

ORDINANCE

FOR

BACHELOR OF SCIENCE (DMSN)



(THIS ORDINANCE HAS BEEN APPROVED IN THE MEETING OF
BOARD OF STUDIES HELD ON DATED 15th June, 2022)

APPLICABLE W.E.F. ACADEMIC SESSION 2022-2023



SRI HARGOBINDGARH, PHAGWARA – HOSHIARPUR ROAD,
PHAGWARA 144401, PUNJAB

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ORDINANCE FOR BACHELOR OF DIGITAL MARKETING AND SOCIAL NETWORKS (BDMSN)

SHORT TITLE AND COMMENCEMENT

I. This ordinance shall be called the ordinance for the Certificate/Diploma/Bachelor/Honors of Digital Marketing and Social Networks of GNA University, Phagwara.

II. This ordinance shall come into force with effect from academic session 2022-23.

1. Name of Program: Bachelor of Science in Digital Marketing and Social Networks (BDMSN).

2. Name of Faculty: Faculty of Computational Science.

3. Vision of the department: To develop the skilled computer and IT professionals meeting global requirements of IT industry.

4. Mission of the department

M1: To provide state of art infrastructure and conducive environment for budding IT professionals.

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M2: To establish strong industry academia relationship to enhance the technical skills of the students and make them readily employable.

M3: To provide exposure to the emerging and establish tools and technology in the field of computer applications.

M4: To develop curriculum in accordance with the industry requirements.

5. Program Educational Outcomes (PEO):

- **PEO1:** Graduates will be capable of making a positive contribution to digital business, trade, and industry in the national and global context.
- **PEO2:** Graduates will be able to apply frameworks and tools to arrive at informed decisions in profession and practice, striking a balance between business and social dimensions.
- **PEO3:** Graduates may engage in start-ups in the ever-expanding digital market space.
- **PEO4:** Graduates will be informed and involved members of their communities, and responsible professionals.

6. Program Outcomes (PO):

- **PO1: Basic knowledge:** An ability to apply knowledge of digital marketing and develop clear and measurable objectives for digital marketing activities.
- **PO2: Modern Tool Usage:** Build your digital profile using tools such as blogs, content marketing, and social media marketing, etc.
- **PO3: Social media Tools:** Develop an understanding of Search Engine Optimization (SEO), Social Media Optimization, Affiliate, and other relevant communication channels for engagement of digital communities.
- **PO4: Essential Skills:** Digital Marketing Professional will provide you with an in-depth understanding of how to strategize and implement effective digital marketing campaigns.
- **PO5: Communication:** Communicate effectively through different digital platforms in different business contexts and situations so as to be able to receive and give clear instructions, comprehend, write reports, prepare documentation and make effective presentations.
- **PO6: Ethics & Social Responsibility:** Demonstrate ethical conduct in personal and professional decisions and of digital businesses and an appreciation of the significance of business ethics and social responsibility in the decision-making process of digital marketing.
- **PO7: Environment and sustainability:** Understand the impact of the professional solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **PO8: Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **PO9: Multidisciplinary Knowledge:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

7. Program Specific Outcomes (PSO):

PSO1: Digital marketing skills: Attain the ability to expertise in digital marketing strategy, and design.

PSO2: Successful Career and Entrepreneurship: Explore technical knowledge in diverse areas of digital marketing and experience an environment conducive in cultivating skills for a successful career.

Additional Program Outcomes: Bachelor of Digital Marketing and Social Networks (Hons.)

The Bachelor of Digital Marketing and Social Networks program enables students to attain following addition attributes besides the afore-mentioned attributes, by the time of

graduation:

- (I) Create and execute a digital marketing plan from scratch.
- (I) Evaluate digital marketing plans and strategies for different types of E-business.
- (ii) Apply digital marketing tools to manage a business's customer relationships across all digital channels.
- (iv) Ability to work independently on a digital Marketer.

8. General Regulations for Faculty of Computational Science:

- The University may introduce programs under Faculty of Computational Science which are specified under the UGC Act 1956. The Governing Body may approve the introduction, suspending or phasing out a program on the recommendation of the Academic Council either on its own or on the initiative of faculty.
- The admissions to a Faculty of Computational Science programs shall be generally governed by the rules of the UGC/AICTE or any other competent authority of the MHRD or as approved by Governing Body of University and shall be as notified in the admission notification of the respective academic year.
- A student shall be required to earn a minimum number of credits through various academic components of a curriculum, as provided for in the regulations.
- A student shall be required to complete all the requirements for the award of the degree within such period as may be specified in the regulations.
- A student may be granted such scholarship as may be specified in accordance with the directions of the Governing Body from time to time or regulations laid down for the same.
- A student admitted to the programs shall be governed by the rules, regulations and procedures framed and implemented by the University from time to time.
- The students shall abide by the regulations mentioned in student handbook issued by the University. These standing regulations shall deal with the discipline of the students in the Hostels, Faculty, and University premises or outside. The standing orders may also deal with such other matters as are considered necessary for the general conduct of the students' co-curricular and extra-curricular activities.
- In exceptional circumstances the chairman of Academic Council may, on behalf of the Council, approve amendments, modifications, Insertions or deletions of an Ordinance(s) which in his/her opinion is necessary or expedient for the smooth running of the program: provided all such changes are reported approved to the Council in its next meeting.

9. General Regulations for the BDMSN Programs:

- **Short Title and Commencement:** These regulations shall be called regulations for the UG programs in Faculty of Computational Science of the University and shall come into force on such a date as the Academic Council may approve.
- **Duration:** The undergraduate degree should be three or four-year, with multiple entries and exit options within this period. The duration of the UG programs leading to degrees of Digital Marketing and Social Networks shall extend over four academic years (Eight Semesters) with multiple entries and exit options. The students can exit after the completion of one academic year (Two semesters) with the Certificate in Digital Marketing and Social Networks; Diploma in Digital Marketing and Social Networks after the study of Two academic years (Four Semesters); and Regular Bachelor Degree in Digital Marketing and Social Networks after the completion of Three academic years (Six Semesters). The successful completion of Four Years undergraduate Programs would lead to Bachelor Degrees with Honours in Digital Marketing and Social Networks. Each year will comprise of two semesters. The duration may be extended up-to two years for certificate in Digital Marketing and Social Networks from the registered batch. The duration may be extended up-to four years for Diploma in Digital Marketing and Social Networks from the registered batch. The duration may be extended up-to five years for Bachelor in Digital Marketing and Social Networks from the registered batch. The duration may be extended up-to seven years for Bachelor in Digital Marketing and Social Networks (Hons.) from the registered batch. The maximum duration of the programs excludes the period of withdrawal, due to medical reasons. However, it shall include the period of suspension or any other reason of discipline /academics e.g. detention, willful absence by the student, not getting promotion to the next class due to poor academic performance etc. Under detention, the student shall attend the University for an additional semester or more time, as equated to period of absence/suspension.
- **Starting or Phasing out of Program:** The University may offer such Undergraduate programs in Computational Science leading to award the degree in Bachelor of Science in Digital Marketing and Social Networks, as per nomenclature laid by the UGC regulations on the subject. A program may be phased out on recommendations of the Academic Council and approval of the Governing Body, on account of continuous low registration in the program or any other justifiable reason like becoming

obsolete etc. Similarly, the Academic Council may approve starting of a new program or modifying the existing one on the recommendations of the Academic Council.

- **Admissions:** Admission to BDMSN program shall be made as per procedure approved by the Governing Body and may be reviewed periodically as required. Fee structure, refund policy, total number of seats, reservation policy, and special category seats, e.g. sponsored seats, or direct entry into II year through lateral entry scheme etc. shall be defined in the admission policy.
- **Eligibility for Admission:** All those candidates who have the 10+2 or equivalent examination in any stream with 50% (45 % for SC/ST/OBC) marks in aggregate from any recognized board/ Council.
- **Semester System:** The BDMSN academic programs in the University shall be based on Semester System; namely, Even (Jan to June) and Odd (July to Dec) Semesters, in an academic year. The courses whether offered in regular semester shall be evaluated as per the policy and procedure laid down.
- **Semester Duration:** A semester will be of approximately 18-20 weeks duration. Of these, 90 days will be available for actual instructions including Mid Semester Exam.

10. Curriculum: The 4 years curriculum has been divided into eight semesters and shall include lectures/ tutorials/laboratorywork/projectwork/viva/seminars/presentations/Industry Training/assignments/Industry Visits. The curriculum will also include other curricular, co-curricular and extra-curricular activities as may be prescribed by the university from time to time.

11. Choice Based Credit System:

The University has adopted Choice Based Credit System (CBCS), which provides an opportunity to the students to choose courses from the offered courses comprising of Core, Elective, Ability Enhancement and Audit Courses. The choice-based credit system provides a “flexible” approach in which the students can take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning. Following are the types of courses and structure for the program.

12. Courses:

Outcome Based Education (OBE): OBE is a student-centric teaching and learning methodology

in which the course delivery, assessment is planned to achieve, stated objectives and outcomes. It focuses on measuring student performance i.e. outcomes at different levels.

I. Discipline Core Course (DCC): A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course. These are the courses which provide basic understanding of their main discipline. In order to maintain a requisite standard certain core courses must be included in an academic program. This helps in providing a universal recognition to the said academic program.

II. Elective Course: Generally, a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/subject of study or which provides an extended scope, or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

i. Discipline Specific Elective (DSE) Course: Elective course may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective (DSE). These courses offer the flexibility of selection of options from a pool of courses. These are considered specialized or advanced to that particular programme and provide extensive exposure in the area chosen; these are also more applied in nature.

ii. Vocational Courses (VC) Course: Vocational course is a course that enables individual to acquire skills set that are required for a particular job.

Note: A core course offered in a discipline/subject may be treated as an elective by other discipline/subject and vice versa and such electives may also be referred to as Vocational Courses.

III. Foundation Course: The Foundation Courses may be of two kinds: Compulsory Foundation and Elective foundation. "Compulsory Foundation" courses are the courses based upon the content that leads to Knowledge enhancement. They are mandatory for all disciplines.

IV. Ability Enhancement Courses (AEC): The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; i. Environmental Science and ii. English/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.

I. Ability Enhancement Compulsory Courses (AECC): Environmental Science, English Communication/MIL Communication.

ii. Skill Enhancement Courses (SEC): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

V. Project Work: It is considered as a special course involving application of knowledge in solving/analysing/exploring a real-life situation/difficult problem. A candidate study such as a course on his own with an advisory support by a teacher/faculty member. The work done will have to be submitted in writing.

VI. Industrial Internship/ Training: Students must complete Industrial Internship/ Training during summer holidays after the fourth semester. They have to submit a report of internship training with the necessary documents and have to appear for a viva-voce examination during fifth semester. Credit for internship will be entered in the fifth semester's mark statement.

VII. Research Project: It is considered as a special course involving the application of knowledge in solving/analysing/exploring a real-life situations and difficult problem for a bachelor degree with honours/research.

VIII. Creative business start-up: The business startup explore to the students for online business as digital marketing can have a substantial effect on the growth of start-ups, enhance brand recognition, gain consumer loyalty, and strengthen customer relationships.

13. Medium of Instructions:

a. The medium of instructions and examination will be English.

b. Practical work/Project Work / Project Report /Training Report etc., if any, should be presented in English.

14. Mode: The program is offered in 'Full Time' mode of study only.

15. Attendance Requirement to be Eligible to Appear in End Semester Examination:

15.1 Every student is required to attend at least 75% of the lectures delivered: squaring tutorials, practical and other prescribed curricular and co-curricular activities.

15.2 Dean of Faculty may give a further relaxation of attendance up to 5% to a student provided that he/she has been absent with prior permission of the Dean of the Faculty for the reasons acceptable to him/her.

15.3 Further, relaxation up to 10% may be given by the Vice Chancellor to make a student eligible under special circumstances only.

15.4 No student will be allowed to appear in the end semester examination if he/she does not satisfy the attendance requirements. Further, the attendance shall be counted from the date of admission in the University or commencement of academic session whichever is later.

15.5 Attendance of N.C.C/N.S.S. Camps or Inter collegiate or Inter University or Inter State or International matches or debates or Educational Excursion or such other Inter University activities as approved by the authorities involving journeys outside the city in which the college is situated will not to be counted as absence. However, such absence shall not exceed four weeks per semester of the total period of instructions. Such facility should not be availed twice during the course of study.

16. Credit: Each course, except a few special audit courses, has a certain number of credits assigned to it depending upon its lecture, tutorial and/or laboratory contact hours in a week. A letter grade, corresponding to specified number of grade points, is awarded in each course for which a student is registered. On obtaining a pass grade, the student accumulates the course credits as earned credits. A student's performance is measured by the number of credits that he/she has earned and by the weighted grade point average. A minimum number of credits should be acquired to qualify for the programs. The absolute grading system has been followed for awarding grades in a course.

Earned Credits (EC): The credits assigned to a course in which a student has obtained 'D' (minimum passing grade) or a higher grade will be counted as credits earned by him/her. Any course in which a student has obtained F, or W or "I" grade will not be counted towards his/her earned credits. A unit by which the course is measured. It determines the number of hours of instruction required per week.

Contact Hours per Week	Credit Assigned
1 Hr. Lecture (L) per week	1 credit
1 Hr. Tutorial (T) per week	1 credit
2 Hours Practical (Lab) per week	1 credit

16.1 Acceptance of MOOC courses

Faculty of Faculty of Computational Science accepts the MOOC course available on SWAYAM platform for credit transfer. 40% of the courses can be taken from the available list of MOOCs on SWAYAM.

1. Instructions for MOOC courses

- MOOC courses taken for credit transfer must be approved and recommended by Dean Academics and Dean of the Faculty before the start of the semester.
- The copy of the list of courses taken by the students for any course has to be submitted to the Controller of the Examination.
- MOOC course should be done from SWAYAM platform as per the guidelines of UGC.
- To obtain the credit the student needs to complete the assessment of the course and provide the certificate of the course issued by the SWAYAM/NPTEL. After completing the certificate, the student must submit the certificate within a week to the department.
- The fees (if any) for the registration and / or assessment of the MOOC course must be borne by the student only.
- The student can opt for a particular online MOOC course if and only if the credit of that course is equivalently mapped with the program structure.
- If the student obtains the same course credit which mapped with the course, then credit shall be considered for this course and the grade/marks provided by the accessing authority shall be transfer to the student. The result of the MOOC shall be taken on record by the university examination cell and a result declared for these papers.
- For any particular semester, all results for the MOOC course must be submitted along with the marks of other papers of the same semester by the course coordinator.
- MOOC course coordinators shall be appointed for each of the course taken by the student.

17. Program Structure (Credit Allocation):

PROGRAM STRUCTURE MODEL FOUND APPROPRIATE AND ADOPTED Program Structures for the Under-Graduate Program (Bachelor of Science (DMSN))							Total credits
Bachelor of Computer Applications	Discipline Core (DSC) (Credits) (L+T+P)	Discipline Elective (DSE) (Credits) (L+T+P)	Ability Enhancement Compulsory Courses (AECC), (Credits) (L+T+P)	Vocational Courses (VC), (Credits) (L+T+P)	Skill Enhancement Courses (SEC) (L+T+P)	Projects (L+T+P) /Industrial Training	
Semester 1	DSC-1 papers (4) (3+0+2), DSC-1 papers (5) (4+0+2), DSC-1 papers (6) (4+0+4), DSC-1 papers (1) (0+0+2)		AECC-1, papers(3)(2+0+2), AECC-1 papers(2)(2+0+0)				21
Semester 2	DSC-2 papers(6) (3+1+4), DSC-1 papers(6) (4+0+0), DSC-1 papers(4) (3+0+2)		AECC-1, papers(3)(2+0+2), AECC-1 papers(2)(2+0+0)	VC-1 papers(3)(3+0+0),			26
Exit option with Certificate (47 credits); Certificate (DMSN)							
Semester 3	DSC-1 papers(6) (3+1+4), DSC-1 papers(6)(4+0+4), DSC-2 papers(4) (4+0+0), DSC-1 papers(3) (3+0+0)			VC-1 papers(3)(3+0+0),			26
Semester 4	DSC-2 papers(3) (3+0+0), DSC-1 papers(6) (3+1+4), DSC-1 papers(6) (4+0+4), DSC-1 papers(6) (4+0+4),		AECC-1 papers (2) (2+0+0), AECC-1 papers (1) (0+0+2)	VC-1 papers(3)(3+0+0),	SEC-1 papers(4)(3+0+2),		24
Exit option with Diploma (97 credits); Diploma (DMSN)							
Semester 5		DSC-3 papers(6) (3+1+4)		VC-1 papers(3)(3+0+0),		Minor Project (1) (0+0+2), Industrial Training(2)	24
Semester 6		DSC-3 papers(6) (3+1+4)			SEC-1 papers(3)(2+0+2),	Major Project (3) (0+0+6)	21
Exit option with Bachelors (142 credits); Bachelors in Science (DMSN)							
Semester 7	DSC-2 papers(6) (3+1+4), DSC-3 papers(4) (3+1+0), DSC-1 papers(2) (0+0+4)					Capstone Project (3) (0+0+6)	23
Semester 8						Creative Business Start-up (20), Digital Marketing Research Project (4)	24
Award of Bachelor (Hons.) (189 credits); Bachelors in Science (DMSN) (Hons.)							

18. Industrial Training:

- Industrial training is a core course, to be done typically during the summer vacations. A student should undergo industrial training for 4-6 weeks, starting after year 2, preferably in an industry, R & D institutions or in an academic institution is of repute permitted. Training of 4th semester shall be graded and is essential part of the degree requirement in 5th semester.
- It is the responsibility of the Corporate Relations Department (CRD) to arrange training for all the students. In the beginning of each academic session, Corporate Relations Department will prepare a program wise list of potential training organizations. These organizations will be approached by the Corporate Relations Department with a request to provide training seats. Consolidated lists of training offers will be made available to the eligible students in the beginning of even semester of the session. If a student is interested in making his/her own arrangement for the training seat, he/she will need to have the training organization approved by routing the application to the Dean of Faculty of Computational Science for approval.
- The students will be required to get their training activity and results reviewed by organization in which they have attended the training. Each Faculty shall nominate training coordinator from amongst the faculty members. The faculty will scrutinize the training report and the certificate issued by the corporate and will award a satisfactory/unsatisfactory grade, which must be sent to the controller of examination office within one month of commencement of next semester. In case the training is considered to be unsatisfactory, an 'Unsatisfactory' grade will be awarded, and the student shall have to undergo fresh industrial training in part or full duration as decided by the Dean of Faculty of Computational Science. The industrial training, submission of training report and obtaining satisfactory grade is mandatory requirement for award of BCA degree.

19. Minor Project: A project shall be a multifaceted assignment that serves as a culminating academic and intellectual experience for students, typically during the 5th semester at the University. The project may take a wide variety of forms, but they shall be semester-long investigative projects that culminate in a final product, presentation, or performance.

20. Major Project: A major project shall be a multifaceted assignment that serves as a culminating academic and intellectual experience for students, typically during their final year at the University. Major projects may take a wide variety of forms, but they shall be Semester

long investigative projects that culminate in a final product, presentation, or performance. In projects under the guidance of a faculty member, a final year student is required to do some innovative work with application of knowledge earned while undergoing various courses and labs in the earlier years. The student is expected to do literature survey and carry out development and/or experimentation. Through the project work the student must exhibit both the analytical and practical skills. The student will have to do his/her project under the guidance of the faculty member from the same department unless specifically permitted by the Head/Dean of the Faculty for alternate arrangements.

21. Creative Business Start-up: The business startup explore to the students for online business as digital marketing can have a substantial effect on the growth of start-ups, enhance brand recognition, gain consumer loyalty, and strengthen customer relationships. Online channels and platforms, such as websites, industry-specific outlets, and forums, have been identified to be the most beneficial for start-ups. It also suggests that a fresh start-up can develop substantially through digital marketing by creating brand awareness, building trust, and building consumer awareness. However, most of the start-up companies hesitate implementing digital marketing strategies at the beginning of the company's establishment. It will be a student course independently with an advisory support by a teacher/faculty member. It is considered as a special course to start up the online business for a bachelor degree with honors/research.

22. Research Project: A design to acquire special/advanced knowledge such as supplement study/support study to a project work and a student course independently with an advisory support by a teacher/faculty member is called research project. It is considered as a special course involving the application of knowledge in solving/analyzing/exploring a real-life situations and difficult problem for a bachelor degree with honors/research. Research projects may take a wide variety of forms, but they shall be Semester long investigative projects that culminate in a final product, presentation, or performance. In projects under the guidance of a faculty member, a final year student (honors) is required to do some innovative research work. The student is expected to do literature survey and carry out development and/or experimentation. The student will have to do his/her project under the guidance of the faculty member from the same department unless specifically permitted by the Head/Dean of the Faculty for alternate arrangements.

23. Examination/Evaluation System: The evaluation system of the University shall be oriented to encourage the academic qualities. The University follows two components to evaluate student's performance:

23.1 Internal Assessment: It includes components such as Attendance, Mid-Semester Examination, Assignments, Continuous Assessment test carrying a weightage of 40%. This is applicable to all theory courses.

23.2 Laboratory Courses: The examination/evaluation criteria of the practical courses shall be decided by the respective faculty member and wherever required on the availability of the external experts/visiting faculty. Faculty may set/design the practical exercises out of any marks but the overall weightage shall be in pre-defined percentage, which the concerned faculty/course coordinator shall announce in the first class of the semester and upload on the GU-MS. Methodology for evaluation of Lab component may include day to day work, lab records, quantity/quality of work and Viva-voce/Seminar/Practical as may be decided.

23.3 Laboratory Internal Assessment: It includes components Lab evaluation, Internal viva-voce, Attendance, Lab Practical File/Report Submission carrying a weightage of 60%. The internal marks of special courses like Project, summer industry training, and six-months industry training have been predefined.

23.4 External Assessment:

- a) End Semester Examination: These examinations shall be conducted by Controller of Examination. The examination dates and schedule shall be released by the University.
- b) End Semester Examination, carrying a weightage of 60%.
- c) The external marks of special courses like Project, summer industry training, and six-months industry training have been predefined.
- d) External Lab Assessment which includes components (External Lab Viva-Voce) carrying a weightage of 40%.
- e) Every student has to score at least 25% marks each in Continuous Assessment and End Semester Examination. The minimum pass percentage is 40% in aggregate. In case a student scores more than 25% each in Continuous Assessment and End Semester Examination, but the overall percentage in the concerned subject remains less than 40%, then a student has to repeat End Semester Examination in that subject.

23.5 Failing to meet Attendance Requirement:

- a) A student is required to attend all the classes.
- b) If the attendance profile of a student is unsatisfactory, he/she will be debarred. Any student, who has been debarred due to attendance shortage, shall not be allowed to take the supplementary Examination. The student shall have to register for the course in the regular semester when offered.

23.5 Make Up Examinations for Mid Semester Examination: A student may apply for a makeup examination where he/she is not able to attend the examination schedule due to reasons of personal medical condition or compassionate reason like death of a very close relative. No other contingencies are acceptable. Except in case of medical emergency, a student needs to seek advance approval from appropriate authority before missing the Examination.

