

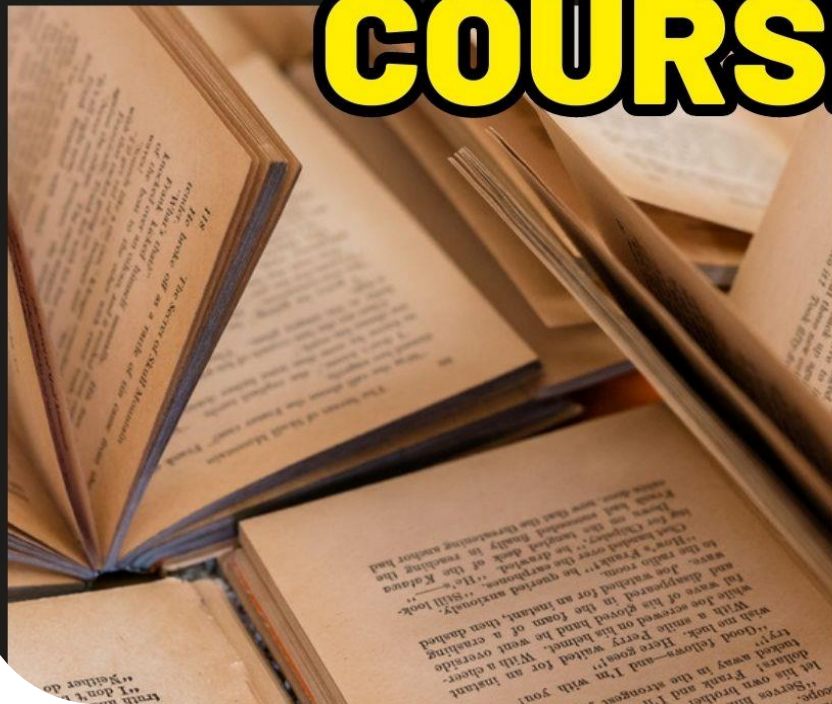


SHRI GURU RAM RAI UNIVERSITY DEHRADUN



VALUE ADDED COURSES

SGRRU





SHRI GURU RAM RAI
UNIVERSITY
Quest for Excellence



SGRR UNIVERSITY

Brochure of Value-Added Courses
College of Computer Application &
Information Technology
2018-19



ABOUT THE UNIVERSITY

Shri Guru Ram Rai University was established by a religious and philanthropic leader, Shri Mahant Devendra Dass Ji Maharaj in the year 2017. It is situated in the heart of city, Uttarakhand. We are extremely privileged to extend the values and ethos of the Shri Guru Ram Rai Education mission through SGRR University to impart quality education and in successfully placing more than 80% students in various companies across the globe. SGRR University has humongous campus spread over 80 acres of land. Its state-of-art facilities give opportunities to develop leadership skills and to achieve professional excellence. It has 3500+ students from different countries, 29 states and Union Territories and providing cultural melange and global exposure to our students. One of the biggest boosts from university is its unmatched experience in delivering quality education that helps to develop confidence and will give you more knowledge, industry exposure, building good networking and high self-esteem. This will change your overall personality and develop you into a complete professional to face any challenge.

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INTRODUCTION

Traditional education provides a strong foundation, but to stay competitive and relevant, individuals must continually enhance their skill set. Enter value-added courses, a gateway to a world of specialized expertise designed to complement and enrich existing knowledge.

Value-added courses go beyond the conventional academic curriculum, offering practical insights and hands-on experience in niche areas. These courses are meticulously crafted to bridge the gap between theoretical learning and real-world application, empowering individuals to navigate the complexities of contemporary professional landscapes.

Conduction of value added courses :

Value Added Course is not mandatory to qualify for any programme and the credits earned through the Value-Added Courses shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree. It is a teacher assisted learning course open to all students without any additional fee.

Classes for a VAC are conducted during the RESERVED Time Slot in a week or beyond the regular class hours. The value-added courses may be also conducted during weekends / vacation period. A student will be permitted to register only one Value Added Course in a Semester.

student will be encouraged to opt for the VAC offered by his/her parent Department/Faculty. Industry Experts / Eminent Academicians from other Institutes are eligible to offer the value-added course. The course can be offered only if there are at least 5 students opting for it. The students may be allowed to take value added courses offered by other departments after obtaining permission from Dean offering the course. The duration of value added course is 30 hours with a combination 18 hours (60%) of theory and 12 hours (40%) of practical. However, the combination of theory and practical shall be decided by the course teacher with the approval of the Dean

Guidelines for conducting value added courses

- ❖ Value Added Course is not mandatory to qualify for any program.
- ❖ It is a instructor supported learning course open to all students without any added fee.
- ❖ Classes for VAC will be conducted during the **RESERVED** Time Slot in a week or beyond the regular class hours.
- ❖ The value-added courses may be also conducted during weekends / vacation period.
- ❖ A student will be permitted to register only one Value Added Course in a Semester.

- ❖ Students may be permitted to enrol in value-added courses offered by other departments/ Schools after obtaining permission from the Department's Head offering the course.

