying and troubleshooting
- Deploying and configuring common server packages – Web Server, DHCP, DNS
- Linux networking

Hands-On Exercises

- Installing and configuring Debian Linux
- Linux Shell commands

- Linux Shell programming
- Linux corn
- Linux networking
- Installing, configuring, and updating packages
- Managing Linux services
- Troubleshooting

Who Needs to Attend

IT analysts, systems engineers, System Administrators, Programmers

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

None

Book:

A Self-study guide for the Linux Foundation Exam

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Linux operating system

- Overview and history of Linux operating System
- Roles and Responsibilities of Linux System engineer/Administrator
- Linux components – Kernel and Tools

- Lab: Installation and Configuration
- Linux file system
- Labs
- Homework

2. Linux Shell Commands

- Introduction to Linux shell
- Connecting with Linux machine with Putty
- Basic Linux commands for system
- Linux commands for file and user management
- Executing basic shell commands
- Introduction to VI editor
- **Labs**
- **Homework**

3. Linux advanced commands

- User and group management
- Monitoring Linux processes
- Linux pipes
- Advanced file search and operations commands
- **Labs**
- **Homework**

4. Linux Shell Scripting

- Introduction to Shell programming
- Basic constructs of shell programming
- Creating and executing basic shell scripts
- Variables

- Control statements – if/else, for, while case
- **Labs**
- **Homework**

5. Linux Shell Scripting and CRON jobs

- Writing useful scripts with Shell scripts
- Functions in shell scripts
- Error handling and logging in shell scripts
- Setting up CRON jobs for scheduling shell jobs
- **Labs**
- **Homework**

6. Software management in Linux systems

- Introduction to Linux software packaging
- Installing and configuring software packages using package manager
- Getting information of packages and content of the packages
- Removing software packages
- **Labs**
- **Homework**

7. Installing and managing common services in Linux

- Common server software – Http server, SSH, DHCP and DNS
- Installing and configuring Apache http server
- Understanding Linux startup and Service setup
- Running Apache server as service on Linux startup
- Installing and configuring SSH, DHCP and DNS on Linux
- Configuring Linux networking
- **Labs**
- **Homework**

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Project Work

Module 2: Jenkins

Acquire skills to perform duties as a DevOps Engineer

About this Course:

Jenkins is a popular and most widely used open-source continuous integration server. In this course you will delve into the role and responsibilities of DevOps Engineer. You will learn Continuous integration concepts and implementing continuous integration using Jenkins server.

What You'll Learn

- Concepts – Continuous integration and deployments
- Benefits of continuous integration
- Overview of Jenkins
- Installing and configuring Jenkins
- Version control with Git
- Using Jenkins to orchestrate application builds.
- Setting security in Jenkins
- Jenkins Plugin manager
- Setting up and running Pipelines in Jenkins
- Jenkins pipeline scripts
- Hands on labs
- Project

Hands-On Exercises

- Installing and configuring Jenkins
- Configuring security in Jenkins
- Building application pipeline in Jenkins using UI
- Git commands for integration and application builds

- Executing Jenkins pipeline manually
- Triggering automatic pipeline builds in Jenkins.
- Adding and configuring plugins in Jenkins
- Writing pipeline scripts using Jenkins scripting

Who Needs to Attend

IT analysts, systems engineers, System Administrators, Programmers, QA, DevOps Engineers

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

None

Book:

Jenkins: The Definitive Guide: Continuous Integration for the Masses

Authors: John Smart

Course Duration: 18 hours /6 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Continuous integration and Jenkins

- What is Continuous integration in DevOps?
- Benefits of continuous integration
- Overview of Jenkins integration server and its architecture
- Download and install Jenkins integration server.