Theory Courses:

- A student missing Mid Term Examination only shall be required to take a make-up Examination.
- The students must put-up the request for make-up Examination along with the medical documents to prove the genuineness of the case (for having missed the Examination) within 5 days of last date of Examination.
- The genuineness shall be reviewed and approved by the Vice Chancellor, whose decision shall be final.
- In case a student misses the make-up Examination also, then no further chance will be provided.
- The duration of Examination shall be as decided by the Faculty member.
- Genuine approved cases shall be notified by the Controller of Examination based on the requests received and only such students shall be allowed to take make-up Examination in the subjects where approval has been granted.
- The date sheet need not be taken out as the makeup examination shall be conducted under arrangement concerned faculty, who after evaluation and sharing the evaluated answer sheet with student shall submit marks to the Controller of Examination.

23.7 Makeup of End Semester Examination: It is mandatory to appear the end semester major examination to obtain any grade for a course. A student who misses the end semester major examination shall follow a similar procedure as outlined above, to obtain approval of the Vice Chancellor to prove genuineness of the case. The student whose case is approved as genuine shall be awarded "I" Grade in the semester results in the given subject. The student shall be allowed to appear in the supplementary examination of the said subject. However, the grades shall be worked out by computing the marks obtained by students in Mid Term Exams, TA, Lab and supplementary examination (equated to the weightage of end semester examination). The total marks shall be compared with the marks of the class as in the regular semester for award of grade.

23.8 Makeup of End Semester Viva of Projects: It is mandatory to appear in the final Viva examination to obtain any grade for a project course. In case of student missing the same for genuine reasons; similar method as given for written examination of theory courses shall be followed.

23.9 Procedure to be adopted by students in case of missing any of the specified Examination(s): Following procedure shall be adopted for establishing genuineness of the case.

a. Action by the student (Medical Cases)

- I. They should report absence from the Examination(s) by fastest possible means to the Controller of Examination. It could be email or written communication by speed post or sent by hand through any means. In case of Hosteller's, if a student falls sick while residing in the hostel, he/she should seek advice of the available qualified doctor.
- II. The said report should preferably be sent prior to the Examination, but not later than 5 days after the last date of the said Examination.
- III. The student should on rejoining:
 - a. Report to the Controller of Examination with complete medical documents to include referral/Prescription slip of the doctor specifically indicating the disease and medicine prescribed, investigation/Lab reports and discharge slip in case of admission should be provided.
 - b. Submit the Documents to the Controller of Examination, not later than 5 days after the last date of Examination.

IV. In case delay beyond 5 days is anticipated the student should arrange for the medical documents to be sent to the University Medical Officer by hand through a friend / relative etc. and get the said genuineness deposit with the Controller of Examination.

V. No request later than 5 days after the last date of Examination shall be accepted for reasons of ignorance or any other reasons.

b. Action by students (any other reason)

In case the student must miss Examination due to genuine reason other than medical, prior written sanction of Vice Chancellor and in his absence, Dean is mandatory. No post facto requests shall be accepted in any case. The approval should be deposited with the Controller of Examination before the examination.

24. Supplementary Examination:

24.1 The supplementary examinations shall be held for each commiserating semester in December for Odd semester and May/June for Even semester, respectively. For the final semester students, there is privilege to appear in the supplementary exams of all pervious semester.

24.2 Eligibility: Student with 'F' grade is eligible to appear in the Supplementary Examination.

24.3 Supplementary for Projects: There shall be no supplementary examinations for the projects, except make up examination for missing the final viva as per rules outlined above.

25. Grading System: University follows eight letter grading system (A+, A, B+, B, C+, C, D, and F) that have grade points with values distributed on a 10-point scale for evaluating the performance of student. The letter grades and the corresponding grade points on the 10-point scale are as given in the table below

Academic Performance	Range of marks	Grades	Grade Points
Outstanding	≥90	A+	10
Excellent	≥80 & < 90	A	9
Very Good	≥70 & < 80	B+	8
Good	≥60 & < 70	B	7
Fair	≥50 & < 60	C+	6
Average	>40 & < 50	C	5
Minimally Acceptable	40	D	4
Fail	< 40	F	0
Incomplete		I	–
Withdrawal		W	–
Grade Awaited		GA	–
S-Satisfactory, US- Unsatisfactory Minor Project		S/US	

25.1 Description of Grades:

A. D Grade: The D grades stands for marginal performance, i.e. it is the minimum passing grade in any course. D grade shall not be awarded below 30% marks, though each teacher may set higher marks for same.

B. F Grade: The 'F' grade denotes a very poor performance, i.e. failing a course. A student has to repeat all courses in which she/he obtains 'F' grade, until a passing grade is obtained. In the case of 'F', no Grade points are awarded. However, the credits of such courses shall be used as denominator for calculation of GPA or CGPA.

C. W Grade: The 'W' grade is awarded to a student if he/she is allowed to withdraw for an entire Semester from the University on medical grounds for a period exceeding five weeks.

D. 'I' Grade: The 'I' grade is awarded when the student is allowed additional opportunity like make up Examination etc. based on which the grade is to be decided along with other components of the evaluation during the semester. An incomplete grade of 'I' may be given when an unforeseen emergency prevents a student from completing the work in a course. The 'I' must be converted to a performance grade (A to F) within 90 days after the first day of classes in the subsequent regular semester.

E. X Grade: It is equivalent to Fail grade but awarded due to student falling below the laid down attendance requirement. Students having X grade shall be required to re-register for the course, when offered next.

25.2 Cumulative Grade Point Average (CGPA), it is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all Semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

NB: The CGPA can be converted to percentage by using the given formula:

$$\text{CGPA} \times 10 = \%$$

e.g. $7.8 \times 10 = 78\%$

25.3 Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (Course title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

26. General Rules: Examinations:

a) Showing the Answer Scripts: The answer scripts of all written Examinations i.e. Mid Term or end semester examination or any other written work conducted by a teacher shall be shown to the students. Students desirous of seeing the marked answer scripts of end Semester Examination, has to ensure their presence before results are declared, as per dates notified by the Controller of Examination.

b) Marks/Answer Sheets of all other tests shall also be shared with the students and thus, there shall be no scrutiny of grades. However, before the grades are forwarded to Registrar/Controller of Examination, they should be displayed on GU-MS and time given to students, to discuss the same with respective faculty.

c) No appeal shall be accepted for scrutiny of grades.

d) Examination Fee for Supplementary. A prescribed fee will be charged as per course or as decided by the Management from time to time for taking supplementary exams.

27. Improvement of overall Score: A candidate having CGPA < 5.5 and wishes to improve his/her overall score may do so within two academic years immediately after passing the degree program by reappearing into maximum four course(s)/subject(s). The improvement would be considered if and only if the CGPA becomes > 5.5.

28. Program qualifying criteria: For qualifying the Program every student is required to earn prescribed Credits as follows:

a) Certificate in Digital Marketing and social Networks (**47 credits**)

b) Diploma in Digital Marketing and social Networks (**97 credits**)

c) Bachelor of Science in Digital Marketing and social Networks (**142 credits**)

d) Bachelor of Science in Digital Marketing and social Networks (Hons.) (**189 credits**)

If any student fails to earn prescribed credits for the program, then he/she will get a chance to complete his/her Program in two more years than the actual duration of degree.

29. Revision of Regulations, Curriculum and Syllabi: The University may revise, amend, change or update the Regulations, Curriculum, Syllabus and Scheme of examinations through the Board of Studies and the Academic Council as and when required.

30. Conditions for Award of a Degree:

The results of successful candidates at the end of II, IV, VI and VIII semesters shall be classified on the basis of Cumulative Grade Point Average (CGPA) obtained in all the II, IV, VI and VIII semesters and Cumulative Grade Point Average (CGPA) for award of:

a) Award the Certificate course in Faculty of Computational Science for completion of first two semesters if the candidate wishes to exit.

b) Award the Diploma course in Faculty of Computational Science for completion of first four semesters in the program if the candidate wishes to exit.

c) Award the Bachelor's Degree in Faculty of Computational Science on completion of six semesters in the program if the candidate wishes to exit.

d) Award the Bachelor degree with Honours in Faculty of Computational Science for completion of all the eight semesters of the program.

e) Nomenclature of the certificate, diploma, and degrees is mentioned in BDMSN Program Structure Model.

f) Earning a minimum credit as specified in the curriculum of respective program. In case of lateral entry students (direct entry into second year) the minimum credits shall be equivalent to total credits for the program less the credits of first year. This excludes the credits required to be obtained by the student of lateral entry, who is advised to take some equivalence courses.

g) Should complete the requirements of the certificate/ Diploma/ Degree/ Honours Degree in maximum duration specified for the program. Semester withdrawals due to medical reasons are not counted in two years in certificate, four years for Diploma, six years in Bachelor, eight years in Honor degree. However, forced withdrawal of students e.g. suspension or expulsion or nonattendance by student due to any other reasons, shall count in the maximum period of two years for Certificate, four years for Diploma, six years for Bachelor degree and eight years for Honor degree and minimum period of two years for Certificate, three years for Diploma, four years for Bachelor degree and five years for Honour degree.

h) Successfully completing the Internship/Training.

i) Should have cleared all the foundational and core courses of the programs. In case of lateral entry students (direct entry into second year) the student should have completed the foundational/core courses/equivalent courses, as approved at the time of admission in the programs.

Bachelor of Science (DMSN) Semester I (First year)

Sr. No	Category	Course Code	Course Title	Teaching Scheme			credits	Hours	Examination Scheme		Total
				L	T	P			Internal	External	
1	Core Course-1	DMSN101	Computer Fundamentals	3	0	0	3	3	40	60	100
2	Core Course-1	DMSN121	Computer Fundamentals Lab	0	0	2	1	2	30	20	50
3	Core Course-2	DMSN102	Social Media Marketing	4	0	0	4	4	40	60	100
4	Core Course-2	DMSN122	Social Media Marketing Lab	0	0	2	1	2	30	20	50
5	Core Course-3	DMSN103	Basics of Digital Marketing	4	0	0	4	4	40	60	100
6	Core Course-3	DMSN123	Basics of Digital marketing Lab	0	0	4	2	4	30	20	50
7	Core Course-4	DMSN124	Workshop on HTML/CSS	0	0	2	1	2	20	30	50

8	Ability Enhanced compulsory Courses-1	COM101	English Communication	2	0	0	2	2	40	60	100
9	Ability Enhanced compulsory Courses-1	COM121	English Communication Lab	0	0	2	1	2	30	20	50
10	Ability Enhanced compulsory Courses-2	ENS001	Environmental Studies	2	0	0	2	2	40	60	100
Total				15	0	12	21	27	340	410	750

Bachelor of Science (DMSN) Semester II (First year)

Sr. No	Category	Course Code	Course Title	Teaching Scheme			credits	Hours	Examination Scheme		Total
				L	T	P			Internal	External	
1	Core Course-5	DMSN201	Web Technologies	4	0	0	4	4	40	60	100
2	Core Course-5	DMSN221	Web Technologies Lab	0	0	2	1	2	30	20	50
3	Core Course-6	DMSN202	Web Analytics	4	0	0	4	4	40	60	100
4	Core Course-7	DMSN203	Digital Design with Photoshop	3	0	0	3	3	30	20	50
5	Core Course-7	DMSN223	Digital Design with Photoshop Lab	0	0	2	1	2	40	60	100
6	Core Course-8	DMSN204	SEO Foundation	4	0	0	4	4	40	60	100
7	Core Course-8	DMSN224	SEO Foundation Lab	0	0	2	1	2	30	20	50
8	Ability Enhanced compulsory Course-3	COM201	Business Communication	2	0	0	2	2	40	60	100
9	Ability Enhanced compulsory Course-3	COM221	Business Communication Lab	0	0	2	1	2	30	20	50
10	Ability Enhanced compulsory Course-3	HVPE101	Human Values and Professional Ethics	2	0	0	2	2	40	60	50
11	Ability Enhanced compulsory Course-3	***	VC 1***	3	0	0	3	3	20	30	100
Total				22	0	8	26	30	380	470	850

Bachelor of Science (DMSN) Semester III (Second year)

Sr. No	Category	Course Code	Course Title	Teaching Scheme			credits	Hours	Examination Scheme		Total
				L	T	P			Internal	External	
1	Core Course-9	DMSN301	Principles of Computer Programming	3	1	0	4	4	40	60	100
2	Core Course-9	DMSN321	Principles of Computer Programming Lab	0	0	4	2	4	30	20	50
3	Core Course-10	DMSN302	Database Management System	4	0	0	4	4	40	60	100
4	Core Course-10	DMSN322	Database Management System Lab	0	0	4	2	4	30	20	50
5	Core Course-11	DMSN303	Social Media Optimization	4	0	0	4	4	40	60	100
6	Core Course-12	DMSN304	Digital Campaign Design and Management	4	0	0	4	4	40	60	100
7	Core Course-13	DMSN305	E-Commerce and Payment Gateway	3	0	0	3	3	40	60	100
8	Vc2	***	VC 2***	3	0	0	3	3	40	60	100
Total Credits				21	1	8	26	30	300	400	700

Bachelor of Science (DMSN) Semester IV (Second year)

Sr. No	Category	Course Code	Course Title	Teaching Scheme			credits	Hours	Examination Scheme		Total
				L	T	P			Internal	External	
1	Core Course-14	DMSN401	Media and Emerging Technologies	3	0	0	3	3	40	60	100
2	Core Course-15	DMSN402	Google AdWords and PPC Advertising	4	0	0	4	4	40	60	100
3	Core Course-15	DMSN422	Google AdWords and PPC Advertising Lab	0	0	4	2	4	30	20	50
4	Core Course-16	DMSN403	Content Writing	3	1	0	4	4	40	60	100
5	Core Course-16	DMSN423	Content Writing Lab	0	0	4	2	4	30	20	50
6	Core Course-17	DMSN404	Basic Mathematics	3	0	0	3	3	40	60	100
7	Ability Enhanced compulsory Courses-4	GWE101	Gender Equality and Women Empowerment	2	0	0	2	2	40	60	100
8	Extension Activities	DMSN405	Physical Education-Sports	0	0	2	1	2	-	-	S/US
9	VC -3	***	VC 3***	3	0	0	3	3	40	60	100
Total Credits				18	1	10	24	29	300	400	700

Note:- The students will take 4-6 weeks summer training in Industry after semester 4th and evaluate in 5th semester.

Bachelor of Science (DMSN) Semester V (Third year)

Sr. No	Category	Course Code	Course Title	Teaching Scheme			credits	Hours	Examination Scheme		Total
				L	T	P			Internal	External	
1	Discipline Specific Elective-1	***	DSE-1	3	1	0	4	4	40	60	100
2	Discipline Specific Elective-1	***	DSE-1 Lab	0	0	4	2	4	40	60	100
3	Discipline Specific Elective-2	***	DSE-2	3	1	0	4	4	40	60	100
4	Discipline Specific Elective-2		DSE-2 Lab	0	0	4	2	4	30	20	50
5	Discipline Specific Elective-3	***	DSE-3	3	1	0	4	4	40	60	100
6	Discipline Specific Elective-3	***	DSE-3 Lab	0	0	4	2	4	30	20	50
7	Project	DMSN550	Minor Project	0	0	2	1	2	40	60	100
8	VC4	***	VC4***	3	0	0	3	3	40	60	100
9	Industrial Training	DMSN560	Industrial Training	-	-	-	2	-	-	-	100
Total Credits				12	3	14	24	29	300	400	800

Bachelor of Science (DMSN) Semester VI (Third year)

Sr. No	Category	Course Code	Course Title	Teaching Scheme			credits	Hours	Examination Scheme		Total
				L	T	P			Internal	External	
1	Discipline Specific Elective-4	***	DSE-4	3	1	0	4	4	40	60	100
2	Discipline Specific Elective-4	***	DSE-4 Lab	0	0	4	2	4	30	20	50
3	Discipline Specific Elective-5	***	DSE-5	3	1	0	4	4	40	60	100
4	Discipline Specific Elective-5	***	DSE-5 Lab	0	0	4	2	4	30	20	50
5	Discipline Specific Elective-6	***	DSE-6	3	1	0	4	4	40	60	100
6	Discipline Specific Elective-6	***	DSE-6 Lab	0	0	4	2	4	30	20	50
7	Project	DMSN650	Major Project	0	0	6	3	6	40	60	100
Total Credits				12	4	14	23	30	280	370	650

Bachelor of Science (DMSN) Semester VII (Fourth year)

Sr. No	Category	Course Code	Course Title	Teaching Scheme			credits	Hours	Examination Scheme		Total
				L	T	P			Internal	External	
1	Discipline Specific Course-18	DMSN701	Digital Presence and Viral Marketing	3	1	0	4	4	40	60	100
2	Discipline Specific Course-19	DMSN702	Data Analysis and Visualization	0	0	4	2	4	30	20	50
3	Discipline Specific Course-19	DMSN720	Data Analysis and Visualization Lab	3	1	0	4	4	40	60	100
4	Discipline Specific Course-20	DMSN703	Mobile Marketing and Video Marketing	3	1	0	4	4	40	60	100
5	Discipline Specific Course-21	DMSN704	Advanced Google AdWords and Online Display Advertising	3	1	0	4	4	40	60	100
6	Discipline Specific Course-21	DMSN720	Advanced Google AdWords and Online Display Advertising Lab	0	0	4	2	4	30	20	50
7	Project	DMSN750	Capstone Project	0	0	6	3	6	40	60	100
Total Credits				12	4	14	23	30	280	370	650

Bachelor of Computer Application Semester VIII (Fourth year)

Sr. No	Category	Course Code	Course Title	Teaching Scheme			credits	Hours	Examination Scheme		Total
				L	T	P			Internal	External	
7	Business Start-up	DMSN850	Creative Business Start-up	0	0	0	20	0	200	300	500
8	Research Project	DMSN860	Digital Marketing Research Project	0	0	8	4	8	40	60	100
Total				21	1	8	24	8	240	360	600

Course Structure

Bachelor of Science in Digital Marketing, B.Sc. (DMSN)

Sr. No	Category Type	Course code	Course Name
1	Core-1	DMSN101	Computer Fundamentals
2	Core-2	DMSN102	Social Media Marketing
3	Core-3	DMSN103	Basics of Digital Marketing
4	Core-5	DMSN202	Web Technologies
6	Core-6	DMSN202	Web Analytics
7	Core-7	DMSN203	Digital Design with Photoshop
8	Core-8	DMSN204	SEO Foundation
9	Core-9	DMSN301	Principles of Computer Programming
10	Core-10	DMSN302	Database Management System
11	Core-11	DMSN303	Social Media Optimization
12	Core-12	DMSN304	Digital Campaign Design and Management
13	Core-14	DMSN401	Media and Emerging Technologies
14	Core-15	DMSN402	Google AdWords and PPC Advertising
14	Core-16	DMSN403	Content Writing
16	Core-17	DMSN404	Basic Mathematics
17	Core-18	DMSN701	Digital Presence and Viral Marketing
18	Core-19	DMSN702	Data Analysis and Visualization
19	Core-20	DMSN703	Mobile Marketing and Video Marketing
20	Core-21	DMSN704	Advanced Google AdWords and Online Display Advertising

Core Courses ((Laboratory)

Sr. No	Category Type	Course code	Course Name
1	Core-1	DMSN121	Computer Fundamentals Lab
2	Core-2	DMSN122	Social Media Marketing Lab
3	Core-3	DMSN123	Basics of Digital Marketing Lab
4	Core-4	DMSN221	Web Technology Lab
5	Core-6	DMSN223	Digital Design with Photoshop Lab
6	Core-7	DMSN224	SEO Foundation Lab
7	Core-8	DMSN301	Principles of Computer Programming Lab
8	Core-10	DMSN322	Database Management System Lab
9	Core-11	DMSN422	Google AdWords and PPC Advertising Lab

10	Core-12	DMSN423	Content Writing Lab
11	Core-19	DMSN722	Data Analysis and Visualization Lab
12	Core-21	DMSN724	Advanced Google AdWords and Online Display Advertising Lab
13	Project (Core)	DMSN550	Minor Project
14	Project (Core)	DMSN650	Major Project
15	Project	DMSN750	Capstone Project
16	Business Start-up	DMSN850	Creative Business Start-up
17	Research Project	DMSN860	Digital Marketing Research Project

A) Vocational Courses (VC)

Sr. No	Category Type	Course code	Course Name
1	VC1	DMSN205	Business Statistics
2	VC1	DMSN206	Excel Spreadsheets
3	VC2	DMSN306	Principles of Marketing
4	VC2	DMSN307	Brand Management and Image Management
5	VC3	DMSN406	Technical Writing
6	VC3	DMSN407	Creative Writing
7	VC4	DMSN507	Marketing Management
8	VC4	DMSN508	Consumer Behavior and Market Research

B) Ability Enhanced Compulsory Courses (AECC)

Sr. No	Category Type	Course code	Course Name
1	AECC1	COM101	English Communication
2	AECC2	ENS001	Environmental Studies
3	AECC3	COM201	Business Communication
4	AECC4	HVPE101	Human Values and Professional Ethics
5	AECC5	GWE101	Gender Equality and Women Empowerment

C) Discipline Specific Elective (DSE)

Sr. No	Category Type	Course code	Course Name
1	DSE1-A	DMSN501	E-mail Marketing
2	DSE1-B	DMSN502	Display Advertising
3	DSE2-A	DMSN503	Affiliate Marketing
4	DSE2-B	DMSN504	LinkedIn and Twitter Marketing
5	DSE3-A	DMSN505	App Store Optimization

6	DSE3-B	DMSN506	Content Management System
7	DSE4-A	DMSN601	PHP and MySQL
8	DSE4-B	DMSN602	Advanced Web Design and Development
9	DSE5-A	DMSN603	Social Media Analytics
10	DSE5-B	DMSN604	Search Engine Management
11	DSE6-A	DMSN605	Data Mining
12	DSE6-B	DMSN606	Data Visualization with Tableau

D) Discipline Specific Elective (DSE)

Sr. No	Category Type	Course code	Course Name
1	DSE1-A	DMSN521	E-mail Marketing Lab
2	DSE1-B	DMSN522	Display Advertising Lab
3	DSE2-A	DMSN523	Affiliate Marketing
4	DSE2-B	DMSN524	LinkedIn and Twitter Marketing Lab
5	DSE3-A	DMSN525	App Store Optimization Lab
6	DSE3-B	DMSN526	Content Management System Lab
7	DSE4-A	DMSN621	PHP and MySQL Lab
8	DSE4-B	DMSN622	Advanced Web Design and Development Lab
9	DSE5-A	DMSN623	Social Media Analytics Lab
10	DSE5-B	DMSN604	Search Engine Management Lab
11	DSE6-A	DMSN625	Data Mining Lab
12	DSE6-B	DMSN626	Data Visualization with Tableau Lab



BACHELOR OF SCIENCE (DMSN)

FACULTY OF COMPUTATIONAL SCIENCES

(Applicable for 2022-2023 onwards)

DMSN101: Computer Fundamentals

Credits: 3

LTP 300

Course Description: The course aims to equip the students with various Office Automation Tools such as Word processor, Spread sheet program & Presentation program. The course includes Crafting professional word documents; excel spread sheets, power point presentations using the Microsoft suite of office tools.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Use various Office Automation Tools like Word processor, Spread sheet software & Presentation software.