Duration and venue

- ❖ The duration of value-added course should not be less than 30 hours.
- ❖ The Dean of the respective School shall provide class room/s based on the number of students/batches.
- ❖ VAC shall be conducted in the respective School itself.

Registration procedure

The list of Value-Added Courses, along with the syllabus, will be available on the University Website. A student must register for a Value-Added Course offered during the semester by completing and submitting the registration form. The Department Head shall segregate according to the option chosen and send it to the Dean of the school offering the specific Value-Added Courses.

- Each faculty member in charge of a course is responsible for maintaining Attendance and Assessment Records for candidates who have registered for the course.
- The Record must include information about the students' attendance and Assignments, seminars, and other activities that were carried out.
- The record shall be signed by the Course Instructor and the Head of the Department at the end of the semester and kept in safe custody for future verification.
- Each student must have a minimum of 75% attendance in all courses for the semester in order to be eligible to take certificate.
- Attendance requirements may be relaxed by up to 10% for valid reasons such as illness, representing the University in extracurricular activities, and participation in NCC.
- The students who have successfully completed the Value Added Course shall be issued with a Certificate duly signed by the Authorized signatories.

Basics of Python Programming

Course Code: VAC2018-38

Course Objectives:

The Basics of Python Programming course is tailored for beginners seeking a foundational understanding of Python programming. The curriculum covers fundamental concepts, beginning with Python syntax and progressing through variables, data types, and operators. Students learn control flow structures, including conditional statements and loops, and explore functions and modules for code organization. The course introduces essential data structures and file handling techniques. Object-oriented programming principles are introduced, and participants gain insights into error handling and debugging. The final portion introduces popular Python libraries and frameworks. The course concludes with a practical project, allowing students to apply their skills in coding, debugging, and documentation. The comprehensive curriculum provides a structured pathway for beginners to acquire proficiency in Python programming.

Course Outcomes:

- Explain the fundamental concepts of Python programming.
- Define and use variables, data types, and operators in Python.
- Implement Control Flow by for decision-making and loops (for and while) for iterative processes.
- Define and Use Functions and understand the concept of scope and the lifetime of variables within functions.
- Create, manipulate, and understand the use of lists in Python.
- Perform operations on dictionaries and sets efficiently.
- Handle Files in Python and develop Basic Python Applications.

Course Content

Module I : Introduction to Python Programming

Overview of Python and its uses, Setting up the Python development environment (IDEs, online platforms), Writing and running your first Python program, Basic Python Syntax: Understanding variables and data types, Exploring basic operators, Writing simple expressions and statements

Module II : Control Flow and Functions

Control Flow Statements, Introduction to if statements, Using loops (for and while) for iteration Writing conditional statements for decision-making, Functions in Python:

Defining and calling functions, Function parameters and return values, Understanding scope and lifetime of variables

Module III: Data Structures in Python

Lists and Tuples: Creating and manipulating lists, understanding tuple data structure, Dictionaries and Sets, Introduction to dictionaries and sets, Performing operations on dictionaries and sets

Module IV: File Handling and Basic Python Applications

Working with Files, Reading from and writing to files, File handling operations, Basic Python Applications: Simple Python applications and projects, Integrating concepts learned into practical examples

References:

- "Learning Python" by Mark Lutz
- "Python Crash Course" by Eric Matthes
- "Automate the Boring Stuff with Python" by Al Sweigart"Firewall Fundamentals" by Wes Noonan and Ido Dubrawsky

Structure Query Language

Course Code: VAC2018-39

Course Objectives :

- Understanding the Basics of SQL and Databases:
- Mastering SQL Commands and Syntax:
- Data Manipulation and Query Optimization:
- Advanced SQL Concepts and Real-world Applications:

Course Outcomes:

- Understand SQL, DDL, DML.
- Understand Create table commands.
- Analyze how to use Structured Query Language.
- Develop use of various functions in SQL.

Module I :

Introduction to SQL, Data Definition Language (DDL), Data Manipulation Language (DML), Introduction to SQL Server, SQL Server Management Studio, Create a new Database, Queries.

Module II :

CREATE TABLE ,Database Modelling, Create Tables using the Designer Tools, SQL Constraints, PRIMARY KEY, FOREIGN KEY , NOT NULL / Required Columns , UNIQUE , CHECK , DEFAULT , AUTO INCREMENT or IDENTITY, ALTER TABLE , INSERT INTO , UPDATE.

Module III :

Structured Query Language (SQL) :DELETE, SELECT , The ORDER BY Keyword, SELECT DISTINCT, The WHERE Clause, Operators , LIKE Operator ,IN Operator, BETWEEN Operator, Wildcards, AND & OR Operators, SELECT TOP Clause, Alias ,Joins, Different SQL JOINS ,SQL Scripts, Using Comments, Single-line comment, Multiple-line comment, Variables, Built-in Global Variables , @@IDENTITY, Flow Control , IF – ELSE, WHILE , CASE, CURSOR, Views, Using the Graphical Designer , Stored Procedures, NOCOUNT ON/NOCOUNT OFF.

