



**Gyanmanjari**  
Innovative University

Course Syllabus  
Gyanmanjari College of Computer Science  
Semester-5 (BSCIT)

**Subject:** Search Engine Optimization - BSCIT15319

**Type of course:** Minor Stream

**Prerequisite:** A foundational understanding of digital marketing, web technologies, and basic analytical skills .

**Rationale:**

Search Engine Optimization (SEO) is essential for improving a website's visibility, organic traffic, and ranking on search engines like Google, Bing, and Yahoo. As search engines serve as the primary gateway for users to access information, businesses and individuals must optimize their content to appear in relevant searches.

**Teaching and Examination Scheme:**

Teaching Scheme			Credits	Examination Marks					Total Marks
CI	T	P		C	SEE		CCE		
			Theory		Practical	MSE	LWA	ALA	
3	0	2	4	75	25	30	20	50	200

*Legends: CI-Class Room Instructions; T – Tutorial; P - Practical; C – Credit; SEE - Semester End Evaluation; MSE- Mid Semester Examination; LWA - Lab Work Assessment; V – Viva voce; CCE- Continuous and Comprehensive Evaluation; ALA- Active Learning Activities.*

**Course Content:**

Sr. No	Course content	Hrs	% Weightage
1	<b>Introduction to The Search Engines</b> The Mission of Search Engines, The Market Share of Search Engines, The Human Goals of Searching, Determining Searcher Intent: A Challenge for Both Marketers and Search Engines,	10	20%



	How People Search, How Search Engines Drive Commerce on the Web, Eye Tracking: How Users Scan Results Pages, Click Tracking: How Users Click on Results, Natural Versus Paid		
2	<b>Search Engine Basics</b> Understanding Search Engine Results, Algorithm-Based Ranking Systems: Crawling, Indexing, and Ranking, Determining Searcher Intent and Delivering Relevant Fresh Content, Analyzing Ranking Factors Using Advanced Search Techniques, Vertical Search Engines, Country-Specific Search Engines	08	20%
3	<b>Determining SEO Objectives and Defining Site's Audience</b> Setting SEO Goals and Objectives, Developing an SEO Plan Prior to Site Development, Understanding Audience and Finding Niche, SEO for Raw Traffic, SEO for E-Commerce Sales, SEO for Mindshare/Branding, SEO for Lead Generation and Direct Marketing, SEO for Reputation Management, SEO for Ideological Influence	07	15%
4	<b>First Stages of SEO</b> The Major Elements of Planning, Identifying the Site Development Process and Players, Defining Site's Information Architecture, Auditing an Existing Site to Identify SEO Problems, Identifying Current Server Statistics Software and Gaining Access and Determining Top Competitors, Assessing Historical Progress, Benchmarking Current Traffic Sources, Leveraging Business Assets for SEO, SEO/Website SWOT Analysis.	12	25%
5	<b>Keyword Research</b> The Theory Behind Keyword Research, Traditional Approaches: Domain Expertise, Site Content Analysis, Keyword Research Tools, Leveraging the Long Tail of Keyword Demand, Trending, Seasonality, and Seasonal Fluctuations in Keyword Demand	08	20%

**Continuous Assessment:**

Sr. No	Active Learning Activities	Marks
1	<b>Battle of Search Engines:</b> Students must use different search engines (Google, Bing, and DuckDuckGo) to analyze variations in search results. They should prepare a detailed	10



	document based on their findings and upload it to the GMIU web portal.	
2	<b>Selective Response:</b> Students will be assigned a selective response-based test on GMIU web portal.	10
3	<b>The Transformation of Search Engines:</b> Students must prepare a case study on how search engines have evolved over time to enhance user experience. They should document their findings and upload the case study to the GMIU web portal.	10
4	<b>Search Engine Marketplace Analysis:</b> Compare product searches on Google, Amazon, and eBay to see ranking differences and submit the Report on GMIU web portal.	10
5	<b>Keyword Research Challenge:</b> Students have to Find and analyze high-traffic keywords using Google Keyword Planner and upload the document on GMIU web portal.	10
Total		50

**Suggested Specification table with Marks (Theory):75**

Distribution of Theory Marks (Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	25%	45%	15%	15%	0	0

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

**Course Outcome:**

After learning the course the students should be able to:	
CO1	Understand basics of SEO and how search engines work.
CO2	Learn the steps you need to prepare for, execute, and evaluate SEO initiatives.
CO3	Analyze a number of advanced strategies and tactics.
CO4	Create a content marketing strategy to support SEO and link acquisition.
CO5	Understand the latest SEO ranking factors, mobile ranking factors and Google algorithms.



**List of Practical**

Sr. No	Descriptions	Unit No	Hrs
1	Introduction to SEO and Compare all the search engine available in market.	1	2
2	Learn how search engines work, including crawling, indexing, and ranking. Familiarize with major search engines like Google, Bing, and Yahoo.	2	2
3	Keyword Research-Use Google Keyword Planner to find 10 relevant keywords for your website.	2	2
4	On page SEO - Optimize a blog post by updating its title tag and meta description based on your keyword research.	2	2
5	Off page SEO - Create a plan to acquire back links from three relevant websites in your industry.	2	2
6	Choose a web page and apply on-page SEO techniques to optimize it.	3	2
7	Perform Technical SEO Using Google Page Speed Insights to analyze your website's speed and implement suggested improvements.	3	2
8	Content creation and optimization - write a 500-word blog post using the keywords identified in your research.	3	3
9	Set up a free account with one SEO tool and explore its features.	4	2
10	Set up Google Analytics on your website and identify three KPIs to monitor.	4	3
11	Optimize title tags, meta descriptions, headings, and content with target keywords.	5	4
12	Set up Google Analytics for your website and familiarize yourself with its features	5	2
13	Case Study: Real Website SEO Audit.	5	2
		Total	30

**Instructional Method:**

The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, role play, Quiz, brainstorming, MOOC's etc.



From the content 10% topics are suggested for flipped mode instruction.

Students will use supplementary resources such as online videos, NPTEL/SWAYAM videos, e-courses, Virtual Laboratory

The internal evaluation will be done on the basis of Active Learning Assignment

Practical/Viva examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

**Reference Books:**

- [1] David Amerland, Google Semantic Search, Pearson
- [2] Jerri L. Ledford, "SEO: Search Engine Optimization Bible", 2nd Edition, Wiley India, April, 2009
- [3] John I Jerkovic, "SEO Warrior: Essential Techniques for Increasing Web Visibility", O'Reilly