CO2: Discuss the fundamental of processing unit and operating system.

CO3: Describe the various peripheral devices like Input and Output devices of Computer systems, online storage devices.

CO4: Perform documentation, accounting operations, presentation skills.

Course Content

Unit I

Introduction to Computers: Introduction, Characteristics of Computers, Block diagram of computer. Types of computers and features, Minicomputers, Micro Computers, Mainframe Computers, Super Computers. Types of Programming Languages (Machine Languages, Assembly Languages, High Level Languages). Data Organization, Drives, Files, Directories. Types of Memory (Primary and Secondary) RAM, ROM, PROM, EPROM, Secondary Storage Devices (FD, CD, HD, Pen drive) I/O Devices (Scanners, Plotters, LCD, Plasma Display).

Unit II

Algorithm: Definition, Characteristics, Advantages and disadvantages, Examples. Flowchart: Definition, Define symbols of flowchart, Advantages and disadvantages, Examples. Operating System and Services in O.S, Types of O.S, DOS: History, Files and Directories, Internal and External Commands.

Unit III

Word Processing: Typing, Editing, Proofing & Reviewing, Formatting Text & Paragraphs, Automatic Formatting and Styles, Working with Tables, Graphics and Frames, Mail Merge, Automating Your Work & printing Documents.

Unit IV

PowerPoint Presentations: Getting started in PowerPoint, creating a presentation, Creating & editing slides, previewing a slide show, Adding picture & graph, adding sound & video, adding auto shape, Animating objects.

Spreadsheets and Database packages: Purpose, usage, command, MS-Excel, Creation of files in MS-Access.

Recommended Books / Suggested Readings:

1. "Computers Today", D. H. Sanders, Fourth Edition, McGraw Hill, 1988.
2. Fundamental of Computers – By V. Rajaraman B.P.B. Publications.
3. "Fundamental of Computers – By P.K. Sinha.
4. MS-Office 2000(For Windows) – By Steve Sagman.
5. "Information Technology Inside and Outside", David Cyganski, John A. Orr, Paperback Edition, Pearson Education 2002.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN102: Social Media Marketing

Credits : 4

LTP 400

Course Description:

The course aims to equip the students with Social Media Marketing. The course includes Social Media, Search Engine Optimization, Marketing Tool, Marketing with Pinterest, LinkedIn advertising.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Identify best practices for social media marketing including platform.

CO2: Develop a marketing plan for a new or existing product or service by Blog and Twitter.

CO3: Demonstrate an understanding of the principles of digital marketing on Facebook and Google+.

CO4: Develop a marketing plan for a new or existing product or service on YouTube and LinkedIn Platform.

Course Content

Unit I

Social Media Mix: Making Business Case for Social Media, Tallying the Bottom Line, Plotting Social Media Marketing Strategy, Managing Cyber social Campaign

Cyber social Tools: Discovering Helpful Tech Tools, Leveraging Search Engine Optimization (SEO) for Social Media, Using Social Bookmarks, News, and Share Buttons

Unit II

Blogs, Podcast, and Video: Growing the Brand, Building the Blog, Using Podcasts or Video in Content, Sharing Images.

Twitter: Using Twitter as a Marketing Tool, Using Twitter as a Networking Tool, Finding the Right Twitter Tools, Supplementing Online Marketing Tools with Twitter, Hosting Twitter Chats

Unit III

Facebook: Using Facebook as a Marketing Tool, Creating and Sharing Content on Facebook, Gaining Insight about Your Facebook Community, Finding the Facebook Sweet Spot.

Google +: Leaping into Google+, Socializing in Circles, and Building through Pluses, Shares and Comments, hanging with Google+ Community.

Unit IV

Pinterest: Pinning Down Pinterest, Marketing with Pinterest, Driving Sales with Pinterest
YouTube and LinkedIn: LinkedIn marketing, LinkedIn advertising, LinkedIn analytics, YouTube marketing, YouTube advertising, YouTube analytics.

Recommended Books / Suggested Readings:

1. Social Media Marketing All-in-One for Dummies by Jan Zimmerman.
2. Social Media Marketing for Dummies by Shiv Singh.
3. Social Media Marketing. The Next Generation of Business Engagement by Dave Evans.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN122: Social Media Marketing Lab

Credits : 1

LTP 002

Course Description:

The course aims to equip the students with understanding of the processes and techniques of Social Media Marketing. This course includes Facebook, YouTube, Twitter Instagram, Pinterest and LinkedIn Marketing.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Identify best practices for social media marketing including platform.

CO2: Evaluate the performance of different social media.

CO3: Demonstrate an understanding of the principles of Social media marketing on Facebook.

CO4: Develop a marketing plan for a new or existing product or service on YouTube and LinkedIn Platform.

List of Practical:

1. Facebook Marketing: 1. Go to facebook.com/pages/create. Click to choose a Page type. Fill out the required information. 2. Choose a great username. 3. Give the key details in the About section. 4. Provide as many details as possible in the full About description. 5. Capture attention with a fantastic cover photo visual. 6. Choose an appropriate profile photo. 7. Ask your Facebook friends to like your Facebook Page. Once your Page is setup, use the handy invite option to invite all of your Facebook friends (or a group of your Facebook friends) to like your Facebook Page via a Facebook direct message. This is a great way to get the ball rolling and start building a following.8. Promote your Facebook Page. 8. Link your Facebook Page with your Webpage in Wix.com 9. Use Facebook Insights to analyze the impact of your Facebook campaign

2. YouTube Marketing: Creating YouTube Channel. Sign into YouTube and click on the user icon at the top right of the screen 2. Click on the gear icon to get to your account's YouTube Settings 3. Click on Create a new channel 4. Then choose "Use a business or other name" 5.

Add your Brand name and click create 6. Fill in the about section 7. Upload the video shot with mobile phone 8. Promote the YouTube Video in Social Media 9. Measure the impact of your YouTube Marketing Campaign with YouTube Analytics

3. Twitter Marketing: 1. Create a Twitter Profile 2. Create compelling content to Tweet 3. Create a Tweeting Strategy/Schedule 4. Make Tweets Conversational 5. Use Twitter Video 6. Connect with existing and potential customers.

4. Instagram Marketing: Create an Instagram Account 2. Post the Banner Ad in Instagram 3. Use filters to make the banner more attractive 4. Write compelling captions 5. Use the right hashtags 6. Run the Instagram Campaign 7. Measure the success with Instagram Analytics.

5. Pinterest social media marketing: 1. Sign up for a business account. 2. Choose the right categories for your content. 3. Use unique images and videos. 4. Leverage keywords. 5. Follow, engage, and interact with other accounts. 6. Analyze your results.

6. LinkedIn marketing: 1. Customize your public Profile URL.2. Add a LinkedIn background photo to your Profile. 3. Add, remove, and rearrange sections of your Profile.4. Optimize your LinkedIn Profile for the search engines.5. Add a ProFinder Badge to your Profile.6. Take advantage of the blog and website links on your LinkedIn Profile.7. Check your Network Updates (or share your own).8. Be identifiable.9. Check out who's viewed your LinkedIn Profile.10. Design all aspects of your LinkedIn page.

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks

External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN103: Basics of Digital Marketing

Credits : 4

LTP 400

Course Description:

The course aims to equip the students with understanding of the processes and techniques of Social Media Marketing. The Course includes Traditional Marketing and Digital Marketing, Online marketing POEM, Web Analytics, Content Marketing, Different social media channels, Display Marketing.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Explain the role and importance of digital marketing in a rapidly changing business landscape and discuss the key elements of a digital marketing strategy.

CO2: Illustrate how the effectiveness of a digital marketing campaign can be measured by google Analytics.

CO3: Demonstrate advanced practical skills in common digital marketing tools such as, content marketing, Social media, and E-mail.

CO4: Describe the ecosystem of Display and mobile marketing.

Course Content

Unit I

Introduction to Digital Marketing: Difference between Traditional Marketing and Digital Marketing, Benefits of using Digital Media, Inbound and Outbound Marketing, Online marketing POEM: (Paid, Owned, and Earned Media), Components of Online Marketing (Email, Forum, Social network, Banner, Blog), Impact of Online Marketing, Basics of Affiliate Marketing, Viral Marketing, Influencer Marketing, Referral Marketing.

Unit II

Search Marketing: Basics of Search Marketing, organic and paid search results, Overview of Google AdWords, keyword research and analysis, Search Engine Optimization techniques: on-page optimization and off-page optimization. Web Analytics: Digital measurement landscape, introduction to Google Analytics, interpreting the data in Google Analytics.

Unit III

Social Media Marketing: Different social media channels, social media for various businesses: B2C and B2B, measuring social media ROI, Content Marketing: Storytelling in social media. Email Marketing: Basics of email marketing. Concept of A/B testing and its use in email marketing.

Unit IV

Display and Mobile Marketing: Display Marketing: different kinds of display marketing, display marketing ecosystem, retargeting and dynamic retargeting. Mobile Marketing: different kinds of mobile marketing, the mobile market ecosystem.

Recommended Books / Suggested Readings:

1. Damian Ryan and Calvin Jones, "Understanding Digital Marketing".
2. Puneet Singh Bhatia, Fundamentals of Digital Marketing First Edition, Publication Pearson.
3. Venakataramana Rolla, "Digital Marketing Practice guide for SMB: SEO, SEM and SMM", CreateSpace Independent Publishing Platform, First edition.
4. Shivani Karwal, "Digital Marketing Handbook: A Guide to search Engine Optimization, Pay Per Click Marketing, Email Marketing and Content Marketing", CreateSpace Independent Publishing Platform, 1st edition.
5. Ian Dodson, "The art of Digital Marketing". Simon Kingsnorth, "Digital Marketing Strategy".

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN123: Basics of Digital Marketing Lab

Credits: 2

LTP 004

Course Description: The course aims to equip the students with understanding of the processes and techniques of digital marketing. This course includes Building Website/Blog, E-mail Marketing and Digital Marketing Analytics tools.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

After completing the course, the students will be able to:

CO1: Use digital marketing tools for blog development.

CO2: Create and maintain a good website and blog posts.

CO3: Apply Email Marketing in today's modern world.

CO4: Implement various Analytics tools of online marketing.

List of Practical:

1. Blog Development
2. Building Website/Blog using CMS WordPress.
3. Using Google Analytics to analyze website performance
4. Design Promotional banner through different designing tool (eg: Canva)
5. Digital Marketing Analytics tools
6. Email Marketing campaigns using Mail Chimp.
7. Google G Suit

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks

	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN124: Workshop on HTML/CSS

Credits : 1

LTP 002

Course Description:

The course aims to equip the students to learn how to design and develop a Web page using HTML and CSS. The course includes practical experience to design and develop a Web site using text, images, links, lists, and tables for navigation and layout.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Design and develop basic web pages using HTML and CSS.

CO2: Analyze a web page and identify its elements and attributes.

CO3: Design and develop web pages using CSS styles, internal and/or external style sheets.

CO4: Design and develop web pages using CSS for layout.

List of Experiments:

1. Introduction to Web Design.
2. WAP in html to illustrate body and pre-tags.
3. WAP in html to illustrate text Font tag.
4. WAP in html to illustrate comment, h1....h6, and div tag.
5. WAP in html to illustrate text formatting tags.
6. WAP in html to illustrate Order List tag.
7. WAP in html to illustrate Unorder List tag.
8. WAP in html to illustrate Nested and Definition tag.
9. WAP in html to illustrate image tag.
10. WAP in html to illustrate Hyper Link tag (Anchor tag).
11. WAP in html to illustrate Table tag.
12. WAP in html to illustrate Frame tag.
13. WAP in html to illustrate Form tag.
14. WAP in html to illustrate span tag.
15. WAP in html to create a webpage to show different hobbies.
16. WAP in html to show India map.

17. WAP in html to create a web page to show registration naukri.com.
18. Create a Web Page in HTML to show Admission form.
19. A Web Page in HTML to show your resume using Appropriate Formatting Elements.
20. A Web Page in HTML to show all the Text, Color, Background and Font Elements.

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

COM101: English Communication

Credits:2

LTP 200

Course Description:

The course aims to equip the students with the use of English in everyday situations both in formal and informal contexts. The course includes reading skills, writing skills, Grammar and vocabulary.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Develop a minute practical knowledge about English grammar and its usage.

CO2: Develop an understanding of the importance of free expression.

Course Content

Unit I

Reading Skills: Comprehension of Unseen Passage [Reading articles] (Intermediate)

Summary Paraphrasing, Translation and Precis Writing.

Unit II

English Grammar and Usage: Parts of speech, common errors in writing (based on Parts of Speech) Tenses, Change of Voice, Transformation of Sentences.

Unit III

Basic Writing Skills and Writing Practices: Paragraph/essay writing, short life story writing, Notice (General like trip, change of name, function) making notes and Letter writing.

Unit IV

Vocabulary Enhancement: Synonym, Antonym, Idioms and Phrasal verbs

Reference Book:

1. *Practical English Usage*. Michael Swan OUP. 1995

Suggested Readings:

1. *On Writing Well*. William Zinsser. Harper Resource Book. 2001

2. *Communication Skills*. Sanjay Kumar and Pushp Lata. Oxford University Press. 2006

3. *Exercises in Spoken English*. CIEFL, Hyderabad. Oxford University Press

COM121: English Communication Lab**Credits: 1****LTP 002****Course Assessment Pattern:**

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

Course Description:

The course aims to equip the students with focus on the production and practice of sounds of language and familiarizes the students with the use of English in everyday situations both in formal and informal contexts. The course includes description of sights seen in everyday life, pronunciation of different words and its correct usage.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Develop better understanding of nuances of English language through audio- visual experience and group activities

CO2: Hone speaking skills with clarity and confidence

CO3: Have better comprehension of accent of people of different backgrounds and regions

CO4: Use English grammar accurately

Course Content**Unit I**

Daily Discourse: Common Everyday Situations: Conversations and Dialogues (Unit 1-6), Monologue (2D/4D/5D/6D), and Communication at workplace

Unit II

Listening Skills: Listening skills on Social Interactions (Unit 1), work and study (Unit 2), daily life (Unit 3), food (Unit 4), Places (Unit 5) and Family (Unit 6)

Unit III

Phonetic Skills: Pronunciation, Intonation, Stress (Unit 1-6) and Rhythm

Unit IV

Speaking Skills: Group Discussion / Debate, Role Plays

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

ENS001: Environmental Studies**Credits: 2****LTP 200****Course Description:**

This course deals with the environment components, ecosystems and how to maintain equilibrium in nature, its conservation, and different methods to reduce pollution and maintain our nature.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Understand about environment, its role and importance for living beings.

CO2: Understand the structure of ecosystem, food chain/ web.

CO3: Understand about the natural resources and their uses.

CO4: Understand about different types of pollution created by human beings and their side effects as well as the methods to reduce these pollutions and their alternatives.

Unit I

Introduction to environmental studies: Multidisciplinary nature of environmental studies; components of environment –atmosphere, hydrosphere, lithosphere and biosphere, Scope and importance; Concept of sustainability and sustainable development.

Unit II

Ecosystems: What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chain, food web and ecological succession. Case studies of the following ecosystems:

- Forest ecosystem
- Grassland ecosystem
- Desert ecosystem
- Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit III

Natural Resources:

Renewable and Non-renewable Resources: Land Resources and land use change; Land degradation, soil erosion and desertification.

Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.

Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state). Heating of earth and circulation of air; air mass formation and precipitation.

Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

Unit IV

Biodiversity and Conservation: Levels of biological diversity: genetic, species and ecosystem diversity; Biogeography zones of India; Biodiversity patterns and global biodiversity hot spots, India as a mega-biodiversity nation; Endangered and endemic species of India, Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity. Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.

Unit V

Environmental Pollution: Environmental pollution: types, causes, effects and controls; Air, water, soil, chemical and noise pollution, Nuclear hazards and human health risks, Solid waste management: Control measures of urban and industrial waste, Pollution case studies.

Unit VI

Environmental Policies & Practices: Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture. Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act; International agreements; Montreal and Kyoto protocols and conservation on Biological Diversity (CBD). The Chemical Weapons Convention (CWC). Nature reserves, tribal population and rights, and human, wildlife conflicts in Indian context

Unit VII

Human Communities and the Environment: Human population and growth: Impact on environment, human health and welfares., Carbon footprint., Resettlement and rehabilitation of project affected persons, case studies. Disaster management: floods, earthquakes, cyclones and landslides. Environmental movements: Chipko, Silent valley, Bishnios of Rajasthan. Environmental ethics: Role of Indian and other religions and cultures in environmental conservation. Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).

Unit VIII

Field work: Visit to an area to document environmental assets; river/forest/flora/fauna, etc., Visit to a local polluted site -Urban/Rural/Industrial/Agricultural, Study of common plants, insects, birds and basic principles of identification, Study of simple ecosystems-pond, river, Delhi Ridge, etc.

Suggested Readings:

1. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
2. Gadgil, M., & Guha, R.1993. This Fissured Land: An Ecological History of India. Univ. of California Press.
3. Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
4. Gleick, P.H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
5. Groom, Martha J. Gary K. Meffe, and Carl Ronald carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.
6. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339:36-37.
7. McCully, P.1996. Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.
8. McNeil, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.
9. Odum, E.P., Odum, h.T. & Andrews, J.1971. Fundamentals of Ecology. Philadelphia: Saunders.
10. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science.

Academic Press.

11. Rao, M.N. & Datta, A.K. 1987. Wastewater Treatment. Oxford and IBH Publishing Co. Pvt. Ltd.
12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. Environment. 8th edition. John Wiley & Sons.
13. Rosencranz, A., Divan, S., & Noble, M.L. 2001. Environmental law and policy in India. Tripathi 1992.
14. Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP.
15. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
16. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.
17. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent.
18. Warren, C.E. 1971. Biology and Water Pollution Control. WB Saunders.
19. Wilson, E.O. 2006. The Creation: An appeal to save life on earth. New York: Norton.
20. World Commission on environment and Development. 1987. Our Common Future. Oxford University Press.
21. 21. www.nacwc.nic.in
22. 22. www.opcw.org

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN201: Web Technologies

Credits: 4

LTP 400

Course Description: The course aims to equip the students with fundamentals of web technologies. This course deals with Internet Basics, HTML, Lists Type, Web Site, JavaScript.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Create pages with simple tags in HTML

CO2: Design webpages with multiple sections or frames

CO3: Explain how to link webpages through hypertext or images a links

CO4: Outline the key web designing concepts using java script

CO5: Design forms with special controls using HTML.

Unit I

Internet Basics: Basic concepts, communicating on the internet, internet domains, internet server identities, establishing connectivity on the internet client IP address. Introduction to HTML Information Files Creation, Web Server, Web Client/Browser, Hyper Text Markup Language (HTML Tags, Paired Tags, Singular Tags), Commonly Used Html Commands (Document Head, Document Body), Title and Footer, Text Formatting (Paragraph Breaks, Line Breaks), Emphasizing Material in a Web Page (Heading Styles, Drawing Lines).

Unit II

Lists Type of Lists (Unordered List (Bullets), Ordered Lists (Numbering), Definition Lists. Adding Graphics to Html Documents Using the Border Attribute, Using the Width and Height Attribute, Using the Align Attribute, Using the Alt Attribute. Tables Introduction (Header, Data rows, The Caption Tag), Using the Width and Border Attribute, Using the Cell padding Attribute, Using the Cell spacing Attribute, Using the BGCOLOR Attribute, Using the COLSPAN and ROWSPAN Attributes. Linking Documents Links (External Document References, Internal Document References), Image as Hyperlinks. Frames Introduction to Frames: The tag, Targeting Named Frames. DHTML: Cascading Style Sheets, Style Tag.

Unit III

Forms Used by a Web Site: The Form Object, The Form Object's Methods (The Text Element, The Password Element, The Button Element, The Submit (Button) Element, The Reset (Button) Element, The Checkbox Element, The Radio Element, The Text Area Element, The Select and Option Element, The Multi Choice Select Lists Element).

Unit IV

Introduction to JavaScript JS Introduction, Where To, Output, Statements, Syntax, Comments, Variables, Operators, Arithmetic, Assignment, Data Types, Functions, Objects, Events, Strings, String Methods, Numbers, Number Methods, Arrays, Array Methods, Array Sort, Array Iteration, Dates, Date Formats, Date Get Methods, Date Set Methods, Math, Random, Booleans, Comparisons, Conditions, Switch, Loop For, Loop While, Break, Type Conversion, Bitwise, RegExp, Errors, Scope, Hoisting, Strict Mode, JSON, Forms, Forms API [CO5] JS Functions, Function Definitions, Function Parameters, Function Invocation, Function Call, Function Apply, Function Closures.

Text Books/Reference Books:

1. Internet for Everyone: Alexis Leon, 1st Edition, Leon Techworld, Publication, 2009.
2. Greenlaw R; Heppel, "Fundamentals of Internet and WWW", 2nd Edition, Tata McGraw-Hill, 2007.
3. Raj Kamal, "Internet & Web Technologies", edition Tata McGraw-Hill Education. 2009.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN221: Web Technologies Lab

Credits: 1

LTP 200

Course Description: The course aims to equip the students with fundamentals of web technologies. This course deals with HTML, Lists Type, Web Site, JavaScript.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

- CO1:** Design pages with simple tags in HTML.
- CO2:** Create web pages with Audio and Video content in it.
- CO3:** Illustrate the movement from one web page to another.
- CO4:** Implement advanced web designing concepts using java script.

List of Practical

1. Create a simple HTML page to demonstrate the use of different tags.
2. Design index page of a book on web designing.
3. Display Letter Head of your college on a web page.
4. Create a Hyperlink to move around within a single page rather than to load another page.
5. Display letter using different Text formatting Tags.
6. Design Time Table of your department and highlights of most important periods.
7. Use Tables to provide layout to your web page.
8. Embed Audio and Video into your web page.
9. Divide a web page vertically and horizontally and display logo of your college in left pane and logo of university in right pane.
10. Create a student Bio- Data.
11. Design front page of hospital with different style sheets.
12. Design a web page and display two different pages at a time.
13. Write a program to create a login form. On submitting the form, the user should get navigated to a profile page using JavaScript.
14. Write a code to create a Registration Form. On submitting the form, the user should be asked to login with the new credentials using JavaScript.

15. Write an HTML code to create your Department website/ Tutorial website for specific subject. Also use Java Script for validation.

DMSN202: Web Analytics

Credits: 4

LTP 400

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

Course Description:

The course aims to equip the students with fundamentals of web Analytics. This course includes the various web analytics processes and metrics used to measure online success, the segmentation process, useful analytical technique, Google Analytics.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Discuss the concepts of web analytics from ground zero to mastering the analytics domain across digital channels.

CO2: Analyze how digital data analytics drives important insights for all aspects of the customer lifecycle across digital channels.

CO3: Compare of web analytics, social analytics, mobile analytics, and content analytics.

CO4: Evaluate data from various sources to conduct quantitative and qualitative research, and deliver actionable, data-informed business insights.