Module IV :

Functions: Built-in Functions, String Functions, Date and Time Functions, Mathematics and Statistics Functions, AVG, COUNT (), The GROUP BY Statement, The HAVING Clause, User-defined Functions, Triggers.

References :

- “SQL Cookbook”, Query Solutions and Techniques for Database Developers by Anthony Molinaro , O'Reilly
- Practical SQL, A Beginner's Guide to Storytelling with Data by Anthony Debarros
- SQL PL/SQL by Ivan Bayross · Introduction to Database Management Systems, by Kahate, Atul

Presentation using Powerpoint

Course Code: VAC2018-40

Course Objectives :

The "Presentation Using PowerPoint" course aims to develop proficiency in creating and delivering professional presentations using Microsoft PowerPoint. It focuses on familiarizing participants with PowerPoint's interface and features, including templates, themes, and slide layouts. The course emphasizes the creation of visually appealing and engaging slides, incorporating graphics, animations, and multimedia. It also covers structuring content clearly and logically, utilizing advanced features like custom animations and integrating external content. Additionally, the course enhances essential presentation delivery skills, teaching participants how to effectively engage audiences and handle questions. Overall, the course prepares individuals to craft and present compelling presentations that effectively communicate their intended messages.

Course Outcomes:

- Understand Power Point presentation and Layouts
- Understand how to add pictures and graphics
- Analyze how to insert tables and charts from MS Excel
- Develop attractive presentations using slide transition effects

Module I :

Creating a presentation, changing theme, Adding slides and typing content, Choosing slide layout, changing slide layout, Adding bulleted and numbered list

Module II:

Outline view, Adding pictures and graphics, Placing pictures in placeholders, Cropping pictures and shapes, Pictures borders and adjustment

Module III:

Using shapes, grouping shapes and pictures text boxes, inserting a table Using charts from MS Excel, Working with tables and charts in MS Excel

Module IV :

Adding slide transition, changing transition effects, options and durations. Slide sorter view, slide show, starting and stopping a slide show

References :

- "Microsoft Office 365 & Office 2019 Introductory" by David W. Beskeen, Carol Cram, Jennifer Duffy, Lisa Friedrichsen
- "Microsoft PowerPoint 2016 Step by Step" by Joan Lambert"
- "Microsoft PowerPoint 2019 Inside Out" by Joe Habraken
- "PowerPoint 2016 For Dummies" by Doug Lowe:

Web designing using HTML

Course Code: VAC2018-41

Course Objectives :

The "Web Designing Using HTML" course focuses on imparting a thorough understanding of HTML for effective web content creation. Participants will grasp fundamental concepts such as HTML syntax, tags, and elements to build well-structured web pages. The course emphasizes the inclusion of multimedia elements and the creation of hyperlinks for seamless navigation. Additionally, participants will gain skills in responsive design and accessibility, ensuring compatibility across devices and user needs. Ultimately, the course equips participants to proficiently use HTML in designing visually appealing and functional web pages, contributing to their competence in web development.

Course Outcome:

- Understand HTML tags
- Understand different formatting styles.
- Analyze the HTML page.
- Measure effectiveness of frames.

Course Content :

Module I: Introduction

Introduction to the Internet, Introduction to HTML Terminology, Designing a Webpage: Design Considerations and Planning, Basic Tags and Document Structure, HTML Tags, Head Tags, Title Tags, Body Tags, Metadata, Saving an HTML Page

Module II: Page Formatting

Adding a New Paragraph, Adding a Line Break, Inserting Blank Space, Preformatted Text, Changing a Page's Background Colour, Div Element. Text Items and Objects: Headings, Comments, Block Quotes, Horizontal Lines. Special Characters. Creating Lists: Numbered (Ordered) Lists, Bulleted (Unordered) Lists, Nested Lists, Definition Lists.

Module III: Links

What are Links?, Text Links, Image Links, Opening a Page in a New Window or Tab, Setting all Links on a Page to Open in a New Window or Tab, Linking to an Area on the Same Page (Bookmarks), Linking to an E-mail Address, Linking to Other Types of

Files. Images: Introduction to Images for Webpages, Adding Images to Webpages, Resizing an Image, Alternative (ALT) Text, Image Labels.

Module IV: Tables & Forms

Inserting a Table, Table Borders, Table Headers, Col and row span, I Frames: What is an I frame?, Inserting I frames, Setting Height and Width, Using an I frame for a link target. Forms: About Forms, Text Boxes, Text Areas, Check Boxes, Menu Lists, Radio Buttons, The Submit Button, The Reset Button, Changing the Tab Order, Sending to E-mail, event handling

References:

- HTML & CSS: The Complete Reference, Fifth Edition, Thomas A. Powell.
- Burdman, "Collaborative Web Development", Addison Wesley
- Sharma & Sharma, "Developing E-Commerce Sites" Addison Wesley
- Ivan Bayross, "Web Technologies Part-I" BPB Publications