- Labs
- Homework

2. Version Control system with Git

- Introduction to software version control system
- Importance of version control system for DevOps
- Understanding distributed version control system with Git
- Download and install Git client.
- Git commands for day-to-day version control operations
- **Labs**
- **Homework**

3. Build orchestration with Jenkins Pipelines

- Setup a project in Git
- Create a sample Jenkins project.
- Configure source control, build, and post build sections.
- Execute Pipeline for sample project.
- Introduction to key concepts – Nodes, Executors, Build Queues
- Setting up security in Jenkins
- **Labs**
- **Homework**

4. Advanced pipelines in Jenkins

- Introduction to Jenkins Plugins
- Installing plugins for reporting and code coverage
- Enhance project pipeline by adding reports and code coverage.
- Setup Jenkins to trigger pipelines based on schedule.
- Understanding pipeline syntax
- Creating a pipeline using Jenkins pipeline syntax

- **Labs**
- **Homework**

5. Scripting pipelines in Jenkins

- Introduction to Pipeline Syntax
- Understanding key pipeline syntax – Pipeline, Nodes, Stages, Steps and Scripts
- Using variables in Pipeline syntax
- Create a pipeline using Pipeline syntax.
- Manage the pipeline script using Git.
- **Labs**
- **Homework**

Project Work

Module 3: Docker

Acquire skills to perform duties as a DevOps Engineer

About this Course:

Docker is a popular and most widely used open-source containerization platform. In this course you will delve into the role and responsibilities of DevOps Engineer. You will learn application containerization using Docker platform.

What You'll Learn

- Overview and history of containerization
- Container architecture and benefits
- Overview of Docker platform
- Installing Docker for Desktop
- Basic docker commands
- Understanding containerization steps for application
- Key Docker concepts - Image, Container, Network, and storage

- Creating docker images using Docker file
- Running docker containers
- Using Docker hub for image repository
- Docker networking concepts
- Docker security and storage
- Integrating Docker with Jenkins CI
- Hands on labs
- Project

Hands-On Exercises

- Installing and configuring Docker for Desktop
- Creating container using Docker
- Docker commands for managing containers.
- Creating docker image
- Docker commands for managing docker images.
- Creating docker network
- Creating persistent volumes in docker
- Deploying application stack as containers

Who Needs to Attend

IT analysts, systems engineers, System Administrators, Programmers, DevOps Engineers.

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

None

Book:

Docker in Action, Second Edition

Authors: Jeff Nickoloff and Stephen Kuenzli

IT Expert System

Website: http://www.itexps.net

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Email: info@itexps.com

Course Duration: 18 hours /6 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to application containers and docker

- Introduction to application containers
- Container vs VM architecture
- Docker platform for application containerization
- Download and install Docker for Desktop
- Running basic docker containers
- Basic commands for container management
- Labs
- Homework

2. Application containerization using docker

- Understanding key docker concepts – Images and containers
- Creating Docker images using Docker file
- Docker commands for image management
- Managing docker images in Docker hub
- **Labs**
- **Homework**

3. Stateful containers and networking

- Docker volumes for storage
- Using docker volumes for stateful containers
- Docker commands for managing docker volumes.
- Docker networking concepts
- Docker commands for managing docker networks.
- **Labs**
- **Homework**

4. Scalability and Availability in containers

- Understanding scalability and availability
- Auto restarting containers by configuration
- Docker cluster using Swarm mode.
- Deploying services on Docker cluster
- Scaling services by configuration
- **Labs**
- **Homework**

5. Integrating docker in DevOps

- Understanding role of containerization in DevOps practices
- Integrating docker in DevOps CI
- Creating pipelines to deploy application containers using Jenkins and Docker hub.
- Deploying app stacks using Docker compose
- **Labs**
- **Homework**

Project Work

Module 4: Kubernetes

Acquire skills to perform duties as a DevOps Engineer

IT Expert System

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About this Course:

Kubernetes is a popular and most widely used open-source platform for managing containers. In this course you will delve into the role and responsibilities of DevOps Engineer. You will learn to provision, manage, and monitor Kubernetes cluster.