Course Content

Unit I

Introduction to Web Analytics: Web analytics and its key terms, Common sources of confusion in web analytics, off site web analytics: Web measurement and analysis, Measurement of website's potential audience (opportunity), share of voice (visibility), and buzz (comments) on internet

Unit II

On-Site Web Analytics: Measurement of visitor's journey including drivers and conversations, tracking pages that encourage people to make a purchase and measures the commercial performance of the website. Comparison of data with key performance indicators, Implication to improve marketing campaign's audience response. On-site Web Analytics technologies and difference between them.

Unit III

Web analytics at e-Business scale: Framework for mapping business needs to web analytics

tasks, Case studies of success stories and currently missed opportunities, Data collection architecture, Introduction to OLAP, Web data exploration and reporting, introduction to splunk or any other similar tool.

Computational Advertisement & tools: Display and search advertising, Ad Auctions, Conversion attribution, Bidding strategies, Introduction to Google Ad Words and O2MC, Simulation tool

Unit IV

Predictive and Descriptive Modeling: - Classification: Generative and discriminative models, Classification vs. regression vs. ranking vs. prediction, Active learning, and semi-supervised learning

Recommended Books / Suggested Readings:

1. Web Analytics 2.0: The art of online accountability and science of customer centricity (Google ebook), Avinash Kaushik, John Wiley & sons.
2. Web Analytics: an hour a day, Avinash Kaushik, John Wiley & Sons.
3. MMDS: Mining of Massive Datasets (by Rajaraman, Ullman, Leskovec)
4. IDM: Introduction to Data Mining book (by Tan, Steinbach, Kumar)
5. NCM: Networks, Crowds, and Markets: Reasoning About a Highly Connected World (by Easley and Kleinberg).

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN203: Digital Design with Photoshop

Credits : 3

LTP 300

Course Description: The course aims to equip the students with graphic design. This Course include the fundamentals of color: visual, rhythm, and pattern in design, Scale, weight, direction, texture, and space in a composition, Series of images using different image making techniques.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

- CO1:** Describe the basic principles of Adobe Photoshop.
CO2: Apply the tools of Digital Photographs such as mask, pen etc.
CO3: Discuss the basic structure and principles of CorelDraw.
CO4: Demonstrate the understanding of object tools.

Unit I

Getting to Know the Work Area: Starting to work in Adobe Photoshop, Using the tools, Undoing actions in Photoshop, Customizing the workspace, Basic Photo Corrections: Strategy for retouching, Resolution and image size, Adjusting the color in Camera Raw, Straightening and cropping the image in Photoshop, adjusting saturation with the Sponge tool, Using the Spot Healing Brush tool

Working with Selections: Using the Quick Selection tool, moving a selected area, Using the Magic Wand tool, selecting with the lasso tools, cropping an image, and erasing within a selection. Layer Basics, Using the Layers panel, applying a gradient to a layer, applying a layer style, Flattening, and saving files

Unit II

Correcting and Enhancing Digital Photographs: Processing files in Camera Raw, merging exposures and applying, correcting image distortion, Adding depth of field. Masks and Channels: Creating a mask, refining a mask, manipulating an image with Puppet Warp, working with channels, Typographic Designs: Creating a clipping mask from type, creating type on a path, warping point type, Designing paragraphs of type.

Vector Drawing Techniques: About bitmap images and vector graphics, the Pen tool, creating vector objects for the background, working with defined custom shapes, Importing a Smart Object.

Unit III

CorelDraw X5 Essentials: Exploring Your Workspace, CorelDraw's Ins and Outs: Importing, Exporting, and Saving Design Work. Navigation and Page Setup, X5 Test Drive.

Getting Started with CorelDraw X5: Working with Single- and Multi-Page Documents, Measuring and Drawing Helpers. Creating Basic Shapes. Applying Transformations, Moving, Scaling, Rotating: Basic Transformations

Unit IV

Working with Object Tools: Drawing and Editing Objects, Editing Objects. Working with Text. Getting Artistic with Text: Typography Rules and Conventions. Graphic Design (Photoshop/CorelDraw).

Recommended Books / Suggested Readings:

1. Adobe® Photoshop® Cs5 Classroom in a Book, the Official Training Workbook from Adobe Systems.
2. CorelDRAW®X5 The Official Guide by Gray David Bouton, McGraw Hill.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN223: Digital Design with Photoshop Lab

Credits: 1

LTP 200

Course Description: The course aims to equip the students with basic principles of Adobe Photoshop. This course includes the basic principles and fundamentals in visual art and design, creative process, develop techniques and methods of creative problem solving, Adobe Photoshop and Illustrator software programs.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

- CO1:** Discuss the basic principles of Adobe Photoshop.
CO2: Analyze the tools of Digital Photographs such as mask, pen etc.
CO3: Describe the basic structure and principles of CorelDraw.
CO4: Demonstrate the understanding of object tools.

List of Practical:

1. Familiar students with draw shapes, add color to objects, duplicate, rotate, mirror objects, import images from file, use smart drawing, ellipse, rectangle, interactive drop shadow, and text tools to CorelDraw Tools.
2. Design a Logo for Company/Shop or Activity.
3. Familiar with Ellipse tool, interactive fountain fill tool of CorelDraw Tools.
4. Design a 3D button for web page.
5. Design 3D looking text that can be used for heading or slide presentation using CorelDraw.
6. Design a movie on given topic by using photos, videos, background music with audio files with effects using Movie Maker.
7. Learn the tools and create the car advertisement in Photoshop.
8. Learn the magnetic logo tools and create a photo effect by merging the two photographs in Photoshop.
9. Mix the two different audio tracks and give then the sound effects.
10. Use Virtual DJ for video mixing of two different videos and give them video effects.
11. Use Cool Edit Pro to Open and edit use multiple tracks and for mixing and editing of different audios.

DMSN204: SEO Foundation**Credits: 4****LTP 400****Lab Course Evaluation Pattern:**

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

Course Description:

The course aims to equip the students with basic principles of SEO. This course includes SEO and PPC efforts, Website Structure, Building Links, Quality Score Optimization.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Describe the overview of search engine marketing.

CO2: Create Web pages designed to be easily crawled and optimally indexed by search engines.

CO3: Discuss Google Analytics and other metrics and tools to monitor progress in achieving search engine marketing goals and Attract inbound Links from other Web Sites.

CO4: Describe the basic principles of Pay Per Click campaigns.

Course Content**Unit I**

Search-Engine Optimization: What is SEO? , Working of Search Engine, Key Metrics used by Search Engine, Types of SEO : White SEO, Black SEO, Comparison of Black SEO, White SEO , White SEO Techniques, Black Hat SEO Techniques, Domain and its working, World Wide Web and Internet , Open standards in WWW, Types of Browsers, HTML and its importance in Web Site Building, Difference between search engine and Portal.

Unit II

Research and Analysis : SEO Keyword Analysis, Competitors Analysis, SWOT Analysis, Choosing Best Keywords. SEO Guidelines: Web Site Design Guidelines, Content Optimization, SEO Design and Layout.

On-Page SEO: On Page Optimization, SEO Page Title, Meta Description and Keywords, SEO Headings, SEO Optimized Domain, canonical tags and meta tags

OFF- Page SEO: Off Page Optimization, SEO Page Rank, Link Popularity, Directory Submission, Social Book Marks, Blog Submission, Article Submission, Reciprocal, Forum Submission, Search Engine Submission

Unit III

Search-Engine Optimization: Find Your Target Audience, Set Budget, Set Goals, Keyword Generation, Using the Google AdWords Keyword Tool, Bing Keyword Tool. Creating Pages: An Introduction to Creating Pages, Choose Filenames, Optimize Title Tags, Optimize Meta Keyword Tags, create a Meta Robots Tag, Add Emphasis with Header Tags, Optimize Images, Create Links, Validate HTML.

Unit IV

Quality Score Optimization: View your Quality Scores, Optimize Your Quality Score, Test Ad Copy with Advance Keyword Insertion, Using Display Network Target Campaigns, Install Remarketing, Optimize Your Landing Pages Optimizing for Other Search Engines, Increase Exposure an Ask.com, Improve Your Ranking on Bing, Using Shopping Engines to Drive Traffic, Produce Sales with eBay Auctions. Using Craigslist to Drive Traffic, Get Listed on Local.com and ReferLocal.com.

Recommended Books / Suggested Readings:

1. Search Engine Optimization for Dummies by Peter Kent.
2. Search Engine Optimization 3rd Edition by Kristopher B. Jones and Foreword by Boyk.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN224: SEO Foundation Lab

Credits : 1

LTP 002

Course Description: The course aims to equip the students with basic principles of SEO. This consist of search engine optimisation techniques for business websites, web pages indexed, ways Google Ads and Google Analytics.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Describe the history of search engine marketing.

CO2: Create Web pages designed to be easily crawled and optimally indexed by search engines

CO3: Analyze Google Analytics and other metrics and tools to monitor progress in achieving search engine marketing goals.

CO4: Apply inbound Links from other Web Sites.

List of Practical:

1. Need and Introduction of SEO.
2. Keyword Research in SEO for organic traffic.
3. Implementation of On-Page and Technical SEO.
4. To Use Technical SEO Audits.
5. Content Marketing using SEO.
6. Setting up Google Search Console.
7. Creating a Compelling Brand using SEO.
8. Profitable SEO Niches.
9. Creating Back links in SEO.

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

COM201: Business Communication**Credits: 2****LTP 200**

Course Description: The course aims to equip the students with business communication principles. The course includes designing and mastering the most important communication skills, from professional writing presentations.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Develop effective reading and writing skills.

CO2: Understand the vocabulary and technical jargons as used in business communication.

Course Content**Unit I**

Theory of Communication: Process of Communication, Verbal and Non-verbal communication, Modes of Communication, and Barriers to Communication.

Unit II

Nature and Style of sensible Writing: Memorandum, Notices, Quotations/Tenders, Report Making, Minutes of Meeting, E-Mail, Press Note, Resume, Complaint Letter, Inquiry Letter, Cover Letter, Confirmation Letter, Resignation Letter, Permission Letter and Job Application.

Unit III

Vocabulary Building: Words Often Confused and Words Often Misspelt, standard abbreviations, word formation, prefix, suffix, root words from foreign languages, punctuation, phrases, and clauses

Unit IV

Grammar: Conditional Sentences, and Degrees of Comparison

Reference Book: Cambridge English Empower Elementary Student's Book by Cambridge University Press

Recommended Books / Suggested Readings:

1. *Exercises in Spoken English. Parts. I-III.* CIEFL, Hyderabad. Oxford University Press
2. *Study Writing.* Liz Hamp-Lyons and Ben Heasley, Cambridge University Press. 2006.

3. *On Writing Well*. William Zinsser. Harper Resource Book. 2001

4. *Practical English Usage*. Michael Swan. OUP. 1995.

COM221: Business Communication Lab

Credits: 1

LTP 002

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

Course Description: The course aims to equip the students with business communication principles through creation of effective business and oral presentations. Includes study and application of team communication and use of technology to facilitate the communication. The course includes designing and mastering the most important communication skills, from professional writing presentations.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Acquire in-depth knowledge of principles of business communication.

CO2: Discuss the use of video in business messages.

CO3: Discuss the use of video in business messages.

CO4: Develop Nonverbal communication, interview preparation and resume writing.

Course Content

Unit I

Listening Skills: Listening Exercises on Journeys (Unit 7), Fit and healthy (Unit 8), Clothes and shopping (Unit 9), Communication (Unit 10), Entertainment (Unit 11) and Travel (Unit 12)

Unit II

Presentation Skills: Making PPT and Presenting Power Point Presentation

Unit III

Phonological Skills: Pronunciation, syllables and word stress

Unit IV

Speaking Skills: Interview skills

Recommended Books / Suggested Readings:

1. Cambridge English Empower Elementary Student's Book by Cambridge University Press
2. Exercises in Spoken English. Parts. I-III. CIEFL, Hyderabad. Oxford University Press
3. Study Writing. Liz Hamp-Lyons and Ben Heasley, Cambridge University Press. 2006.
4. *On Writing Well*. William Zinsser. Harper Resource Book. 2001
5. *Practical English Usage*. Michael Swan. OUP. 1995.

HVPE101: Human Values & Professional Ethics

Credits : 2

LTP 200

Lab Assessment Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	15 Marks
	Attendance	5 Marks
External Assessment (Summative)	External Viva	30 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

Course Description: The course aims to equip the students to understand the need, basic guidelines, content and process of value education. This course includes harmony at all the levels of human living, and harmony in existence in their profession and lead an ethical life.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Understand the significance of value inputs in a classroom, distinguish between values and skills

CO2: Compare between the Self and the Body, understand the meaning of Harmony in the Self the Co-existence of Self and Body

CO3: Compare between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.

CO4: Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships and explore their role in ensuring a harmonious society.

Course Content

Unit I

Introduction to Value Education: Understanding Value Education, Self-exploration as the Process for Value Education, Happiness and Prosperity -Current Scenario.

Unit II

Harmony in the Human Being: Understanding Human being as the Co-existence of self ('I') and the Body, discriminating between the Needs of the Self ('I') and the Body, Understanding Harmony in the self ('I'), Harmony of the self ('I') with the Body.

Unit III

Harmony in the Family and Society: Harmony in the Family – the Basic Unit of Human Interaction, 'Trust' - the Foundational Value in Relationships, Understanding, Harmony in the Society.

Unit IV

Harmony in the Nature (Existence): Understanding Harmony in the Nature, Interconnectedness, Self-regulation and Mutual Fulfillment among the Four Orders of Nature, The Holistic Perception of Harmony in Existence.

Implications of the Holistic Understanding -a Look at Professional Ethics: A Basis for Humanistic Education, Humanistic Constitution and Universal Human Order, Competence in Professional Ethics, Strategies for Transition towards Value-based Life and Profession.

Recommended Books / Suggested Readings:

1. R R Gaur, R Sangal, G P Bagaria, 2009, A Foundation Course in Human Values and Professional Ethics
2. A.N. Tripathy, 2003, Human Values, New Age International Publishers.

Suggested Books:

1. PL Dhar, RR Gaur, 1990, Science and Humanism, Commonwealth Publishers.
2. B P Banerjee, 2005, Foundations of Ethics and Management, Excel Books

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN205: BUSINESS STATISTICS

Credits : 3

LTP 300

Course Description: The course aims to familiarize students with the basic statistical tools used for managerial decision-making and will able to learn of Hypothesis testing. The course includes Statistical Data and Descriptive Statistics, Probability & Correlation and Regression Analysis, Index Numbers & Time series analysis

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Solve the practical problems related to mean, median, mode, harmonic mean and geometric mean

CO2: Solve the practical problems related to Standard deviation, Coefficient of variation, moments & skewness.

CO3: Solve the practical problems related to Karl Pearson's coefficient of correlation, Spearman's Rank correlation coefficient, Regression Analysis.

CO4: Use various probability techniques such as Theorems of addition and multiplication. Conditional probability. Bayes' theorem.

Course Content

Unit I

Measures of Central Value: Characteristics of an ideal measure; Measures of Central Tendency - mean, median, mode, harmonic mean and geometric mean. Merits, Limitations and Suitability of averages. Relationship between averages.

Unit II

Measures of Dispersion: Meaning and Significance. Absolute and Relative measures of dispersion - Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation, Moments, Skewness, Kurtosis

Unit III

Karl Correlation Analysis: Meaning and significance. Correlation and Causation, Types of correlation. Methods of studying simple correlation - Scatter diagram, Pearson's coefficient of correlation, Spearman's Rank correlation coefficient, Regression Analysis: Meaning and

significance, Regression vs. Correlation. Linear Regression, Regression lines (X on Y, Y on X) and Standard error of estimate.

Analysis of Time Series: Meaning and significance. Utility, Components of time series, Models (Additive and Multiplicative), Measurement of trend: Method of least squares.

Unit IV

Index Numbers: Meaning and significance, problems in construction of index numbers, methods of constructing index numbers-weighted and unweighted, Test of adequacy of index numbers, chain index numbers, base shifting, splicing and deflating index number.

Probability: Meaning and need. Theorems of addition and multiplication. Conditional probability. Bayes' theorem.

Recommended Books / Suggested Readings:

1. S.P. Gupta (S.P.): Statistical Methods, Sultan Chand & Sons, 34th Edition.
2. Richard Levin & David Rubin : Statistics for management, Prentice Hall.
3. Anderson, Sweeny & Williams: Statistics for Business and Economics, South Western J.R.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN206: Excel Spreadsheets

Credits : 3

LTP : 3 0 0

Course Description:

The course aims to equip the students with basic principles of Excel Spreadsheets. This course consists of Manage Workbook Options and Settings, Custom Data Formats and Validation, Operations with Formulas and Functions, Charts and Objects.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Examine spreadsheet concepts and explore the Microsoft Office Excel environment.

CO2: Create, open and view a workbook and Save and print workbooks.

CO3: Modify a worksheet and workbook and Work with cell references.

CO4: Learn to use functions and formulas and create and edit charts and graphics

Course Contents:

Unit I

Manage Workbook Options and Settings: Create Worksheets and Workbooks, create a workbook, import data from a delimited text file. Add a worksheet to an existing workbook. Copy and move a worksheet. Navigate in Worksheets and Workbooks. Search for data within a workbook. Navigate to a named cell, range, or workbook element. Insert and remove hyperlinks. Format Worksheets and Workbooks. Change worksheet tab color. Rename a worksheet. Change worksheet order. Insert and delete columns or rows. Change workbook themes. Adjust row height and column width. Insert headers and footers. Customize Options and Views for Worksheets and Workbooks. Hide or unhide worksheets. Hide or unhide columns and rows. Customize the Quick Access toolbar. Modify document properties. Display formulas: Configure Worksheets and Workbooks for Distribution. Inspect a workbook for hidden properties or personal information. Inspect a workbook for accessibility issues. Inspect a workbook for compatibility issues.

Unit II

Apply Custom Data Formats and Validation: Create custom number formats. Populate cells by using advanced Fill Series options. Configure data validation. Apply Advanced Conditional Formatting and Filtering. Create custom conditional formatting rules. Create conditional formatting rules that use formulas. Manage conditional formatting rules. Create and Modify Custom Workbook Elements. Create and modify simple macros. Insert and configure form controls. Create and Manage Tables-Create an Excel table from a cell range. Convert a table to a cell range. Add or remove table rows and columns. Manage Table Styles and Options. Apply styles to tables. Configure table style options. Insert total rows. Filter and Sort a Table. Filter records. Sort data by multiple columns. Change sort order. Remove duplicate records.

Unit III

Perform Operations with Formulas and Functions: Summarize Data by using Functions. Insert references. Perform calculations by using the SUM function. Perform calculations by using MIN and MAX functions. Perform calculations by using the COUNT function. Perform calculations by using the AVERAGE function. Perform Conditional Operations by using Functions. Perform logical operations by using the IF function. Perform logical operations by using the SUMIF function. Perform logical operations by using the AVERAGEIF function. Perform statistical operations by using the COUNTIF function. Format and Modify Text by using Functions. Format text by using RIGHT, LEFT, and MID functions. Format text by using UPPER, LOWER, and PROPER functions. Format text by using the CONCATENATE function.

Unit IV

Create Charts and Objects: Create Charts. Create a new chart. Add additional data series. Switch between rows and columns in source data. Analyze data by using Quick Analysis. Format Charts. Resize charts. Add and modify chart elements. Apply chart layouts and styles. Move charts to a chart sheet. Insert and Format Objects. Insert text boxes and shapes. Insert images. Modify object properties. Add alternative text to objects for accessibility. Manage Workbooks. Save a workbook as a template. Enable macros in a workbook. Display hidden ribbon tabs. Manage Workbook Review Restrict editing. Protect a worksheet. Configure formula calculation options. Protect workbook structure. Manage workbook versions. Encrypt a workbook with a password.

Create Advanced Formulas: Apply Functions in Formulas. Perform logical operations by using AND, OR, and NOT functions. Perform logical operations by using nested functions. Perform statistical operations by using SUMIFS, AVERAGEIFS, and COUNTIFS functions.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN301: Principles of Computer Programming

Credits : 4

LTP : 3 1 0

Course Description: The course aims to equip the students with a comprehensive study of Python Programming.

The course includes Object-Oriented paradigm in Python programs, Python functions, Python exception handling mechanism.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Familiar with Python environment, data types, operators used in Python.

CO2: Compare and contrast Python with other programming languages.

CO3: Learn the use of control structures and numerous native data types with their methods.

CO4: Design user defined functions, modules, and packages.

CO5: Identify and handle the exceptions in programs through appropriate exceptions handling methods.

Course Contents:

Unit I

Introduction: Why do people use python? Python a scripting language, Users of Python, Need of Python, Python's Technical Strengths. How Python runs programs: Introducing the Python Interpreter, Program Execution.

Execution Model Variation: Python Implementation Alternatives.

Data Types & Input/Output: Keywords, Identifiers, Python Statement, Indentation, Documentation, Variables, Multiple Assignment, Understanding Data Type, Data Type Conversion, Python Input and Output Functions, Import command.

Operators and Expressions: Operators in Python, Expressions, Precedence, Associativity of Operators, Non-Associative Operators.

Unit II

Control Structures: Decision making statements, Python loops, Python control statements.

Strings Fundamentals: String Basics, String Literals, Strings in action, String Methods -Lists and Dictionaries, Tuples-Files.

Module: Importing Module, Math Module, Random Module, Package, Composition and The Distribution Utility.

Unit III

Functions: Defining a function, calling a function, Types of functions, Function Arguments, Anonymous functions.

Classes & OOP: Introduction, Class Coding Basics, Class Coding details: Class Statement, Methods, Inheritance, classes: Python and OOP, OOP Inheritance, Composition, Delegation, Methods and Classes act as Objects, Multiple Inheritance

Unit IV

Exception Handling: Exceptions, Built-in exceptions, Exception handling, User defined exceptions in Python.

File Management in Python: Operations on files (opening, modes, attributes, encoding, closing), read () & write () methods, tell () & seek () methods, renaming & deleting files in Python, directories in Python.

Recommended Books / Suggested Readings:

1. Programming in Python, Pooja Sharma, BPB Publications, 2017.2.
2. Core Python Programming, R. Nageswara Rao, 2nd Edition, Dreamtech.3.
3. Python in a Nutshell, A. Martelli, A. Ravenscroft, S. Holden, OREILLY.
4. Python, The complete Reference, Martin C. Brown, Mc Graw Hill Education.

DMSN321: Principles of Computer Programming Lab

Credits : 2

LTP : 004

Course Description: The course aims to equip the students with a comprehensive study of Python Programming.

The course includes Object-Oriented paradigm in Python programs, Python functions, Python exception handling mechanism.

Course Outcomes (CO):

Upon successful completion of the course, the students should be able to:

CO1: Solve simple to advanced problems using Python language.

CO2: Develop logic of various programming problems using numerous data types and control structures of Python.

CO3: Implement different data structures using Python.

CO4: Implement modules and functions using Python.

CO5: Design and implement the concept of object-oriented programming structures.

CO6: Implement files handling.

