SGRR UNIVERSITY

**Brochure of Value-Added Courses
School of Computer Application &
Information Technology
2021-2022**

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 8000+ 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 of 67 years of 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.

Vision

"To establish Sri Guru Ram Rai University to be a Center of Excellence in higher education, innovation and social transformation by nurturing inquisitive and creative minds and by enabling the stakeholders to become committed professionals and educators of national and global relevance."

Mission

❖ To provide a comprehensive and sustainable educational experience that fosters the spirit of enquiry, scientific thinking and professional competence along with ethical and spiritual values

❖ To deliver a classic, well rounded learning experience that is distinctive and impactful on the young generation preparing them for a successful career

❖ To engage, inspire and challenge the stakeholders to become leaders with ethics and positive contributors to their chosen field and humane citizens

❖ To attract, train and retrain qualified staff to work efficiently to bring forth the maximum resource potential

❖ To develop committed and responsible professionals who work for the welfare of the society by providing innovative and efficient solutions and creating long term relationship with the stakeholders

❖ To create a sustainable career, by collaborating with stakeholders and participating in community partnership for life and livelihood in the local society in a responsive and dynamic way

❖ To make our students globally competent by introducing specialized training leading to professional capabilities and developing diverse skills in them for competitive advantage.

❖ To establish quality standards for generations by epitomising professionalism and integrity while raising the achievements of students.

❖ To ceaselessly pursue excellence by strengthening a learning environment that makes the institution the most preferred destination in the country.
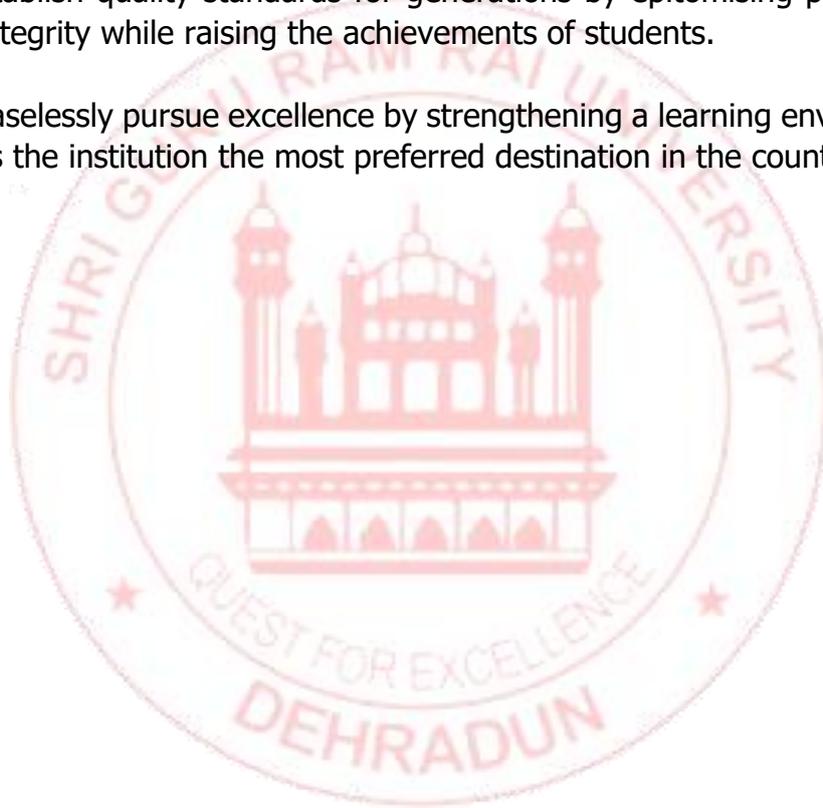
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2	Web development using java	VACCAIT001	36 Hours	2021	7-8
3	Ethical Hacking	VACCAIT002	30 Hours	2021	9

INTRODUCTION

The ever-changing global scenario makes the world more modest and needs high levels of lateral thinking and the spirit of entrepreneurship to cope up with the emergent challenges. Many a times, the defined skill sets that are being imparted to students today with Programme Specific Objectives in educational institutions become redundant sooner or later due to rapid technological advancements. No university curriculum can adequately cover all areas of importance or relevance. It is important for higher education institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes.

Objectives The main objectives of the Value-Added Course are:

- ✓ To provide students an understanding of the expectations of industry.
- ✓ To improve employability skills of students.
- ✓ To bridge the skill gaps and make students industry ready.
- ✓ To provide an opportunity to students to develop inter-disciplinary skills.
- ✓ To mould students as job providers rather than job seekers.

Course Designing The department interested in designing a Value Added Course should undertake Training Need Analysis, discuss with the generic employers, alumni and industrial experts to identify the gaps and emerging trends before designing the syllabus.

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.

Web Application Development in Java

Course Code: VACCAIT001

Course Objectives

1. To bridge the gap between academics and technology prevailing in the industry.
2. To give exposure to students about latest and emerging trends in IT industry.
3. To bring close the industry experts and students.
4. To learn how to develop software projects as per standards of IT industry

Course Outcomes

1. Student will be able to understand, analyse build and test software as per new prevailing technologies in IT industry.
2. It will increase the confidence in student to face interview and answer question based on project development
3. Students are benefited for better employability and help in placements of students

Module I: Introduction of Web Application, 3-Tieri Architecture, Advantages, Disadvantages, Scope & Examples of Web Application.

Module II: Overview of Client Side and Server Side Technologies that is (HTMLI, CSS, Javascript, Jquery, Ajax, Xml, Java, Servlets, Jsp, Tomcat server and Database. Getting Account Information of Different User Without Loading Page Using Ajax Request.

Module III: Installation/Configuration of Java & Tomcat Server, Start Making First Web Application. Html Form Elements Overview with Practical Demonstration. Implicit Variables. Send SMS, Email from Web Application. Uploading / Retrieving of Image/File.

Module IV: Introduction of Javascript and its Practical Implementation in Client Side Validation. Database Basics, SQLQueries Implementation in MySQL.

Module V: Servlets Overview, Servlets Life Cycle, Servlet Context, Servlet Config. XML Mapping, Servlet Coding for Login Page with Database Connectivity to Demonstrate Authentication. Introduction to JSP, Session Management. JSP Scripting Elements, Page Directives, Implicit Dynamic JSP Age, Connectivity of Data Base In JSP Page, Listing Of all Account Users With All Details.

Reference Books:

1. Lynn Beighley, Head First SQL, 1st edition O'Reilly Media Publications.
2. Sarika Agarwal ,Vivek Gupta , Java for Web Development BPB Publications.
3. Prem Kumar, Web Design with HTML & CSS, 1st edition Notion Press.

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Module I Introduction of hacking and its scope, networking basic, networking advance.

Module II Installation of kali Linux and basic commands. What is IP and MAC address how to change it, gaining access server-side attack. gaining access client-side attack.

Module III social engineering attack, spoofing emails with smtp server. Introduction to beef framework with attack.

Module IV Website hacking info gathering/SQL injection, website hacking cross site scripting. Brute force attack with examples, DoS attack with explanation

Reference Books:

1. Introduction to Cyber Security: Guide to the World of Cyber Security by Anand Shinde Paperback
2. Cybersecurity for Beginners: Learn the Fundamentals of Cybersecurity in an Easy, Step-by-Step Guide by Kevin Clark