What You'll Learn

- Overview of Kubernetes
- Kubernetes architecture and key components
- Kubernetes concepts
- Download and install Docker for Desktop, Enable Kubernetes
- Create Kubernetes cluster.
- Kubernetes CLI
- Contexts and Namespaces
- Kubernetes workloads – Pods, Deployments, Replica Sets, Jobs
- Services
- Security in Kubernetes
- Setting environment using Kubernetes secrets
- Managing Persistent Volumes in Kubernetes
- Deploying and managing container on Kubernetes cluster
- Integrating Kubernetes in DevOps
- Hands on labs
- Project

Hands-On Exercises

- Installing and configuring Docker for Desktop
- Creating container Kubernetes cluster
- Creating namespaces
- Running application containers in Pods
- Creating Kubernetes Deployments

- Exposing deployments as Services
- Injecting environment as Secrets
- Scaling containers
- Blue/Green deployments in Kubernetes

Who Needs to Attend

IT analysts, systems engineers, System Administrators, Programmers, Architects

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

None

Book:

Kubernetes: Up and Running: Dive into the Future of Infrastructure 1st Edition.

Authors: Kelsey Hightower, Brendan Burns, Joe Beda

Course Duration: 18 hours / 6 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Kubernetes

- Introduction to Kubernetes
- Overview and architecture of Kubernetes
- Key components of Kubernetes
- Benefits of Kubernetes and its role in DevOps

- Download and install Docker for Desktop, enable Kubernetes.
- Setup Kubernetes cluster
- Labs
- Homework

2. Kubernetes – Key concepts

- Understanding Kubernetes objects
- Contexts and Namespaces
- Create a namespace in Kubernetes.
- Using Kubernetes CLI and syntax of **Kubectl** commands
- Key Kubernetes objects – Node, Pods, Deployments, Replica sets
- Creating Pods to run application containers from docker hub.
- Understanding properties of Pod object
- Creating a Pod using YAML file
- **Labs**
- **Homework**

3. Kubernetes – Running application containers

- Understanding higher level abstractions – Replica sets and Deployments.
- Creating Kubernetes deployments using command line
- Creating Kubernetes deployments using YAML file
- Understanding metadata and other properties
- Using selectors in queries and metadata
- Provisioning n-tier application stack using Kubernetes.
- **Labs**
- **Homework**

4. Scalability and Availability in Kubernetes deployments

- Understanding scalability and availability
- Configuring rolling updates in Deployment YAML descriptors
- Executing and monitoring rolling updates
- Scaling deployments using command line.
- Scaling deployments using TAML descriptor.
- Managing YAML descriptors in git repository
- **Labs**
- **Homework**

5. Bluer/Green deployment and services in Kubernetes

- Understanding zero downtime deployments
- Kubernetes services
- Exposing deployments as services
- Understanding Blue/Green deployment
- Using service concept to configure blue green deployment in Kubernetes.
- Setup and execute blue/green deployment.
- **Labs**
- **Homework**

6. Advanced Kubernetes concepts

- Understanding networking in Kubernetes
- Understanding and setting up Persistent Volume and Persistent Volume Claims in Kubernetes for stateful containers
- Exposing environment using Kubernetes secrets
- Setting up security in Kubernetes
- Creating scheduled workloads using Kubernetes Jobs
- Integrating Kubernetes in CI/CD pipelines
- **Labs**

- **Homework**

Project Work

Module 5: AWS Certified Developer Associate

Understand the System Engineer's role and Responsibilities in a successful project.

About this Course:

This AWS Cloud training course is designed to provide participants with a solid foundation in Amazon Web Services, equipping them with the skills and knowledge required to effectively use AWS services for various applications. From basic cloud concepts to advanced AWS services, this course covers a wide range of topics to help you become proficient in cloud computing.