List of Practical:

1. Write a program to add two numbers.
2. Write a program that declares 3 integers, determines and prints the largest and smallest in the group.
3. Write a program for factorial of a number.
4. Write a program to calculate simple interest.
5. Write a program to find that given year is leap year or not.
6. Write a program to implement linear search and binary search.
7. Write a program to find that given number is Armstrong or not.
8. Write a program to print Fibonacci Series.
9. Write a program to convert decimal number into binary numbers.
10. Python Program to find sum of array.

11. Write a program to find largest number of elements in array.
12. Write a program to check if a string is palindrome or not.
13. Maintain book record as per their serial numbers in library using dictionary.
14. Write a program to concatenate two dictionaries into one.
15. Perform following operations on dictionary 1) Insert 2) delete 3) change 4) update.
16. Write a program to calculate addition of two number using methods.
17. Program to calculate average of numbers using function.
18. Fibonacci series using recursion.
19. Write a program to create a module of factorial in Python.
20. Write A Program to Find the Area of a Rectangle Using Classes
21. Write A Program to Append, Delete and Display Elements of a List Using Classes
22. Write A Program to Create a Class and Compute the Area and the Perimeter of the Circle
23. Write A Program to Create a Class which Performs Basic Calculator Operations
24. Write A Program to Create a Class in which One Method Accepts a String from the User and Another Prints it.
25. Write A Program that Reads a Text File and Counts the Number of Times a Certain Letter Appears in the Text File.
26. Write A Program to Read a Text File and Print all the Numbers Present in the Text File.
27. Write a program for generation of pyramid.

DMSN302: Database Management System

Credits: 4

LTP 400

Course Description: The course aims to equip the students with a comprehensive study of the Introduction to Database Management System.

The course includes Components of DBMS Environment, Database System Architecture, Entity-Relationship Model, and Relational Data Model.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Analyze Data Base design methodology.

CO2: Acquire knowledge in fundamentals of Data Base Management System.

CO3: Analyze the difference between traditional file system and DBMS.

CO4: Design a database for a given set of requirements.

Course Content

Unit I

Basic Concepts: Data, Information, Records and files. Traditional file –based Systems-File Based Approach-Limitations of File Based Approach, Database Approach-Characteristics of Database Approach, Database Management System (DBMS), Components of DBMS Environment, DBMS Functions and Components, Advantages and Disadvantages of DBMS. Roles in the Database Environment, Data and Database Administrator, Database Designers, Applications Developers and Users.

Unit II

Database System Architecture: Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances. Data Independence, Logical and Physical Data Independence. Classification of Database Management System Centralized and Client Server architecture to DBMS. Data Models: Records-based Data Models, Object-based Data Models, Physical Data Models and Conceptual Modeling.

Unit III

Entity-Relationship Model: Entity Types, Entity Sets, Attributes Relationship Types, Relationship Instances and ER Diagrams. Basic Concepts of Hierarchical and Network Data Model.

Unit IV

Relational Data Model: Brief History, Relational Model Terminology-Relational Data Structure, Database Relations, Properties of Relations, Keys, Domains, Integrity Constraints over Relations, Base Tables and Views.

Recommended Books / Suggested Readings:

1. Desai, B.C., 1993: An Introduction to Database Systems, Galgotia Publ. Private Ltd.
2. Elmasri & Navathe, "Fundamentals of Database Systems", 5th edition, Pearson Education.
3. Thomas Connolly Carolyn Begg, "Database Systems", 3/e, Pearson Education.
4. C. J. Date, "An Introduction to Database Systems", 8th edition, Addison Wesley N. Delhi.
5. Mukhi, Vijay 1992: Mastering Oracle 6.0, BPB Publications.

DMSN322 : Database Management System Lab

Credits: 2

LTP 004

Course Description: The course aims to equip the students with a comprehensive study of the Introduction to Database Management System.
The course includes SQL Fundamentals, Joins, Queries, Tables.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

- CO1:** Discuss about SQL Fundamentals.
- CO2:** Describe the Database connectivity with front-end.
- CO3:** Implement Commit & Rollback commands.
- CO4:** Describe the concepts of Table View, Log & Triggers.

List of Practical:

1. To implement Data Definition language
 - 1.1. Create, alter, drop, truncate
 - 1.2. To implement Constraints.
 - 1.2.1. (a). Primary key, (b). Foreign Key, (c). Check, (d). Unique, (e). Null, (f). Not null, (g). Default, (h). Enable Constraints, (i). Disable Constraints (j). Drop Constraints
2. To implementation on DML, TCL and DRL
 - 1.1. (a). Insert, (b). Select, (c). Update, (d). Delete, (e). commit, (f). rollback, (g). save point, (i). Like '%', (j). Relational Operator.
3. To implement Nested Queries & Join Queries
 - 1.1 a). To implementation of Nested Queries
 - 1.2 b). (a) Inner join, (b). Left join, (c). Right join (d). Full join
4. To implement Views
 - 1.1. (a). View, (b). joint view, (c). force view, (d). View with check option

DMSN303: Social Media Optimization

Credits: 4

LTP 400

Course Description: The course aims to equip the students with the mechanism of how to spread the brand, service and product awareness among the intended audience.
The course includes Components of prepare blogs, create content and upload videos etc.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

- CO1:** Understand the importance of digital marketing in a rapidly changing business landscape.
- CO2:** Learn the key elements of a digital marketing strategy
- CO3:** Examine how effectiveness of a digital marketing campaign can be measured.
- CO4:** Demonstrate knowledge and ability to implement common digital marketing tools such as SEO, SEM, Social media and Blogs.

Course Content

Unit I

Introduction to Digital Marketing (DM) - Overview of Digital marketing; Meaning, Definition, Origin and Need of Digital marketing, History of DM, Traditional Vs. Digital Marketing, Concept and approaches to DM, Advantage and Disadvantage. Scope of DM, Future of digital marketing in India and outside India. Examples of good practices in DM.

Unit II

Modes of Digital Marketing- Mobile marketing; Overview of the B2B and B2C Mobile Market. Email Marketing- Need for Emails, Types of Emails, and options in Email advertising. Social media marketing and other forms of digital Marketing. Overview of various & tools of digital marketing.

Unit III

Measurement Metrics- Digital Marketing Media, Budget Allocation, ROI for Digital Marketing, Analytics and Key Performance Indicators (KPI); Attribution Models and Frameworks; Digital Marketing in Governance. Emerging Technologies for Digital Marketing. Leading and Managing Digital Marketing teams.

Unit IV

Payment Gateways and Security System- Electronic Payment System; Electronic cash; Smart cards; Risk and Electronic payment system; Types of Transaction security- Security risk of E-Commerce; Types and sources of threats; Protecting e-business assets and intellectual property; firewalls; client server network security.

Recommended Books / Suggested Readings:

1. Chaffey. D., E-Business and E-Commerce Management: Strategy, Implementation and Practice, Pearson Education India.
2. Kotler, P. Kartajaya, H and Setiawan, I., Marketing 4.0: Moving from Traditional to Digital, Wiley.
3. Tapp, A., & Whitten, I., & Housden, M; Principles of Direct, Database and Digital Marketing, Pearson.
4. Tasner, M; Marketing in the Moment: The Digital Marketing Guide to Generating More Sales and Reaching Your Customers First, Pearson Education.
5. "Basics of Digital Marketing" MOOC on SWAYAM Portal of UGC, https://swayam.gov.in/nd2_cec20_mg15/preview
6. "Digital Marketing" MOOC on SWAYAM Portal of UGC, https://swayam.gov.in/nd2_cec20_mg29/preview.

DMSN304: Digital Campaign Design and Management

Credits: 4

LTP 400

Course Description: The course aims to equip the students with a key concepts of digital marketing, including advantages, limitations and planning.

The course includes Components of Planning, web presence, Social Media Management.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Describe various web presence options and how to select appropriate keywords for search engine optimisation.

CO2: Describe how effective social media management assists in promotion and lead generation.

CO3: Use a social media management service to schedule posts and set up notifications.

CO4: use analytics services to monitor and improve campaigns.

Course Content

Unit I

Planning: elements of a digital marketing strategy, Recognise the need for a consistent online presence in line with corporate identity and design, Recognise types of content used to drive traffic and enhance engagement, Understand the importance of having policies and access controls.

Web Presence: possible web presence solutions, Outline the typical steps to create a web presence, understand the term content management system.

Unit II

Social Media Setup: Understand the term social media platform and identify the main uses of some common platforms, common social media marketing campaign elements, social media profile. Distinguish between the different types of profiles, Create, edit social media business profile information, Understand social media actions.

Unit III

Social Media Management: social media management service and identify some common social media management services, scheduled post, influencers, targeted audience, video

marketing, review, referral, URL shortener, promotional campaign.

Unit IV

Online Marketing and Advertising: search engine marketing (SEM) platforms, types of online advertisement, sponsored post, e-mail marketing, opt-in, opt-out, mobile marketing.

Recommended Books / Suggested Readings:

1. Likeable Social Media By Dave Kerpen.
2. Audience: Marketing in the Age of Subscribers, Fans & Followers by Jeffrey Rohrs.

DMSN305: E-Commerce and Payment Gateway

Credits: 3

LTP 300

Course Description: The course aims to equip the students with the concepts, and procedures associated with E-Commerce and the Internet. This course includes the component of e-commerce, types, and applications, E-Commerce payment System.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Explain the basic business management concepts and how E-commerce is affecting business enterprises, governments, consumers, and people in general.

CO2: Discuss technical concepts, and privacy relating to E-commerce.

CO3: distributed environment, client-server architecture and middleware for the purpose of the development of E-commerce applications.

CO4: describe various electronic payment systems.

Course Content

Unit I

Electronic Commerce (E-Commerce): Definition, Scope, Interdisciplinary Nature; Benefits and Limitations; Future Prospects. Driving forces of E-Commerce. Electronic marketing process. Strategic Framework of E-Commerce; E-Commerce Strategy and Implementation.

Unit II

Security of E-Commerce Transactions: Review of cryptographic tools, authentication, signatures, observers, anonymity, privacy, traceability, key certification, management, and escrow.

Unit III

Electronic Payments: Overview of Electronics payments, Smart card, e-cash, e-wallet, Digital Token based Electronics payment System, crypto-currency payments, Smart Cards, Credit Card I Debit Card based EPS, Emerging financial Instruments, Home Banking, Online Banking, business models for e-commerce.

marketing, review, referral, URL shortener, promotional campaign.

Unit IV

Electronic Payment System and Security Issues; Electronic payment protocols; Stored Value Cards (SVCs), Control Issues; Security Hazards; Trust and Ethical Issues; Use of firewalls in E-Commerce security. Technical Solutions for Privacy Protection, Online Frauds and Phishing.

Recommended Books / Suggested Readings:

1. P.T. Joseph, S.J., E-Commerce: An Indian Perspective(5thed.), Prentice-Hall of India,2015.
2. Efraim Turban, Jae Kyu Lee, Dave Kling, Judy McKay, Peter Marshall, Electronic Commerce: A Managerial Perspective(5thed.), Pearson, 2008.
3. M.L. Liu, Distributed Computing: Principles and Applications, Pearson, 2004.
4. Stuart Jacobs, Engineering Information Security, IEEE Press, Wiley, 2011.
5. R. Orfali and Dan Harkey, Client/Server Programming with Java, and CORBA(2nded.), John Wiley & sons, 1998.

DMSN306: Principles of Marketing

Credits: 3

LTP 300

Course Description: The course aims to equip the students with the knowledge of Marketing Environment and recent trends in Marketing.

This course includes the component of process of marketing, tools of marketing.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Understand strong conceptual knowledge in the functional areas of Marketing Management.

CO2: Interpret the relevant functional areas of Marketing Management and its application.

CO3: Analyze and apply marketing concepts in case studies, discussions, problems in written assignments and exams.

CO4: Create Solutions by using various Ps of marketing and Promotion Mix tools in day to day marketing problems.

Course Content

Unit I

Introduction to Marketing -Meaning, Evolution, Importance and Concepts of Marketing; Approaches to Marketing; Concept of Marketing Myopia; Holistic Marketing. Role of Information technology in Marketing. Factors affecting Marketing Environment. Components of Marketing Mix.

Unit II

STP (Segmenting, Targeting and Positioning) – Need and Basis for Market Segmentation; Evaluating & Selecting Target Markets; Concept of Positioning – USP; Relationship between MIS and MR; Significance of studying Consumer Behaviour and its modus Operandi, Factors influencing Consumer Behaviour.

Unit III

Product Decisions – Concept, levels of Product; PLC and its Significance; New Product Development Process and Marketer Strategies at each Stage of NPD; Pricing Decisions – Meaning, Policies and Procedures, Factors affecting Pricing Decisions; Branding & Packaging

Decisions.

Unit IV

Introduction to Market Logistics; Channels of Distribution - Concept, Types and factors affecting Channels of Distribution; Promotion Mix – Advertising, Sales Promotion, Personal Selling, Publicity & PR; Recent Developments in Marketing; Green Marketing; Ethics in Marketing.

Recommended Books / Suggested Readings:

1. Etzel J. Michael, Stanton J. William, Marketing Concepts and Cases, Tata McGraw Hill Publishing Co. Ltd.
 2. Kotler, Philip. Marketing Management, Millennium Edition. Intl ed. US: Prentice Hall.
 3. Ramaswamy, V.S. & Nama kumari, S., Marketing Management Indian Context with Global Perspective, Mc Graw Hill.
 4. Kotler, P., Keller, K.L., Koshy, A., & Jha, M., Marketing Management, A South Asian Perspective, Mc Graw Hill.
- Saxena Rajan, Marketing Management, Tata McGraw Hill Publishing Co. Ltd

DMSN401: Digital Media and Emerging Technologies

Credits: 3

LTP 300

Course Description: The course aims to equip the students with the concepts for understanding the basics of Digital Media.

The course includes working with Digital Media Design, Digital Audience, Interpersonal Processes, Media Applications in Business.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Discuss the basics of Digital Media and its characteristics.

CO2: Describe about Digital Media Design and its techniques.

CO3: Describe the role of Digital Audience in digital media.

CO4: Examine the different applications in business.

Course Content

Unit I

Introduction: Understanding Digital Media: Evolution and Development, Digital Media and its computer components, Digital Media Application Software: Word processing, Spreadsheet, Image Editing. Digital Media Revolution: Mass Media Adaptation, Trends, Revolution, Digital Media Effects: Cybercrime, Privacy, Hate Speech, Surveillance.

Unit II

Digital Media Design: Essential of Digital Media Design, Design Blueprint, Digital Illustration, UI & UX, Photographic Imaging Process, Data Visualization, Moving Image & Motion Graphics, Animation, App Design, 3D Animation, 360 Advertising Campaign, Website Design & its technology: HTML, DHTML, CSS, JavaScript, ASP, PHP, FTP and Streaming Server, Cloud: Area of Use, utility and advantages, Cloud services: Dropbox, Google Drive, Speech to Text, Text to Speech, Scanning, OCR.

Unit III

Digital Audience: Basics of Digital Audiences, Search Engine Strategies for Digital Audience Acquisition, Social Media Campaigns and Engagement, Digital Audience Research and Behaviour, Digital Audience Analytics, Digital Audience Management.

Unit IV

Media Applications in Business: Media and Types, Multimedia Applications in Business and Benefits, Impact of Social Media Applications in Business, Benefits of Social Media in Business, Examples of Social Media Analytics Tools, Business Impacts of Social Media Analytics, Digital Marketing and Types with Elaborations in Details, Difference between Social Media and Digital Marketing, Influence of Digital Marketing in Business.

Recommended Books / Suggested Readings:

1. Athique, A. (2013). Digital media and society: An introduction. John Wiley & Sons.
2. Buckingham, D. (2007). Youth, identity, and digital media (p. 216). The MIT Press.
3. Dewdney, A., & Ride, P. (2006). The Digital Media Handbook. Routledge.
4. Feldman, T. (2003). An introduction to digital media. Routledge.
5. Lindgren, S. (2017). Digital media and society. Sage.
6. D. P. Curtin, Information Technology – The Breaking Wave, New Delhi: Tata Mc GrawHill.

DMSN402: Google AdWords and PPC Advertising

Credits: 4

LTP 400

Course Description: The course aims to equip the student's on enhancing knowledge and skills of the students to understand how AdWords bidding works, Google's ad placement formula, and plan AdWords spend by calculating a max cost-per-click (CPC) bid. The course includes the Ad groups, keywords, and their usage.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Identify the key elements of a Google Ad Words paid search campaign.

CO2: understand the difference between text only and rich Image Media Ads.

CO3: Evaluate which ads are shown on the website and where Ads are placed on the website.

CO4: Design Google Ad Words campaign using keyword research.

Course Content

Unit I

Google Ad Words Overview. Inorganic Search Results. Google Ad Words & PPC Advertising. Overview of Microsoft AdCenter (Bing & Yahoo). Online advertising, Pay-Per-Click (PPC) advertising. AdWords ad types, benefits. Google Ads advertising system - Networks, Targeting methods, Actions & Benefits.

Unit II

Creation of an AdWords Account, Ad Words Account Structure. Types of Advertising Campaigns – Overview, Search, Display, Shopping & Video. Organizing campaigns and ad groups. AdWords Algorithm- AdWords rank ads; Examples. Quality score, CTR. Understanding bids.

Unit III

Researching Keywords. Keyword matching options in Google Ads – Four different keyword match types: Broad Match, Broad Match Modifier, Phrase Match, and Exact Match with examples. Evaluating a keyword, Keyword Planner tool & its use. Tracking & optimizing Ad Performance - Defining conversions, AdWords Conversion Tracking, Linking Google Analytics to AdWords. Measuring return on investment (ROI); Importance of Conversion Optimizer.

Balance between performance and volume.

Unit IV

Introduction to Google AdSense – Interface; Guidelines; Benefits; Efficiency; Insight. Getting website approval for AdSense. Allowing & blocking ads. Managing & optimization of Google AdSense account. Interface for YouTube & Website through Google AdSense account. Create Performance Reports.

Recommended Books / Suggested Readings:

1. Rabazinsky, C., Google AdWords for Beginners: A Do-It-Yourself Guide to PPC Advertising, CreateSpace Independent Publishing Platform.
2. Jacobson, H. and McDonald. K., Google AdWords for Dummies, For Dummies
3. Fox Vanessa, F., Marketing in The Age of Google, Wiley
4. Marshall, P., Rhodes, M. and Todd, Bryan, Ultimate Guide to Google AdWords, Entrepreneur Press.
5. Noah, G., Mastering Google AdWords: Step-by-Step Instructions for Advertising Your Business (Including Google Analytics), CreateSpace Independent Publishing Platform.
6. Zabaraz, J., Advanced Google AdWords Strategy: The Comprehensive & Data-Driven Practical Guide on Managing & Optimizing AdWords Accounts Profitably, CreateSpace Independent Publishing Platform.

DMSN422: Google AdWords and PPC Advertising Lab

Credits: 2

LTP 004

Course Description: The course aims to equip the student's course on Google Ad Words marketing fundamentals.

The course includes the AdWords Editor, AdWords Editor Options.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Discuss how to create Google Ad Words Campaign.

CO2: understand the kind of ads they can use with AdSense.

CO3: Review the performance of the Ads on a website.

CO4: Analyze the different formats used in AdWords.

List of Practical:

1. AdWords Editor
2. Creating optimized campaigns
3. Understanding AdWords Editor options
4. Optimization of Google AdSense account
5. Analysis of accounts using AdWords Editor
6. AdWords Editor shortcuts
7. Exporting accounts into different formats.

DMSN403: Content Writing

Credits: 4

LTP 310

Course Description: The course aims to equip the students with the focuses on training you to write on a variety of topics.

The course includes writing for the web, Creating web-friendly PDF's and content development for different media purposes.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Determine fast track methods to write and produce engaging content for website or blogs.

CO2: Build successful web content.

CO3: Develop the smartest ways to write articles blogs or web contents.

CO4: Classify the right social media channels to promote your contents.

Course Content

Unit I

Understanding writing for the web and how to engage your online audience, How audiences read online and the way we need to write for the web, Understanding your audience – who are they, characteristics and personas, Turning jargon into reader friendly messages, Building relationships with different audience segments, Features/benefit driven content.

Unit II

Types of Content writing: The process of Content Writing – getting the brief, ideating, researching, structuring, formatting, Editing and Proof-Reading—following company style sheet, grammar, copy flow, restructuring, market research, Writing Styles - Non-fiction (Essays, Reports), Advertising, Newspapers, Writing blogs, case studies, white papers, Corporate Communications -- Writing for business to business (B2B), business to consumer (B2C), press releases, newsletters – focus on language, jargon, writing style, target audience, formal and informal language.

Unit III

Creating web-friendly PDF's – and when/where to use them, Images – best practices, alt tags, Info graphics tip ,Handy tools for web writers ,Email copywriting techniques and strategies ,How people read and interact with emails Appropriate tone and style, establishing credibility with your audience ,Planning your newsletter content, Email writing best practices.

Unit IV

Plagiarism laws in Content Writing: What is plagiarism, rules on plagiarism, How to write plagiarism-free copies, Content for E-commerce: Content Writing for E-commerce Sites, Effective Content Writing for E-commerce Sites, Product description that sells.

Recommended Books / Suggested Readings:

1. Feldar, Lynda. Writing for the Web: Creating Compelling Web Content Using Words,
2. Pictures, and Sound. New Riders, CA, USA. ISBN-13: 978-0321794437, ISBN10: 9780321794437.
3. James, Anthony. Blog Writing : The Content Creation Blueprint. Amazon digital services LLDKDP print US, 2018.
4. Jones, Colleen. Clout: The Art and Science of Influential Web Content. New Riders, CA, USA. ISBN-13: 978-0321733016, ISBN-10: 0321733010.
5. Nielsen, Jakob and Budi, Raluca. Mobile Usability. New Riders, CA, USA. ISBN13: 978-0321884480, ISBN-10: 0321884485.
6. Redish, Janice. Letting Go Of The Words : Writing Web Content That Works. Morgan Kaufmann. ISBN: 0123859301.
7. Robinson Joseph. Content Writing Step-by-step. Amazon digital services LLC--KDP print US, 2020. ISBN: 9798603871929.
8. Williams, Andy. How To Write Great Website Content in 2019. Independently published. ISBN: 1731384467

DMSN423: Content Writing Lab

Credits: 2

LTP 004

Course Description: The course aims to equip the students with the focuses on training you to write on a variety of topics.

The course includes writing for the web, Create & Optimize your Blog/Website and Write 2 SEO Optimized Blogs

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Describe the basic concepts of Content Writing

CO2: Create a Guest Blogging Plan and Content Marketing Calendar.

CO3: Develop the smartest ways to write articles blogs or web contents.

CO4: Create & Optimize your Blog/Website..

List of Practical:

1. Create & Optimize your Blog/Website profile on LinkedIn, Facebook, Twitter & Instagram.
2. Share your previously Written blog on all the Social Media Platforms
3. Share short posts or graphics on all the Social Media Platforms
4. Share your content on Online Communities like Reddit & Quora
5. Write a Quora Answer for the following question – Is Skills Upgrader the best Content Writing Institute?
6. Create a Guest Blogging Plan and make a list of 10 websites where you can guest blog.
7. Use Call-To-Actions in your website
8. Create a Content Marketing Calendar for next month.
9. Write 2 SEO Optimized Blogs
10. Use Power Words in Your Content

DMSN404: Basic Mathematics

Credits: 3

LTP 300

Course Description: The course aims to equip the students with formulation and analysis of mathematical problems.

The course includes Mathematical Logic, Complex Numbers, Probability, Set theory.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Use mathematical knowledge to analyze and solve problems.

CO2: Formulate problems in the language of sets and perform set operations.

CO3: Evaluate the development of Mathematical Logic in terms of its relation to the foundations of mathematics.

CO4: Analyze a problem and identify and define the computing requirements appropriate to its solution.

Course Content

Unit I

Set theory: Sets and their representations; The empty set; finite and infinite sets; equal and equivalent sets; subsets; power set; universal set; Venn diagrams; complement of a set operation on sets; applications of sets.

Mathematical Logic: Basic Logical connections; Conjunction; Disjunction; Negation; Negation of Compound Statements; Truth tables. Tautologies; Logical Equivalence.

Unit II

Complex Numbers: Complex Numbers; Conjugate of a complex number; properties of a complex Number; geometrical representation of complex number; De Moivre's theorem.

Unit III

Matrices and Determinants: Definition of a matrix; Operations on matrices; Square Matrix and its inverse; determinants; properties of determinants; the inverse of a matrix; solution of equations using matrices and determinants; solving equations using determinants.

Unit IV

Probability: Concept of probability; sample space and events; three approaches of probability; conditional probability and independence of events; baye's theorem.

Recommended Books / Suggested Readings:

1. Satinder Bal Gupta, C.P. Gandhi, Discrete Structures, University Science Press.
2. Kenneth H. Rosen, "Discrete Mathematics and its Applications", McGraw Hill, 2002.
3. Seymour Lipschutz, M. Lipson, "Discrete Mathematics" Tata Mc Graw Hill, 2005.

GWE101: Gender Equality and Women Empowerment

Credits: 2

LTP 200

Course Description: The course aims to equip the students to provide the knowledge around the revolving issues for gender equality and women's empowerment. The course includes the issues of gender and the gender inequalities prevalent in society, Women and Law and Prevention of Sexual Harassment.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Recognize the intersections between gender and other social and cultural identities

CO2: Engage in promoting social justice and human rights

CO3: Explain how theories of gender and sexuality have been influenced by and influence their social contexts

CO4: Describe the social construction of gender and sexuality and explain how these constructions are shaped by time, location, and culture.

Course Content

Unit I

Introduction to Women's Studies: Sex and Gender, socialization, Definition, Nature, Scope and various dimensions.

Unit II

Approaches of Feminism: Feminism and Patriarchy, Feminist ideology, Feminist Movements in brief.

Unit III

Basic concepts of Gender and Society: Sexual division of Labour, Masculinity & femininity, Man and Woman relationship, Self-awareness, consciousness raising

Unit IV

Women and Law: Constitutional Laws and Fundamental rights, Human Rights, Women related Law, Women in Politics

Unit V

Skill development and presentation: Film/Documentary Screening, Field Visits, Group

discussion and debate, Awareness Songs, Street plays, theatre and presentation skills for personality development.

Unit VI

Prevention of Sexual Harassment: Preconditions for Effective Working of Sexual Harassment, Complaints Committees, Role of men in prevention of sexual harassment at workplace, Gender sensitive language, work culture and workplace.

Recommended Books / Suggested Readings:

1. Gill, Rajesh, Contemporary Indian Urban Society- Ethnicity, Gender and Governance, Bookwell Publishers, New Delhi, 2009.
2. Jain, Devaki and Rajput, Pam, (eds), Narratives from the Women's Studies Family, Sage, New Delhi, 2003.
3. Mies, Maria, Indian Women and Patriarchy, Concept Publishing Company, New Delhi, 2004..

DMSN406: Technical Writing

Credits: 3

LTP 300

Course Description: The course aims to equip the students with a comprehensive study of Writing unambiguous documents in standard formats.

The course includes Letters, Media Related Writing and Report Writing.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Explain the principles of correspondence and jargon for business letters

CO2: Explain the conventions, formats of business letter writing

CO3: Design different types of documents.

CO4: Design effective reports by collect data from meetings, briefings

Course Content

Unit I

Introduction to Written Communication: Principles of Commercial correspondence, Language in a business letter including Jargon, Letter Writing Basics, Layouts of Business Letters, Parts of a Business Letter.

Unit II

Letters: Formal Letters, RTI (Right to Information) LETTERS, Testimonials, References, Memos, Job Application Letters, Appointment Letters, Acceptance Letters, Resumes, Resignation Letters.

Unit III

Media Related Writing: Press Releases and articles for the press, Advertisements, E-mail and Netiquette, Classified Advertisements, Tender Notices.

Unit IV

Report Writing: Introduction, How to collect data for a report, Kinds of Reports, What a Report usually contains, Reports written by individuals, Committee Reports, Evaluation of a Report

discussion and debate, Awareness Songs, Street plays, theatre and presentation skills for personality development.

Recommended Books / Suggested Readings:

1. Aspi Doctor & Rhoda Doctor, Principles and Practice of Business communication, Sheth Publishers Private Limited Technical Writing by Sajitha Jayaprakash.
2. Technical English for Engineers : <https://nptel.ac.in/courses/109/106/109106094/>.
3. Letterwriting: <https://nptel.ac.in/content/storage2/courses/109104030/Module5/Lecture13.pdf>

DMSN407: Creative Writing

Credits: 3

LTP 300

Course Description: The course aims to equip the students with a with ideas related to creative writing including the art, the craft and the basic skills required for a creative writer. The course includes working with Fundamentals of Creative Writing & Elements of Creative Writing

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Understand the principles of creative writing and the distinction between the literary genres.

CO2: Write for various literary and social media.

CO3: Evaluate various forms of literature.

CO4: Make innovative use of their creative and critical faculties v. Seek employment in various creative fields.

Course Content

Unit I

Fundamentals of Creative Writing: Meaning and Significance of Creative Writing, Genres of Creative Writing: poetry, fiction, non-fiction, drama and other forms, Research for Creative Writing.

Unit II

Elements of Creative Writing: Plot, Setting, Character, Dialogue, Point of View, Literary Devices and Figurative Language, Elements of Style, Grammar and the Structure of Language, Proof Reading and Editing.

Unit III

Traditional Forms of Creative Writing: Fiction: short story, novella and novel, Poetry, Drama, Essay, Fable, Biography, Memoire and Autobiography, Travelogues, Diaries, Self-Narrative Writing

Unit IV

New Trends in Creative Writing: Web Content Writing and Blog Writing, Script Writing,

Journalistic Writing, Copywriting, Graphic Novel, Flash Fiction.

Recommended Books / Suggested Readings:

1. Abrams, M.H. Glossary of Literary Terms. Boston: Wadsworth Publishing Company, 2005.
2. Atwood, Margaret. Negotiating with the Dead: A Writer on Writing. Cambridge: CUP, 2002.
3. Bell, James Scott. How to Write Dazzling Dialogue. CA: Compendium Press, 2014.
4. Bell, Julia and Magrs, Paul. The Creative Writing Course-Book. London: Macmillan, 2001.
5. Berg, Carly. Writing Flash Fiction: How to Write Very Short Stories and Get Them Published.*Then Re-Publish Them All Together as a Book. Houston: Magic Lantern Press, 2015.
6. Blackstone, Bernard. Practical English Prosody. Mumbai: Orient Longman, 1984.
7. Clark, Roy Peter. Writing Tools. US: Brown and Company, 2008.
8. Earnshaw, Steven (Ed). The Handbook of Creative Writing. Edinburgh: EUP, 2007.
9. Egri, Lajos. The Art of Dramatic Writing. NY: Simon and Schuster, 1960.
10. Gardner, John. The Art of Fiction. New York: Vintage, 1991.
11. Goldberg, Natalie. Writing Down the Bones. Boston and London: Shambhala, 1986.
12. Hamer, Enid. The Metres of English Poetry. Booksway, 2014.
13. King, Stephen. On Writing: A Memoir of the Craft. London: Hodder and Stoughton, 2000.
14. Johnson, Jeannie. Why Write Poetry? US:F. D. Univ. Press, 2007.
15. Mezo, Richard E. Fire i' the Blood: A Handbook of Figurative Language. USA: Universal Publishers/uPUBLISH.com, 1999.
16. Sartre, Jean-Paul. What Is Literature? And Other Essays. Harvard: Harvard Univ. Press, 1988.
17. Show, Mark. Successful Writing for Design, Advertising and Marketing. New York: Laurence King, 2012.
18. Strunk, William and White, E. B. The Elements of Style. London: Longman, 1999

SEMESTER V

DMSN501: E-Mail Marketing

Credits: 4

LTP 400

Course Description: The course aims to equip the students to promote the business by employing email's unique presentation abilities and massive distribution capability via email marketing.

The course includes effective email marketing strategies.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Describe various elements of marketing emails

CO2: Create the appropriate content to use in email campaign.

CO3: Build email list for marketing.

CO4: Measure the success of your email campaign.

Course Content

Unit I

Email marketing Overview: Introduction to Advanced Email Marketing, fundamentals of email marketing, email best practices and Myths, Bulk Email Concept: Email Campaign Creation, The three types of emails, Mass email vs Automated email, The different types of email campaigns and when to use each one.

Unit II

Elements of marketing emails: Advantages of the different text formats (HTML or Plain Text), Permission & E-Permissions, Frequency & Ethics of Newsletter, Defining your Goals, Email Marketing Strategies.

Unit III

Building Email List: Different ways to build your email list via customer interaction, Build email list through website subscribe form, use of list broker to buy mailing lists, learn about quality email providers, compare email providers.

Unit IV

Measuring your email campaigns success: Open rates, click-through-rates, unsubscribe rates,

conversation rates, bounce rates, A/B Split Testing, spam filter, choosing metrics, tracking landing Pages, Analyzing Test results, Setting your Budget.

Recommended Books / Suggested Readings:

1. Email Marketing Rules: A Step-by-step Guide to the Best Practices that Power by Chad White
2. Email Marketing Demystified: Build a Massive Mailing List, Write Copy That Converts by Matthew Paulson.

DMSN521: E-Mail Marketing Lab

Credits: 2

LTP 004

Course Description: The course aims to equip the students to promote the business by employing email's unique presentation abilities and massive distribution capability via email marketing.

The course includes email marketing campaign and build your email databases.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Describe various elements of marketing emails

CO2: Create the appropriate content to use in email campaign.

CO3: Build email list for marketing.

CO4: Measure the success of your email campaign.

List of Practical:

1. Acquire email addresses using both online and offline techniques. Set KPIs against these acquisitions. How would you report on these?
2. Set up a free account on an email service provider and start to import your contacts and begin to build your email databases. Rate your end users in terms of open rates, interaction and click through rates.
3. Find three examples of good email design and three examples of bad email design. From the emails you have chosen, provide three reasons why they illustrate good or bad design. From the emails that illustrate bad email design, explain how you would improve them.
4. Create an email using different examples of sender, subject and copy. Use your designated email service provider e.g. Mailchimp and test these different characteristics.
5. Create an email marketing campaign using split testing. Send to a select number of email addresses. From here test subject lines, content and sender details. Which split is performing better and why is that performing better? You need to report on this better split. How? You will run with this split henceforth. How?
6. Segment your audience using email marketing campaigns. How many segments can you

make in just one campaign?

7. Create a KPIs dashboard and find which KPI is most relevant for your business. Think open rates, interaction rates, click through rates, unsubscribes, bounce rates, etc.

8. You need to customize the reporting of your email marketing campaign by using a goal funnel type report. How would you go about doing this?.

9. You have an aggressive email marketing campaign coming up next month but you are out of the office for two weeks. You need to send out weekly email campaigns. Schedule your email to be sent out on Thursdays at 2pm to a target segment. Make sure to test your scheduling to mitigate any anomalies.

10. You have emailed your database about an event coming up next month. The open rate of 40% is quite good but the other 60% has not responded. Using the same campaign, remind the remainder of unopens about the event.

DMSN502: Display Marketing

Credits: 4

LTP 400

Course Description: The course aims to equip the students with understanding the definition and categories of the display marketing. This course includes basic display campaign and strategies to track and optimize performance of display campaigns.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Understand the role of display advertising in the digital marketing ecosystem

CO2: Become a pro on how and when to use display advertising effectively

CO3: Using Display Ads to reach your target audience.

CO4: Improving display success through display ads optimization.

Course Content

Unit I

Introduction: Display marketing, display marketing ecosystem, Display Ads On Google Display Network, Google Display Network & YouTube On Tablets, Mobile Devices & Computers, Brand & Direct Response Advertisers Benefits, Media Purchase Options, Ad Formats & Display Inventory, Campaign Planning, The Value Of Planning Ahead, Direct Response Campaigns Strategies

Unit II

Create Your Ads: Ad Formats, How To Use AdWords Ad Gallery, Display Ads Strategies and Policies, Implement and Create A New Campaign, Target Your Campaign, Display Network Bidding Features, Bid Adjustments Setting, Performance Measurement, Running AdWords Reports, Refine & Optimize, Advanced Features Of Google Display Network Optimization.

Unit III

YouTube Display Ads: YouTube Ad Formats Fundamentals, YouTube Advertisement Understanding, YouTube Campaign Planning & Implementation, Fundamentals of Location and Language Targeting, Brand Channel Planning & Implementation, Basics of AdWords Ad Gallery, Introduction to AdWords For Video, YouTube Reserved Media Placements Fundamentals

Unit IV

Refine & Optimization: Performance Measurement & Optimization, Optimization Strategies and Video Content on YouTube, Display Ads on Mobile Devices, Ads Placements Fundamentals, Mobile Inventory Overview, Introduction to YouTube Mobile Ad Formats, Fundamentals of Video Ad Formats in AdWords.

Recommended Books / Suggested Readings:

1. Damian Ryan and Calvin Jones, "Understanding Digital Marketing".
2. Puneet Singh Bhatia, Fundamentals of Digital Marketing First Edition, Publication Pearson.
3. Venakataramana Rolla, "Digital Marketing Practice guide for SMB: SEO, SEM and SMM", CreateSpace Independent Publishing Platform, First edition.
4. Shivani Karwal, "Digital Marketing Handbook: A Guide to search Engine Optimization, Pay Per Click Marketing, Email Marketing and Content Marketing", CreateSpace Independent Publishing Platform, 1st edition.
5. Ian Dodson, "The art of Digital Marketing".
6. Simon Kingsnorth, "Digital Marketing Strategy".

DMSN522: Display Advertising Lab

Credits: 2

LTP 004

Course Description: The course aims to equip the students with understanding the working of display marketing. This course includes basic display campaign and strategies to track and optimize performance of display campaigns.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Use the various methods of online display advertising.

CO2: Become a pro on how and when to use display advertising effectively

CO3: Using Display Ads to reach your target audience.

CO4: Create an online display advertising campaign.

List of Practical:

1. Study about the Display Network.
2. Study about the different Ad Formats used in Display marketing.
3. Study about the Planning and Budgeting for Adwords Display Campaign
4. Create a Google Display Network Ads campaign.
5. Create various Ad Formats in Display Campaigns – Rich Media Ads using Lightbox, Responsive Ads, Video Ads, Gmail Ads.
6. Optimize the display ads.
7. Remarketing of display ads.

DMSN503: Affiliate Marketing

Credits: 4

LTP 400

Course Description: The course aims to equip the students with understanding the Definition and importance of Affiliate marketing. The course includes importance of Affiliate marketing, Affiliate Website.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Understand the role of Affiliate marketing in the digital marketing ecosystem

CO2: Discuss on the partnership with Affiliate Networks, AdSense& Ad Networks.

CO3: Create web designs for affiliate marketing and integrate social plugins.

CO4: Describe the Monetisation of Affiliate Marketing.

Course Content

Unit I

Definition and importance of Affiliate marketing in current scenario. Changing dimensions of Advertising and business promotion. Introduction to Affiliate Marketing – Difference between referral and affiliate marketing Merchant- Affiliate- Network- Types of Affiliate Websites

Unit II

Partnership with Affiliate Networks, AdSense& Ad Networks - Compensation Methods - Current and past issues-Email Spam -Search engine spam- Google slap- Adware- Trademark bidding- Cookie stuffing- Lack of self-regulation and Industry standards

Unit III

Affiliate Website: Strategy / Planning & case studies – Web design and development- Capturing visitor credentials- Integrating social plugins- integrating third party tools- integrating plugins - Locating and signing up with Affiliate Networks-Implementing outbound tracking links- Driving traffic to the website-Distributing plugins, add-ons, apps & widgets- Selling prominent ad spaces addons, apps and widgets

Unit IV

Monetisation of Affiliate Marketing – Data metrics, Pay-per-View, pay-per-click. Conversion rate.

Recommended Books / Suggested Readings:

1. Blogging: A Practical Guide to Plan Your Blog: Start Your Profitable Home-Based Business with a Successful Blog By Jo and Dale Reardon, 2015
2. Affiliate marketing: A complete guide step by step to how to join the affiliate marketing business by Mark J. Cooper
3. Affiliate Marketing: Learn How to Make \$10,000+ Each Month on Autopilot. by Michael Ezeanaka.
4. Google Ad words for Beginners: A Do-It-Yourself Guide to PPC Advertising, By Cory Rabazinsky, 2015
5. Introduction to Programmatic Advertising, By Dominik Kosorin, 2016

DMSN523: Affiliate Marketing Lab

Credits: 2

LTP 004

Course Description: The course aims to equip the students with understanding the Definition and importance of Affiliate marketing. The course includes Affiliate marketing platforms.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Understand the role of Affiliate marketing in the digital marketing ecosystem

CO2: Implement an affiliate program for websites.

CO3: Create web designs for affiliate marketing.

CO4: Describe the different platforms of Affiliate Marketing.

List of Practical:

1. Study about the how Affiliate Marketing Work.
2. Study about the Different commission models.
3. Hosting and implementing an affiliate program.
4. Setting up an affiliate program.
5. Affiliate Marketing with Lnkshare
6. Affiliate Marketing with One Network Direct
7. Affiliate Marketing wit ShareASale
8. Affiliate Marketing with Plimus
9. Affiliate Marketing with Amazon Associates
10. Affiliate Marketing with Flexoffers
11. Affiliate Marketing with clickbank
12. Affiliate Marketing with Commission Soup
13. Affiliate Marketing with Local affiliate Programs
14. Enrolling in an Affiliate Marketing Program: a. Signing up as an Affiliate b. Logging into your affiliate account c. Integrating Affiliate Links into your websites d. Monitoring affiliate performance and tracking sales

DMSN504: LinkedIn And Twitter Marketing

Credits: 4

LTP 400

Course Description: The course aims to equip the students with understanding the importance of LinkedIn And Twitter Marketing. The course includes importance of LinkedIn, Partnership Content Strategy and Twitter ads.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Understand the role of LinkedIn And Twitter Marketing in the digital marketing ecosystem.

CO2: Discuss the Partnership Content Strategy used in LinkedIn.

CO3: Create a content strategy in Twitter marketing.

CO4: Describe the different ads in Twitter marketing.

Course Content

Unit I

Introduction to LinkedIn: The hub of B2B Networking LinkedIn Strategy, why it is important to have LinkedIn presence, build a Robust Company page on LinkedIn, Leverage Paid Ads and Sponsored Updates, Use Advanced Searching and who viewed your Profile, Sales leads generation using LinkedIn

Unit II

Partnership Content Strategy: The In -Demand Content is Industry insights, Creating Showcase pages, Engaging by Updating Products and Services, LinkedIn PULSE, LinkedIn analytics, Updates, Followers and Visitors, how is LinkedIn Targeting different from Facebook.

Unit III

Twitter Marketing: Getting started with Twitter , Building Blocks Twitter in India, how is Twitter different? Building a content Strategy, Best Practices, Twitter Calender Twitter Usage , when to use Twitter, Customer Service.

Unit IV

Twitter Ads, Campaign Types, Targeting Audience Options, Targeting Best Practices, Twitter Ads, Pricing, Metricrate

Recommended Books / Suggested Readings:

1. Twitter Marketing build a cult like following – Bryan Sharpe
2. Digital Marketing By Seema Gupta
3. Twitter Marketing : How to grow twitter account to 1 MILLION FOLLOWERS in the first 6 months, by Pamela Russell
4. The Tao of Twitter , Revised and expanded new edition by Mark Schaefer
5. Twitter Power: How to Dominate Your Market One Tweet at a Time – Joel Comm.
6. LinkedIn: How to Build Relationships and Get Job Offers Using LinkedIn: by Robbie Abed
7. LinkedIn for Personal Branding: The Ultimate Guide Kindle Edition by Sandra Long
8. LinkedIn Marketing in 2018 and Beyond: by Amar Ghose
9. LinkedIn Marketing: An Hour a Day by Viveka von Rosen

DMSN524: LinkedIn And Twitter Marketing Lab**Credits: 4****LTP 400**

Course Description: The course aims to equip the students with understanding the importance of LinkedIn And Twitter Marketing. The course includes importance of LinkedIn, Partnership Content Strategy and Twitter ads.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

- CO1: Understand the role of LinkedIn And Twitter Marketing in the digital marketing ecosystem.
- CO2: Discuss the Partnership Content Strategy used in LinkedIn.
- CO3: Create a content strategy in Twitter marketing.
- CO4: Describe the different ads in Twitter marketing.

List of Practical:

1. How to Create Your LinkedIn Ads Account
2. Direct Sponsored Content – Specifications & Requirements
3. How to design your LinkedIn Ad Creatives (Free Tools)
4. How to use LinkedIn Campaign Manager
5. How to install Insight Tag and Track Conversions (Free Plugin)
6. Objective-Based Advertising
7. How to create your Target Audience on LinkedIn Ads (Step-by-step)
8. Different LinkedIn Ad Formats (Image Ads, InMails, Lead-Gen Forms, etc)
9. Campaign Performance Management with the new LinkedIn Campaign Manager.
10. Design Creatives in the Twitter Ads Creative Center.
11. Launch a Video View Campaign with a Risk Reversal Strategy
12. Launch an Engagement Campaign Using Event Targeting

DMSN505: App store optimization

Credits: 4

LTP 400

Course Description: The course aims to equip the students with concepts of App store optimization. The course includes principles of ASO, ASO Keyword optimization Localising app for different app stores and App store optimization tools

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Identify the role of app store optimization in digital Marketing.

CO2: Understand the app store optimization keywords optimization.

CO3: Demonstrate an understanding of the principles of ASO in digital marketing.

CO4: Develop a marketing plan for a new or existing product or service on YouTube and LinkedIn Platform.

Course Content

Unit I

Introduction to app store optimization (ASO)

Needs of ASO, principles of ASO, importance of mobile app, difference between iOS & android app stores, key metrics for app store optimization, App store optimization (ASO) fundamentals

Optimise app content basis algorithms, using app- icons, screenshots, and preview videos to get more installs, importance of- reviews, ratings, app size & update frequency

Unit II

ASO Keyword optimization: Introduction to keyword optimization, finding root keywords & long tail keywords, choosing keywords, introduced: search score and chance score, mobile action's keyword tracking feature, keyword selection process

Testing keywords and repeating keyword optimization cycles

Unit III

Localising app for different app stores: Customizing apps for aso, app elements to localize as per country, app localization contributes to conversion rate optimization.