What You'll Learn

- Cloud Computing and AWS
- Amazon EC2
- AWS Lambda and Server less Computing
- Amazon S3
- Amazon RDS
- Amazon VPC (Virtual Private Cloud)
- AWS Identity and Access Management (IAM)
- Scalability and High Availability
- Monitoring, Logging, and Cost Management
- AWS Best Practices and Well-Architected Framework

Hands-On Exercises

- Launching Your First EC2 Instance
- Load Balancing with ELB
- Creating and Deploying Lambda Functions
- Working with Amazon S3
- Launching an RDS Database Instance
- Creating and Configuring a VPC
- Managing IAM Users and Permissions
- Auto Scaling and Elastic Beanstalk
- Monitoring with AWS Cloud Watch
- AWS Cost Management
- Designing a Well-Architected AWS Solution

Who Needs to Attend

- IT Professionals

- Developers
- Business Leaders and Managers
- Data Scientists and Analysts
- Security Professionals
- AWS Partner Network (APN) Members
- Career Changers, Entrepreneurs, Anyone Interested in Cloud Computing

Prerequisites

- Basic knowledge of General IT Knowledge
- Familiarity with Computing Concepts

Certification Programs and Certificate Tracks

- This course prepares you for the AWS Cloud Practitioner Certification Exam.

Book:

AWS Certified Solutions Architect Study Guide with 900 Practice Test Questions

– Ben Piper

Course Duration: 24 hours / 8 weeks, 3 hours/week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. Introduction to Cloud Computing and AWS

1.1Introduction to Cloud Computing

- Understanding cloud computing concepts
- Benefits and challenges of cloud computing
- Cloud service models: IaaS, PaaS, SaaS

1.2 Getting Started with AWS

- Creating an AWS account
- AWS Management Console overview
- Setting up AWS CLI and AWS SDKs

2. Compute Services

2.1 Amazon EC2 (Elastic Compute Cloud)

- Launching and managing EC2 instances
- EC2 instance types and families
- Elastic Load Balancing (ELB)

2.2 AWS Lambda

- Server less computing with Lambda
- Creating and deploying Lambda functions
- Event-driven architecture

3. Storage and Database Services

3.1 Amazon S3 (Simple Storage Service)

- Object storage fundamentals
- Creating and managing S3 buckets
- S3 data management and versioning

3.2 Amazon RDS (Relational Database Service)

- Managed database services in AWS
- Creating and managing RDS instances
- Database backups and high availability

4. Networking and Security

4.1 Amazon VPC (Virtual Private Cloud)

- Networking fundamentals in AWS
- VPC setup and configuration
- Security groups and NACLs

4.2 AWS Identity and Access Management (IAM)

- IAM basics and policies
- Creating and managing IAM users and roles
- Securing AWS resources with IAM

5. Advanced AWS Services and Best Practices

5.1 AWS Services for Scalability and High Availability

- Auto Scaling and Elastic Load Balancing
- AWS Elastic Beanstalk for application deployment

- Designing for high availability

5.2 Monitoring, Logging, and Cost Management

- AWS Cloud Watch for monitoring
- AWS Cloud Trail for auditing
- Cost management best practices

5.3 AWS Best Practices and Well-Architected Framework

- Review of AWS Well-Architected Framework
- Security, reliability, performance efficiency, and cost optimization

Assessment:

- Weekly quizzes or assignments
- Mid-term project
- Final project presentation.

Module 6: DevOps

Acquire skills to perform duties as a DevOps engineer in its organization.

About this Course:

In this you will delve into the role and responsibilities of DevOps engineer. DevOps is all about automating and managing organizations IT infrastructure in desired state. You will learn tools and technologies involved in completing all phases of DevOps lifecycle. As part of this course, you will learn concepts, challenges, and solutions to implement optimal DevOps solution based on Organizations' IT requirement.

What You'll Learn

- DevOps – Concepts, culture, and Principles
- DevOps – Roles and Responsibilities
- DevOps Practices – Version Control, Automated build and deployments, Test Automation deployments
- Continuous integration with Jenkins
- Containerization with Docker
- Continuous deployment with Kubernetes and Helm charts
- Infrastructure monitoring with Prometheus and Graphana

- IT Service Management principles and practices
- Implementing DevOps in cloud (AWS/Azure)

Hands-On Exercises

- Source code version control using Git and GitHub
- Branching strategies and reviews in Git
- Installing pre-requisite software for Continuous integrations
- Setting up CI pipeline with Jenkins
- Installing Docker components
- Containerizing Python application
- Installing Kubernetes components
- Deploying containerized python application on Kubernetes cluster
- Learning Kubernetes commands to manage deployed applications.
- Monitoring infrastructure using Prometheus.
- Using Graphana to proactively identify and resolve infrastructure issues.
- Create a DevOps pipeline in Azure/AWS cloud to manage cloud application.