Unit IV

App store optimization tools: ASO tool to analyze app's performance, ideal keyword research tools, finalizing keywords and optimizing app content, navigating google play console for ASO Conversion rate optimization. Importance of conversion rate optimization, experimenting with icons, content, videos & more

Recommended Books / Suggested Readings:

1. Chaffey, D., & Smith, P. R. (2017). Digital marketing excellence: planning, optimizing and integrating online marketing. Taylor & Francis.
2. Evans, L. (2010). Social media marketing: strategies for engaging in Facebook, Twitter & other social media. Publisher: BookRix
Oliver Hoss
3. (2019), App Store Optimization: A Step-by-Step Guide to Boosting your App's Organic Downloads, ISBN-10:3952509507
Upendra Rana
4. (2016), Mobile App Store Optimization, Publisher: BookRix

DMSN505: App store optimization Lab

Credits: 4

LTP 400

Course Description: The course aims to equip the students with concepts of App store optimization. The course includes study about google play and apple app stores and A/B testing.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Identify the role of app store optimization in digital Marketing.

CO2: Understand the app store optimization keywords optimization.

CO3: Describe google play and apple app stores optimization.

List of Practical:

1. Study about google play and apple app stores.
2. Study about Category rankings in App Store optimization
3. Study about how to find correct keyword.
4. Study about how to optimize app stores,
5. Study about A/B testing in app store optimization.

DMSN506: Content Management System

Credits: 4

LTP 310

Course Description: The course aims to equip the students to use the thousands of themes and plugins already out there to design own custom websites by using WordPress. The course includes Crafting professional word documents; excel spread sheets, power point presentations using the Microsoft suite of office tools.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Design and develop a website..

CO2: Manage the content in the website

CO3: Describe the types of WordPress.

CO4: Create a page in WordPress websites.

Course Content

Unit I

Introduction-Hosting your CMS-Types of WordPress-Setting up local server Downloading XAMPP-Installing XAMPP to create local server.

Unit II

Installation: Install WordPress-Extracting WordPress files and installing WordPress Logging into WordPress Dashboard-WordPress Dashboard -Navigate to the WordPress dashboard; know what everything does and how to use it.

Unit III

Plugins: Install WordPress Plugins -Installing plugin for SEO on WordPress website - Increasing Speed of WordPress websites -Security of WordPress websites -Contact Form for WordPress websites -Setup Contact us page for WordPress websites -Creating Post and Basics of One Page Optimization (SEO)

Unit IV

Page Creation: Creating Page -Settings -Domain -Choosing the right domain name Registering your domain -Choosing your hosting services -Comparing various service providers -Choosing your hosting provider -Pointing your domain to hosting provider -Setting up your Web server -

Recommended Books / Suggested Readings:

1. WordPress-All –in-One for Dummies by Lisa Sabin-Wilson, a John Wiley& Sons Inc. Branding 2013 New Jersey
2. WordPress for Writers- Create an Awesome Author Website that Helps You Sell Books By Rachel McCollin 2019 published by Catawampus Press

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

Course Description: The course aims to equip the students with understanding the importance of LinkedIn And Twitter Marketing. The course includes importance of LinkedIn, Partnership Content Strategy and Twitter ads.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Design and develop a website.

CO2: Manage the content in the website

CO3: Describe the types of WordPress.

CO4: Create a page in WordPress websites.

List of Practical:

1. Install WordPress on your PC or Mac computer.
2. Navigate around the WordPress dashboard.
3. Learn about WordPress theme and design.
4. Learn to create and manage pages.
5. Learn to create and manage posts.
6. Understanding, searching, installing plug-ins.
7. Understanding, searching, installing themes.
8. Create a static homepage useful for most websites.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN507: Marketing Management

Credits: 3

LTP 300

Course Description: The course aims to equip the students with the concepts of Marketing Management. The course includes working with Marketing, Market segmentation, Product decisions, Delivering and Promoting Product.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Enhance the understanding of marketing concepts, buying process and synthesis of marketing environment for developing pertinent marketing plans.

CO2: Develop necessary skills for effective market segmentation, targeting and positioning.

CO3: Illustrate various components of product mix, product life cycle and comprehend the new product development process.

CO4: Understand the decisions related to promoting and delivering a product including sales force management.

Course Content

Unit I

Marketing: Nature and Scope of Marketing, customer needs, wants and demand. Various Marketing Concepts: production, product, selling, marketing and societal marketing, Analyzing marketing environment: micro, macro environment.

Unit II

Market segmentation: Need, concept, nature, basis and strategies, mass marketing vs. Segmentation. Marketing mix: 4Ps of products and 7Ps of services, components and factors affecting mix.

Unit III

Product decisions: Product definition, new product development process, and product life cycle, positioning, branding, packaging and labeling decisions. Pricing decisions: importance, objectives, designing strategies, Pricing Techniques.

Unit IV

Delivering and Promoting Product: Supply Chain Decisions: Nature, Types, Channel Design and Channel Management Decisions, Retailing, Wholesaling Promotion Decisions: Communication Process, Promotion Mix, Advertising, Sales Promotion, Public Relations, Direct Selling and Online Marketing. Personal Selling: Personal Selling Process, Managing the Sales Force.

Recommended Books / Suggested Readings:

1. Etzel J. Michael, Stanton J. William, Marketing Concepts and Cases, Tata McGraw Hill Publishing Co. Ltd.
2. Kotler, Philip. Marketing Management, Millennium Edition. Intl ed. US: Prentice Hall.
3. Ramaswamy, V.S. & Nama kumari, S., Marketing Management Indian Context with Global Perspective, Mc Graw Hill.
4. Kotler, P., Keller, K.L., Koshy, A., & Jha, M., Marketing Management, A South Asian Perspective, Mc Graw Hill.
5. Saxena Rajan, Marketing Management, Tata McGraw Hill Publishing Co. Ltd.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN508: Consumer Behavior and Market Research

Credits: 3

LTP 300

Course Description: The course aims to equip the students to develop an understanding of underlying concepts and issues in Consumer behavior in marketing, and also understand the application of market research in framing effective marketing strategies.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Demonstrate how knowledge of consumer behaviour can be applied to marketing.

CO2: Evaluate the factors affecting consumer behaviour in detail.

CO3: Assess the impact of consumer's motivation, personality on the buying behaviour.

CO4: Use appropriate research approaches including sampling, data collection and questionnaire design for specific marketing situations.

Course Content

Unit I

Consumer behavior: Concept and Implications; Integration of consumer behavior in the marketing concept; Consumer Decision Making Process; Levels of consumer decision making; Types of Consumer Decision Making.

Unit II

Factors affecting Consumer Behaviour: Factors influencing Consumer Behaviour, External Influences, Culture, Sub Culture, Social Class, Reference Groups, Family, Internal Influences, Needs & Motivations, Perception, Personality, Lifestyle, Values, Learning, Memory, Beliefs & Attitudes.

Unit III

Consumer Motivation; Dynamics of Motivation, type and systems of needs; Personality and theories of personality (relevant to marketing); Consumer diversity; Self and self-image; Consumer Perception; Dynamics of perception and consumer imagery; Consumer Learning; Behavioral and cognitive learning theories; Consumer Attitude; Attitude formation and behavior; Communication and consumer behavior.

Unit IV

Market Research: Concept and significance; Types of Research; Research approach and Process; Consumer research paradigms; Combining qualitative and quantitative research; Sampling, Data Types and Collection; Questionnaire and Schedule; Scaling Techniques; Data analysis & reporting research findings; Barriers to market research.

Recommended Books / Suggested Readings:

1. Schiffman, L.G. and Kanuk, L.L. (2011) Consumer Behavior, 9th Ed., Prentice Hall. ISBN: 9780131869608.
2. Batra, S.K. and Kazmi, S.H.H. (2009) Consumer Behavior Text and Cases 2nd Eds, Excel Books. ISBN: 978-8174466440.
3. Majumdar, Ramanuj. (2011) Consumer Behavior. Prentice Hall India. ISBN: 978-8120339637.
4. Blackwell, R.D, Miniard, P.W, and Engel, J.F. (2006) Consumer Behaviour, Cengage. ISBN: 9780030211089.
5. Consumer Behaviour – Satish K Batra, S H H Kazmi.
6. Consumer Behaviour in Indian Context – K K Srivastava, Sujata Khandai.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

BDSM560: Industrial Training

Credits: 3

Course Description: The course aims to equip the students to develop an understanding of underlying concepts and issues in Consumer behavior in marketing, and also understand the application of market research in framing effective marketing strategies.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Understand the team working and team management.

CO2: Learn how to develop components & systems in isolation which meets a common goal.

CO3: Understand practical application of Digital Marketing principles for designing fabrication and testing of working models.

CO4: Design a system, model, component or a process to meet desired/industrial/R&D needs.

Course Contents:

Summer Professional Training is an important part of B.Sc. (DMSN) course curriculum. It provides an opportunity to B.Sc. (DMSN) students to write a summer training report on latest trends/technology related to software project. Following are guidelines for summer training report writing and assessment.

General Instructions:

1. Summer training report should not be less than 50 pages.
2. Proper guidelines to be followed for preparation of summer training report.
3. Proper dress code is mandatory for presenting and attending summer training PPT presentations.
4. Attendance is compulsory for all students.
5. If a student is absent for his presentation as per schedule, he/she must assess later on with reduced weightage in the presentation assessment.
6. Always prepare a draft report first and print it out.
7. Read it yourself first and correct any typographical or grammatical errors.
8. One copy of final summer training report must be submitted as a spiraled report to the coordinator.

Main Components of a Report:

1. Cover page.
2. Abstract
3. Acknowledgement and declaration.
4. Certificate.
5. Table of contents/Index page.
6. conclusions.
7. References.

Typing Instructions for Summer Training Report:

- Specification for Fonts:
- Font Face: Times new Romano.
- Font Size: As per following preview:
 - Headings (Size 16 Bold).
 - Sub-Heading (Size 14 Bold and Italic).
 - Contents (Size 12Normal)
 - Line spacing: 1.5.
 - Text Alignment: Both left and right justified.
- Page Dimensions: Standard A4 size (297mm x 210mm).
- Margins:
 - Top margin: 0.75"
 - Bottom margin: 0.75"
 - Left margin: 1"
 - Right margin: 0.75"
- Footer: Page number should be bottom centered.
- Sections should be numbered as for example, 1. Introduction.
- Subsections should be numbered as for example, 3.1 Simulation Toltec.
- Paragraphs and sentences should be short.
- Start of a paragraph should not be intended, rather, give one-line space between two paragraphs.
- A sub heading at the bottom of a page must have at least two full lines below it or else it should be carried over to the next page.
- The last word of any page should not be split using a hyphen

- References:
- Book titles must be in capitals.
- Reference numbers should be marked liberally inside the text of the report-e.g.,as given in [3].
- References should either be in chronological order or in the order in which they appear in
- Evaluation of Professional Training

Internal/External Evaluation:

Criteria for Internal/external evaluation of Professional Training, External evaluation is done by one external examiner and one internal examiner are appointed by the HOD/DEAN of the department. The following components are to be assessed for the End Semester External Evaluation of the Professional Training:

Training Report	25 marks
Presentation	20 marks
Training Viva	25 marks
Depth of knowledge and skills	15 marks
Quality of content presented.	15 marks
Total Marks	100 marks

DMSN550: Minor Project

Credits: 3

LTP 004

Course Description: The course aims to equip the students to provide an opportunity to apply the knowledge gained through various courses in solving a real-life problem of digital marketing.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

- CO1:** Understand the team working and team management.
- CO2:** Learn how to develop components & systems in isolation which meets a common goal.
- CO3:** Understand practical application of Digital Marketing principles for designing fabrication and testing of working models.
- CO4:** Design a system, model, component or a process to meet desired/industrial/R&D needs.

Guidelines for Minor Project

The minor project is considered as a steppingstone in implementing Major projects. Hence students should plan and organize their minor projects meticulously and necessary discussions and planning should be done so as to achieve this objective. The following guidelines should be adhered to:

General Instructions:

1. Team size should preferably be three with a maximum limit of 4 members.
2. Individual projects may be permitted in exceptional cases, for valid reasons.
3. Minor Projects should be purely internal in nature.
4. No restriction on tools/platform/language chosen should be made.
5. Minor Projects 2 normal applications and one database related application is must.
6. Students must ensure that they have to submit their synopsis of Project within 15 days from the start of the project.
7. Two interim reports (one after analysis and another after design) should be submitted to internal guides.
8. The number of records to be submitted is limited to team size + one (Departmental copy).

Hard binding of reports is mandatory.

9. The report format guidelines used to document Minor Projects should be followed for making the final report and evaluation will be made on the same grounds.

Evaluation of Minor Project:

External Evaluation:

Criteria for external evaluation of Minor Project, External evaluation is done by an external examiner appointed by the HOD/DEAN of the department. The following components are to be assessed for the End Semester External Evaluation of the Minor Project:

Project Demonstration	20 marks
Presentation	20 marks
Viva-voice	25 marks
Total Marks	100 marks

Internal Evaluation:

Criteria for internal evaluation of Minor Project, Internal evaluation is being done by conducting a Viva by a team of evaluators comprising of the concerned guides and/or Head of the Department. The following are the components for internal evaluation of the Minor Project:

Presentation /Internal Viva	10 marks
Individual involvement & teamwork	10 marks
Attendance	5 marks
Project Report	15 marks
Total Marks	40 marks

DMSN601: PHP and MySQL

Credits: 2

LTP 200

Course Description: The course aims to equip the students to understand how server-side programming works on the web. The course includes PHP basic syntax for variable types, conditional structures, storing data in arrays using PHP built-in functions and creating custom functions.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Describe the concepts of PHP.

CO2: Create, back up a MySQL database.

CO3: Describe the concepts of loop, array, functions and String in PHP.

CO4: Describe the concepts of PHP connection with MySQL.

Course Content

Unit I

Introducing PHP: PHP introduction, inventions and versions, scope, Basic Syntax, PHP variables and constants, Types of data in PHP, Expressions, scopes of a variable (local, global), PHP Operators: Arithmetic, Assignment, Relational, Logical operators, Bitwise, ternary and MOD operator, PHP operator Precedence and associativity.

Unit II

PHP conditional events and Loop: PHP IF Else conditional statements (Nested IF and Else), Switch case, while, For and Do While Loops, Goto, Break, Continue and exit.

PHP Functions: Function, Need of Function, declaration and calling of a function, PHP Function with arguments, Default Arguments in Function, Function argument with call by value, call by reference, Scope of Function Global and Local.

Unit III

Working with Arrays: Storing data in arrays, processing arrays with loops and iterations, using arrays with forms working with array functions, working with dates and times.

String Manipulation: Creating and accessing String, Searching & Replacing String; Formatting, joining and splitting String, String Related Library functions.

Unit IV

Tables and Database in PHP: MySQL Connection PHP, Classes Objects, PHP Framework Code Generation scripts, Web Services, Introduction to MySQL, MYSQL for Web application Creating Database, create table, Constraints, Where Clause, Alias, Using MySQL from PHP.

Recommended Books / Suggested Readings:

1. Core PHP Programming by Leon Atkinson: Pearson Publishers.
2. PHP A Beginner's Guide, VIKRAM VASWANI, Tata McGraw-Hill, 2008.
3. The PHP Complete Reference, Steven Holzner –Tata McGraw-Hill Edition, 2010
4. The complete Reference PHP by Stever Holzner: McGraw Hill
5. PHP 5.0 and MySQL Bible Tim Converse, Joyce Park, Clark Morgan, Publishers: John Wiley & Sons.
6. Beginning PHP 5.0 Database by Christopher Scollo, Harish Rawat, Deepak Thomas, and Publisher: WROX press.
7. PHP – A beginners Guides BY: Ashok Appu Publisher: Wiley.
8. MySQL Bible by Steve Suehring Publisher: John Wiley & Sons.
9. PHP Black Book by Peter Moulding.
10. PHP 5 and MySQL – Tim converse, Joyce Park and Clark Morgan - Bible Wiley.
11. Beginning PHP 5.3 by matt Doyle – By Word publication.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN601: PHP and MySQL Lab

Credits: 1

LTP 002

Course Description: The course aims to equip the students to familiarize with connectivity between PHP and MySQL and develop programs to add records, retrieve records and delete records from a table. The course includes developing applications in PHP using various concepts of basic programming in PHP.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Describe the fundamentals of PHP.

CO2: Apply control structures/logic to web pages.

CO3: Implement client-side and server-side scripting.

CO4: Implement Database connectivity.

Lab Exercises:

1. Create a php webpage and print "hello world".
2. Create a php program to find odd or even number from given number.
3. Write a php program to find maximum of three numbers.
4. Write a PHP program to swap two numbers.
5. Write a program to do PHP Functions -Adding parameters.
6. Write a program to do Array Operation in PHP.
7. Write a program to do Multidimensional array in PHP
8. Give the example of string function: strcmp.
9. Insertion, Updating and Deletion of rows in MYSQL tables.
10. Database connectivity in PHP with MySQL.
11. Creating simple webpage using PHP and MySQL.
12. Create a form, add the data into it and submit it to the database by connecting it to MySQL database using PHP.
13. Write a program to Develop student registration form and display all the submitted data on another page
14. Write PHP code to upload image.

15. Write a program that keeps track of how many times a visitor has loaded the page.
16. Write a program that displays a different message based on time of day. For example, page should display “Good Morning” if it is accessed in the morning.

DMSN602: Advanced Web Design and Development

Credits: 2

LTP 200

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

Course Description: The course aims to equip the students with a comprehensive study of Advanced Web Application Development. The course includes Frameworks, AJAX, JQUERY and JS.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Generate web page using AJAX, JQUERY and JSP.

CO2: Understand website dynamic behavior and server-side programming.

CO3: Understand persistence Data storage.

CO4: Generate dynamic web pages using databases.

CO5: Develop web services and comprehend the significance of frameworks.

Course Content

Unit I

Introduction to Web Designing: Web Technologies, HTML/ CSS, JavaScript, Bootstrap, Adobe Dreamweaver, Adobe Flash, HTML5.

AJAX: AJAX: History of AJAX, AJAX using XMLHttpRequest object-using XML and DOM, creating a full scaled AJAX Enabled Application using JSON.

Unit II

PHP: Introduction String processing and regular expressions, Viewing Client/Server environment variables-Form processing and Business logic, verifying a username and password, connecting to a database.

JQUERY: jQuery basic, jQuery core, events, effects, plugins, user interface using jQuery UI.

Unit III

Database Connectivity: Introduction, Relational Database: SQL-MYSQL-JDBC-Driver and Connection Management, Understanding JDBC ODBC connectivity, Connection and Pooled connection, Resultset, Datatype support, Prepared statement, Callable statements, Microsoft Language Integrate Query.

JSP and SERVLETS: Overview of JSP and Servlet, creating dynamic web pages using JSP Standard.

Unit IV

Web Servers and Web Frameworks: Web servers: Introduction, HTTP/HTTPS Transactions, Multi-tier Application architecture, configuring web servers, Apache installation, Microsoft IIS Express and web matrix-Web Frameworks. Web Services: WSDL, UDDI, SOAP-RPC.

Recommended Books / Suggested Readings:

1. A Beginner's Guide to Html <http://www.Ncsa.Nine.Edit/General/Internet/www/Html.Prmter>
2. BayrossIvan, "HTML, DHTML, JavaScript, PERL, CGI", 3rd Edition, BPB Publication, 2009.
3. Programming PHP, "Kevin Tetroi", O' Reilly.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN622: Advanced Web Design and Development Lab

Credits: 1

LTP 002

Course Description: The course aims to equip the students with a comprehensive study of Advanced Web Application Development.

The course includes Frameworks, AJAX, JQUERY and JS.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Create web pages using several technologies.

CO2: Store data in a table using web pages.

CO3: Develop website and web applications.

CO4: Generate web page using HTML5, AJAX, JQUERY.

CO5: Develop web services and comprehend the significance of frameworks.

List of Practical:

1. To study different web designing tools.
 - a. Bootstrap
 - b. Adobe Dreamweaver
 - c. Adobe Flash
 - d. HTML 5
2. HTML5 Input Types.
3. HTML5 Canvas.
4. HTML5 Web Storage.
5. Create a webpage using AJAX.
6. Implement jQuery.
7. JSP Programs.
8. Create a simple website. The website should contain at least two to three pages. It should have a table, a menu and some photograph. Also create an image map in website. Demonstrate the use of summary tags, headings, colours etc.
9. Create a simple Web application.

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN603: Social Media Analytics

Credits: 4

LTP 310

Course Description: The course aims to equip the students to understand the concept of Social Media Analytics.

The course includes working with SMA concepts, and Web analytics tools and techniques.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Explain and discuss the importance of Social Media Analytics.

CO2: Evaluate effectiveness of different social media campaigns.

CO3: Apply appropriate analytic tools to a range of social media data sources.

CO4: Examine how different industries across the globe are using social media analytics.

Course Content

Unit I

Introduction to Social Media Analytics (SMA): Social media landscape, Need for SMA; SMA in Small organizations; SMA in large organizations; Application of SMA in different areas

Unit II

Network fundamentals and models: The social networks perspective - nodes, ties and influencers, social network and web data and methods. Graphs and Matrices- Basic measures for individuals and networks. Information visualization.

Unit III

Making connections: Link analysis. Random graphs and network evolution. Social contexts: Affiliation and identity.

Web analytics tools and techniques: Click stream analysis, A/B testing, online surveys, Use of Google Analytics; Web crawling and Indexing; Natural Language Processing Techniques for Micro-text Analysis.

Unit IV

Facebook Analytics: Introduction, parameters, demographics. Analyzing page audience. Reach and Engagement analysis. Post-performance on FB, Use of Facebook Business Manager; Social campaigns. Measuring and analyzing social campaigns, defining

goals and evaluating outcomes, Network Analysis. (LinkedIn, Instagram, YouTube Twitter etc.

Recommended Books / Suggested Readings:

1. Mathew Ganis, Avinash Koivrka "Social Media Analytics" IBM Press.
2. Oliver Blanchard Social Media ROIQue Publishing.
3. Marshall Sponder, Gorah F.KhanDigital Analytics for Marketing Routledge 2017 / 1st
4. Marshall SponderSocial Media Analytics McGraw Hill.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN623: Social Media Analytics Lab

Credits: 2

LTP 004

Course Description: The course aims to equip the students to understand the concept of Social Media Analytics.

The course includes working with SMA concepts, and Web analytics tools and techniques.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Explain and discuss the importance of Social Media Analytics.

CO2: Evaluate effectiveness of different social media campaigns.

CO3: Apply appropriate analytic tools to a range of social media data sources.

CO4: Examine how different industries across the globe are using social media analytics.

List of Practical:

- Study about social media analytics for the different platforms.
- Study about different analytics tools used in marketing.
- Website Analytics.
- Facebook Analytics
- Twitter Analytics
- YouTube Analytics
- Analyze the social media of any ongoing campaigns and present the findings.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN604: Search Engine Management

Credits: 4

LTP 310

Course Description: The course aims to equip the students on promoting the websites in terms of enhancing their visibility along both paid and also organic searches.