Who Needs to Attend

System administrators, Network Administrators, Software engineers, IT analysts, developers, and infrastructure architects

Prerequisites

There are no prerequisites for this course.

Certification Programs and Certificate Tracks

None

Book:

The DevOps handbook

Authors: Gene Kim, Jez Humble, Patrick Debois, John All spaw and John Willis

Effective DevOps

IT Expert System

Website: http://www.itexps.net

Main Office: 951 N Plum Grove Rd, Suite A, Schaumburg, IL - 60173

Email: info@itexps.com

Authors: Jennifer Davis and Ryn Daniels

Course Duration: 24 hours / 8 weeks, 3 hours / week

Course Rubric:

- Attendance: 10%
- Active Participation: 20%
- Homework: 30%
- Labs: 10%
- Project: 30%

Course Outline

1. DevOps – Theory and Concepts

- DevOps culture
- Overview of DevOps tools and technologies
- DevOps methodology
- DevOps practices
- Tenets of DevOps

2. Version control using GIT

- Introduction to Source code version control systems
- Distributed Version control using Git and GitHub
- Setting up a Source code repository
- Git Commands to manage artifacts – in it, clone, commit, push, pull.
- Creating and managing multiple versions of source files
- Effective branching strategies
- Creating and managing branches using git
- Implementing effective review process using git
- Homework

3. Continuous integration using Jenkins

- Introduction to continuous integration
- Overview of Jenkins architecture
- Setting up Jenkins for continuous integration
- Create pipeline for deploying application from source code repository.
- Setting up security in Jenkins
- Automatic build, test and deployment using Jenkins.
- Handling application build and deployment failures in Jenkins CI
- Homework
- Project for CI

4. Application containerization using Docker

- Introduction to containerization
- Role of containerized apps in DevOps
- Overview and architecture of Docker containerization platform
- Installing Docker
- Basic docker commands
- Key docker objects
- Building docker images and creating containers
- Steps to containerize application using docker.
- Provisioning and managing container storage.
- Automating docker image builds in CI pipeline.
- Homework
- Group Project

5. Managing continuous deployment using Kubernetes

- Introduction to continuous deployment
- Overview of Kubernetes architecture
- Installing Kubernetes

- Configuring Kubernetes
- Key concepts – Contexts, namespaces, pods
- Workflow for container deployments
- High level abstractions – Deployments, Replica Sets and Services
- Performing Rolling updates of application
- Blue / Green deployment strategy for ITSM
- Homework

6. Managing continuous deployment using Kubernetes and Helm charts

- Managing environment using Kubernetes secrets
- Managing storage in Kubernetes using mount volumes
- Introduction and Overview of Helm charts
- Structural differences between Kubernetes and helm charts
- Installing helm charts
- Basic commands for managing deployed versions using helm charts.
- Creating templates with parameters
- Supplying values to helm chart at the time of deployment.
- Creating helm repo for managing continuous deployments
- Homework
- Project

7. Monitoring infrastructure using Prometheus and Grafana

- Overview of infrastructure monitoring
- Importance of events and alerts in proactive monitoring
- Introduction to Prometheus
- Installing Prometheus
- Feature and architecture of Prometheus
- Setting up monitoring for containers
- Understanding data model

- Configuring and discovery
- Using Prometheus Query Language
- Installing and configuring Grafana
- Setting up infrastructure dashboards in Grafana
- Setting up alerts in Grafana
- Homework
- Project

8. DevOps in Cloud environments

- Overview of Cloud
- Introduction to Cloud services (Azure)
- Overview of Azure DevOps
- Setting up Project dashboard in Azure
- Integrating/setting git repositories in Azure
- Configuring CI pipelines in Azure
- Using Azure collaboration services
- Overview and importance of ITSM/ITIL
- Homework