The course includes working with SEM concepts, and SEM Terminologies.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Demonstrate cognitive knowledge of the skills required in conducting online search and research on online markets.

CO2: Use of digital marketing tools by applying relevant marketing theories and frameworks.

CO3: Evaluate issues in adapting to globalized markets that are constantly changing and increasingly networked

CO4: Comprehend the importance of conversion and working with digital relationship Marketing.

Course Content

Unit I

SEM: Introduction to SEM, Introduction to Ad Words (About Google and Google Ad Words, Ad Words fundamentals, Overview of search ad positions, Introduction to the Google network); Account management (Setting up an Ad Words account, Account management) Campaign and ad group management (Campaign strategy, Campaign set-up, Managing campaigns); Introduction to ad group management Keyword targeting (Introduction to keyword targeting, Keyword management & troubleshooting, Keywords and the display network).

Unit II

Introduction to SEM Terminologies: Introduction to SEM Terminologies: Pay per Click (PPC), Cost Per Click (CPC), Search Engine Results Page (SERP), Click-Through Rate (CTR), Impressions (served and viewable), Split Testing (Multivariate and A/B Testing); Development of PPC ads, CPM and CPA campaigns, Retargeting. Comparison between SEO and SEM, SEO: Understanding Search Engine Optimization, Features of SEO, Significance of SEO, Inverted Pyramid in SEO.

Unit III

On-Page SEO: Keyword Research with Google Keyword Planner, Difference between keywords stuffing & KW placement, Selection of a Domain Name, Page Naming {URL Structuring} and Folder Naming Image Naming, Image Title and ALT Tags Creation. Meaning of Meta Tags, Description. Robots, Keywords, Author Redirection Tags Headings Tags {H1 to H6}, Meaning of Content Writing, SEO Friendly Content Writing {Insert keywords in content}, Anchor Text, Link Title Internal Linking Robot, text file use and creation HTML Sitemap creation, XML Site Map Creation Site Tracking Tools (Google Webmaster Tool, Google Analytics Tool), Alexa, Alexa Integration.

Unit IV

Adding title Off-Page SEO: Off-Page SEO -Meaning of OFF-Page Optimization, Backlinks, Importance of Backlinks are Important, Getting Backlinks, Difference Between Do-Follow and No-Follow Backlinks, Meaning of Google Page Rank, Steps to Increase Page Rank.

Recommended Books / Suggested Readings:

1. Arnold, J., 2007. E-Mail Marketing for Dummies®. Sussex: John Wiley & Sons.
2. Saleh, K. & Shukairy, A., 2010. Conversion Optimization: The Art and Science of Converting Prospects to Customers. United States: "O'Reilly Media, Inc.
3. Diamond, S., 2019. Digital Marketing All-In-One for Dummies. Sussex: John Wiley & Sons.
4. SEO Fitness Workbook, 2016 Edition: The Seven Steps to Search Engine Optimization Success on Google by: Jason Mc Donald.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN624: Search Engine Management Lab

Credits: 4

LTP 310

Course Description: The course aims to equip the students on promoting the websites in terms of enhancing their visibility along both paid and also organic searches. The course includes working with different on page and off page optimization.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Demonstrate cognitive knowledge of the skills required in conducting online search and research on online markets.

CO2: Use of digital marketing tools by applying relevant marketing theories and frameworks.

CO3: Evaluate issues in adapting to globalized markets that are constantly changing and increasingly networked

CO4: Comprehend the importance of Working of SEO.

List of Practical:

- a. Analysis of Similar websites
- b. Creating Sitemaps.
- c. Google webmasters' tool
- d. Creating Robots file
- e. Case Study of White Hat SEO.
- f. Case Study of Black Hat SEO.
- g. Case Study of Grey Hat SEO.
- h. Page Rank Increment
- i. Backlinks
- j. Type of Backlinks
- k. Link Building

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN605: Data Mining

Credits: 4

LTP 310

Course Description: The course aims to equip the students with a comprehensive study of the data mining. The course includes Classification, prediction and cluster analysis techniques.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Justify the need of Data Warehousing & Mining.

CO2: Identify the real-life applications where data mining can be applied.

CO3: Apply different data mining algorithms on wide range of data sets.

CO4: Describe the Spatial Data Mining, Multimedia Data Mining, Text Mining and web Mining.

Course Content

Unit I

Introduction: Data Mining, Data ware House, Transactional Databases, Data Mining Functionalities, Characterization and Discrimination, Mining frequent patterns, Association and correlation, Classification and Prediction, Classification of Data Mining Systems, Data Mining Task Primitive, Integration of Data Mining systems, Major issues in Data Mining, Data integration and transformation, Data reduction, Data discretization.

Unit II

Data Warehouse and OLAP technology: Data Warehouse, Multidimensional data Model, Data warehouse architecture, Data Warehouse implementation, LAP, Data Warehouse and data mining.

Unit III

Association Pattern Mining: Introduction, Frequent Pattern Mining Model, Association Rule Generation Framework, Frequent Item set Mining Algorithms, Brute Force Algorithms, Apriori Algorithm, Enumeration, Tree Algorithms, Pattern Summarization.

Unit IV

Mining Complex Data: Spatial Data Mining, Multimedia Data Mining, Text Mining and Mining WWW.

Recommended Books / Suggested Readings:

1. Jiawei Han and Micheline Kamber Data Mining - Concepts and Techniques (Second Edition) Elsevier, 2006.
2. Soman, Divakar and Ajay Data Mining Theory and Practice PHI, 2006.
3. Charu C. Aggarwal, Data Mining: The Textbook, Springer, 2015.LTP312.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN625: Data Mining Lab**Credits: 2****LTP 004**

Course Description: The course aims to equip the students on promoting the websites in terms of enhancing their visibility along both paid and also organic searches. The course includes working with SEM concepts, and SEM Terminologies.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Identify different data mining tools used to analyze data.

CO2: Implement different data mining algorithms to analyze data.

CO3: Use effective visualization for representing data.

CO4: Implement Decision Tree.

List of Practical:

1. Study of WEKA Data Mining Tool.
2. Installation of WEKA Data Mining Tool.
3. Fundamental programming using WEKA tool.
4. Create an Employee Table with the help of Data Mining Tool WEKA.
5. To apply different kind of preprocessing techniques on given dataset.
6. To list all the categorical (or nominal) attributes and the real valued attributes using Weka mining tool.
7. Create a Weather Table with the help of Data Mining Tool WEKA.
8. To implement the Apriori Algorithm.
9. To develop a decision tree and cross validate accuracy of data set is increasing order increasing or decreasing.
10. To Construct Decision Tree for various types of data and classify it.
11. One Hierarchical clustering algorithm.
12. To demonstrate K-means clustering.

Note: Software: WEKA Tools and R tools.

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN606: Data Visualization with Tableau

Credits: 4

LTP 310

Course Description: The course aims to equip the students with a comprehensive study of Data Visualization with Tableau.

The course includes working with Tableau Data Source and Basic Charts, and Multivariate Charts and Maps.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Justify the need of Data Visualization.

CO2: Apply visualization techniques for various data analysis tasks.

CO3: Present data through charts and maps.

CO4: Describe the Spatial Data Mining, Multimedia Data Mining, Text Mining and web Mining.

Course Content

Unit I

Introduction: Data Mining, Data ware House, Transactional Databases, Data Mining Functionalities, Characterization and Discrimination, Mining frequent patterns, Association and correlation, Classification and Prediction, Classification of Data Mining Systems, Data Mining Task Primitive, Integration of Data Mining systems, Major issues in Data Mining, Data integration and transformation, Data reduction, Data discretization.

Unit II

Data Warehouse and OLAP technology: Data Warehouse, Multidimensional data Model, Data warehouse architecture, Data Warehouse implementation, LAP, Data Warehouse and data mining.

Unit III

Association Pattern Mining: Introduction, Frequent Pattern Mining Model, Association Rule Generation Framework, Frequent Item set Mining Algorithms, Brute Force Algorithms, Apriori Algorithm, Enumeration, Tree Algorithms, Pattern Summarization.

Unit IV

Mining Complex Data: Spatial Data Mining, Multimedia Data Mining, Text Mining and Mining WWW.

Recommended Books / Suggested Readings:

1. Efraim Turban, Ramesh Sharda, Dursun Delen, "Decision Support and Business Intelligence Systems", Pearson.
2. Nandeshwar, A., Tableau Data Visualization Cookbook, Mumbai: PACKT /Shroff Publishers.
3. Iliinsky, N. & Steele, J., Designing Data Visualizations, Mumbai: O'Reilly /Shroff Publishers.
4. Milligan, N.J., Learning Tableau, Mumbai: PACKT / Shroff Publishers.
5. Jones, B., Communicating Data with Tableau, Mumbai: PACKT / Shroff Publishers.
6. Yau, N., Visualize This: The Flowing Data Guide to Design, Visualization, and Statistics. John Wiley & Sons.

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN606: Data Visualization with Tableau Lab

Credits: 2

LTP 004

Course Description: The course aims to equip the students with a comprehensive study of Data Visualization with Tableau.
The course includes working with Tableau Data Source and Basic Charts, and Multivariate Charts and Maps.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Describe the main concepts of data visualization.

CO2: Create ad-hoc reports, data visualizations, and dashboards using Tableau Desktop

CO3: Create several different charts using Tableau

CO4: Identify stories and insights in data.

List of Practical:

- 1. Introduction to Tableau:** Getting started with Tableau Desktop Connecting to the tutorial dataset Creating the first charts Filtering and sorting data
- 2. Common charts:** Creating common visualizations (bar charts, line charts etc.) Assembling a dashboard layout Using dashboard filters
- 3. Transform the data:** Dataviz best practices Creating simple calculations in Tableau Using table calculations.
- 4. Interactions:** Interactivity with text and visual tooltips Interactivity with actions (filter, highlight, URL) Drilldown between dashboards
- 5. Data Storytelling:** Intro to data storytelling Creating a data story in Tableau Overview of the Tableau ecosystem.

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN650: Major Project

Credits: 3

LTP 006

Course Description: The course aims to equip the students to provide an opportunity to apply the knowledge gained through various courses in solving a real-life problem in digital marketing..

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Understand the team working and team management.

CO2: Learn how to develop components & systems in isolation which meets a common goal.

CO3: Understand practical application of engineering principles for designing fabrication and testing of working models.

CO4: Design a system, model, component or a process to meet desired/industrial/R&D needs.

Guidelines for Major Project

Hence students should plan and organize their minor projects meticulously and necessary discussions and planning should be done so as to achieve this objective. The following guidelines should be adhered to:

1. Group Size: Maximum 4, most preferably:3
2. Certificate should include the names of all members.
3. The minimal phases for the project are Project feasibility, Investigation of system requirements, Data and Process Modelling, System Design, Program design, Program coding and unit testing, System integration, System implementation and acceptance testing.
4. **Planning the Project:** The Major Project is an involved exercise which has to be planned well in advance. The topic should be chosen in Semester 5 itself. Related reading, training and discussions should start from semester 5 itself.
5. Attendance is compulsory for all the students.
6. If a student is absent for his/her presentation as per schedule, he/she must assess later on with reduced weightage in the presentation assessment.

1. Selection of project work: Project work could be of 3 types:

a) Developing solution for a real-life problem: In this case, a requirement for developing a computer-based solution already Exists and the different stages of system development life cycle is to be implemented successfully. Examples are Accounting Software Package for a particular organization, Computerization of administrative functions of an organization, Web Based application, website design and development and many more. The scope for creativity and exploration in such projects is limited, but if done meticulously, valuable experience in the industrial context can be gained.

b) Innovative Product development: These are projects where a clear-cut requirement for developing a computer-based solution may not be existing, but a possible utility for the same is conceived by the proposer. An Example is innovative Android applications, Networking, Computer Music Software for Indian Music, Heat Engines Simulation Software for eLearning, Digital Water Marking Software and many more.

c) Research level project: These are projects which involve research and development and may not be as structured and clear cuts in the above case. Examples are Character Recognition, Speech Recognizer, Biometric Systems, Machine Translation System etc.

8. Students must ensure that they have to submit their synopsis of Project within 15 days from the start of the project.

9. Two interim reports (one after analysis and another after design) should be submitted to internal guides.

10. The number of records to be submitted is limited to team size + one (Departmental copy). Hard binding of reports is mandatory.

11. The report format guidelines used to document Major Projects should be followed for making the final report and evaluation will be made on the same grounds.

Typing Instructions for Major Project Report:

- Specification for Fonts:
- Font Face: Times new Romano.
- Font Size: As per following preview:
 - Headings (Size 16 Bold).
 - Sub-Heading (Size 14 Bold and Italic).
 - Contents (Size 12Normal)
 - Line spacing: 1.5.

- Text Alignment: Both left and right justified.
- Page Dimensions: Standard A4 size (297mm x 210mm).
- Margins:
 - Top margin: 0.75"
 - Bottom margin: 0.75"
 - Left margin: 1"
 - Right margin: 0.75"
- Footer: Page number should be bottom centered.
- Sections should be numbered as for example, 1. Introduction.
- Subsections should be numbered as for example, 3.1 Simulation Toltec.
- Paragraphs and sentences should be short.
- Start of a paragraph should not be intended, rather, give one-line space between two paragraphs.
- A sub heading at the bottom of a page must have at least two full lines below it or else it should be carried over to the next page.
- The last word of any page should not be split using a hyphen.
- References:
 - Book titles must be in capitals.
 - Reference numbers should be marked liberally inside the text of the report-e.g.,as given in [3].
 - References should either be in chronological order or in the order in which they appear in the text.

Evaluation of Major Project:

External Evaluation:

External Evaluation:

Criteria for external evaluation of Major Project, External evaluation is done by an external examiner appointed by the HOD/DEAN of the department. The following components are to be assessed for the End Semester External Evaluation of the Minor Project:

Project Demonstration	20 marks
Presentation	20 marks
Viva -voice	20 marks
Total marks	60 marks

Internal Evaluation:

Criteria for internal evaluation of Major Project, Internal evaluation is being done by conducting a Viva by a team of evaluators comprising of the concerned guides and/or Head of the Department. The following are the components for internal evaluation of the Minor Project:

Presentation /Internal Viva	10 marks
Individual involvement & teamwork	10 marks
Attendance	5 marks
Project Report	15 marks
Total marks	40 marks

**Kindly note the format to be followed is same as last year.

The whole text should be justified.

Font: Times New Roman

Main Heading Font Size: 14

Subheadings: 12

Font Size: 12 (Text)

Left margin: 1.25"

Right margin: 1"

Top Margin: 1"

Bottom Margin: 1"

DMSN701: Digital Presence and Viral Marketing

Credits: 4

LTP 310

Course Description: The course aims to equip the students with knowledge about marketing opportunities and implementation plans in viral marketing.
The course includes viral marketing concepts, strategies of viral marketing and buzz marketing.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Understand the basic concepts of viral marketing.

CO2: Comprehend the impact and implementation of viral marketing.

CO3: Enrich the knowledge of competitive intelligence and strategy.

CO4: Enrich knowledge about online buying behaviour.

Course Content

Unit I

Viral Marketing: Definition – Role of viral marketing, Types of viral marketing, Advantages and disadvantages of viral marketing, Importance of viral marketing.

Unit II

Strategies of viral marketing: Impact of viral marketing, Buzz marketing and viral marketing, Viral marketing techniques, Implementation of viral marketing.

Unit III

Competitive advantage: identifying and assessing competitors, Competitors to attack or avoid, Competitive intelligence, Competitive strategy and position, Leader and challenger strategies.

Unit IV

Digital Customer: Online buying behaviour, Advertising online, Email marketing, Metrics and analytics.

Recommended Books / Suggested Readings:

1. Philip T Kotler, Gary Armstrong & Prafulla Agnihotri, Principles of Marketing, 17th edition, Pearson India & 2018, ISBN – 9789352865611
2. Kotler.P & Keller.K.L, Marketing Management, 12th edition, Pearson India & 2015, ISBN - 9789332557185
3. Ramon Tarruella, Online Viral Marketing, 11th edition, Business Expert Press & 201, ISBN - 1606498126.
4. Stanton Etzel, Fundamental of Marketing, 18th edition, Pearson Education & 2002, ISBN - 9781606498125
5. Ryan.D, Understanding Digital Marketing: Marketing strategies for engaging the digital generation, 13th edition, Pearson India & 2005, ISBN - 9780268978523

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN702: Data Analysis and Visualization

Credits: 4

LTP 310

Course Description: The course aims to equip the students with the importance of data analysis and visualization in all functions and domains of digital marketing.

The course includes to use advanced functions of MS Excel for informing Financial Decisions.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Apply and use advanced functions of MS Excel for ease of calculation and informing management decisions.

CO2: Use One-way and Two-way Data Tables in Excel to analyze data.

CO3: Demonstrate ability to perform What-If Analysis, Goal Seeking, Scenario and Sensitivity Analysis in Excel.

CO4: Integrate various data analytic and visualization techniques to present a coherent data story.

Course Content

Unit I

Data Analysis in Excel using classic tools: pivot tables, pivot charts, and slicers. Pivot Tables and Charts- Creating a pivot table; Displaying with a pivot chart; Slicing and dicing of data and related analyses with Pivot tables, Using One-way and Two-way Data Tables to analyse data. Sensitivity Analysis; Goal Seek; Scenario Manager. Saving pivot tables and charts to web pages.

Unit II

Excel Add-Ins. Excel's Data Analysis Toolpak - Summarizing Data with Histograms and frequency distributions. Descriptive Statistics; Using Correlations to summarize Relationships. Predictive Analysis with Excel - Implementing multiple regression analyses in Excel; Forecasting with Moving Averages; Time Series Analysis.

Unit III

Data Visualization tools in Excel – Line Graphs, Bar Graphs, Pie Charts, Heat Maps etc. Creating an Interactive Excel Dashboard. Introduction to Tableau. Understanding how Tableau works –

Dimensions and Measures, Continuous and Discrete Pills in Tableau; Axis vs Label; Colour and Maps – Gradient vs Colour Palette, Symbol map vs. Filled map. Date types.

Unit IV

Filtering – on a discrete pill and on a continuous measure pill. Aggregation in Tableau; Granularity in Tableau. Creation of Calculated Fields in Tableau – Calculating rates and ratios. Using the right Data Visualization tool in a given situation. Integration of Tools. Creating a data story – elements of a data story, steps for creation.

Recommended Books / Suggested Readings:

1. Ryan Sleeper, Practical Tableau: 100 Tips, Tutorials, and Strategies from a Tableau Zen Master.
2. Ben Jones, Communicating Data with Tableau: Designing, Developing, and Delivering Data Visualizations.
3. Sosluski, K.; Data Visualization Made Simple: Insights into Becoming Visual. New York: Routledge.
4. Winston, W. L., Microsoft Excel - Data Analysis and Business Modeling, PHI Publications
5. Lalwani, L., Excel 2019 All-in-One Paperback; BPB Publishers
6. Walkenbach, John, Excel 2016 Bible, Wiley Publications

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN722: Data Analysis and Visualization

Credits: 2

LTP 004

Course Description: The course aims to equip the students with the importance of data analysis and visualization in all functions and domains of digital marketing.

The course includes to use advanced functions of MS Excel for informing Financial Decisions.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Apply and use advanced functions of MS Excel for ease of calculation and informing management decisions.

CO2: Use One-way and Two-way Data Tables in Excel to analyze data.

CO3: Design and Create an Interactive Excel Dashboard from a given data set in Excel.

CO4: Design and Create a Dashboard from a given data set using Tableau.

List of Practical:

1. Visualization of Numerical Data- use appropriate charts, graphs and tables to create visualizations that convey relationship between data items.
2. Visualization of Non-Numerical Data- use appropriate charts, graphs and tables to create visualizations that convey relationship between data items.
3. Excel Dashboard – Design and Create an Interactive Excel Dashboard from a given data set.
4. Tableau Dashboard – Design and Create a Dashboard from a given data set using Tableau and its Aggregation, Granularity and Calculated Fields functionalities.

Lab Course Evaluation Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Lab Evaluation (Five times a semester): Based on following criteria: Problem solving (Based on difficulty level, one or more questions may be given)	15 Marks
	Flowchart / Algorithm / Structured description of problem to explain how the problem can be solved / Interface Design	
	Internal viva	5 Marks
	Attendance	5 Marks
	Practical File	5 Marks
External Assessment (Summative)	External Viva	20 Marks
Total		50 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	

DMSN702: Data Analysis and Visualization

Credits: 4

LTP 310

Course Description: The course aims to equip the students with understanding the Mobile Marketing and Video Marketing. The course includes Mobile Advertising and Search, Mobile Marketing Features and Video Making for YouTube.

Course Outcomes (CO)

Upon successful completion of the course, the students should be able to:

CO1: Identify and discuss key terminology and successful mobile marketing examples.

CO2: Explain how technology and mobile marketing are intertwined.

CO3: Discuss and analyze how Mobile Analytics works to track mobile campaigns.

CO4: Develop a video content for YouTube.

Course Content

Unit I

Introduction to Mobile Marketing – Mobile usage, Mobile penetration Worldwide, Smartphone penetration worldwide. Mobile Advertising Models, Advantages of Mobile Advertising, Mobile Marketing Toolkit, Paid and Owned.

Unit II

Mobile Advertising and Search: Mobile Advertising Mobile Marketing and Search Programmatic Ad Buying. Mobile Marketing and social media: Mobile and Social Media Content Marketing for Mobile Facebook Advertising for Mobile

Unit III

Mobile Marketing Features: Location- Based Services or Proximity, Social Marketing on Mobile, QR Codes Augmented Reality, Gamification, Common mistakes in mobile strategy. Diversity issues in India through Mobile, Campaign development Process, Tracking of Mobile Campaigns- Mobile Analytics.

Unit IV

Video Making for YouTube: How to make videos, Camera angles, settings, shooting techniques, editing, Audio, background score, Animation, Software for editing. On hands training on video, Publishing HD videos, Practical Examples and creating Animated Contents.

Recommended Books / Suggested Readings:

1. Digital Marketing by Seema Gupta
2. Groundswell: Winning in a World Transformed by Social Technologies – Charlene Li and Josh Bernoff
3. The Elements of User Experience: User-Centered Design for the Web – Jesse James Garrett
4. Socialnomics: How Social Media Transforms the Way We Live and Do Business – Erik Qualman
5. Mobile Marketing: How Mobile Technology is Revolutionizing Marketing, Communications and Advertising by Daniel Rowles
6. Tap: Unlocking the Mobile Economy by Anindya Ghose

Course Assessment Pattern:

Criteria	Description	Maximum Marks
Internal Assessment (Summative)	Mid Semester Exam (MSE)	20 Marks
	Assignment	5 Marks
	Continuous Assessment Test	10 Marks
	Attendance	5 Marks
End Term Exam (Summative)	End Term Examination (ESE)	60 Marks
Total		100 Marks
Attendance (Formative)	A minimum of 75% Attendance is required to be maintained by a student to be qualified for taking up the End Semester examination. The allowance of 25% includes all types of leaves including medical leaves.	