P. D. E. A's
Prof. Ramkrishna More Arts, Commerce and Science
College Akurdi Pune-411044

Affiliated to

Savitribai Phule Pune University [SPPU]

B.C.A(Under AICTE)

Choice Based Credit System-2024 Pattern
Under
Autonomy and NEP-2020

From Academic Year
2024-2025

Syllabus
First Year Graduate S.Y. B. C.A.

Board of Studies B.C.A.

Preamble of the syllabus

B.C.A.(Science) program is designed to bridge the gap between IT industries and academic institutes by incorporating the latest development into the curriculum and to give students a complete understanding within a structured framework. This is intended to provide a broad framework within which help to create an academic base that responds to the need of the students to understand the basics of Computer. The curriculum framework is designed and formulated in

order to acquire and maintain standards of achievement in terms of knowledge, understanding and skills in Computer Science and their applications, critical thinking and developing skills for problem solving and initiating research which are competitive globally. This program is for candidates who wish to explore new emerging technologies using computer languages.

It will provide the necessary skills to make the successful candidate proficient in software development, paving the way for self-employment. The curriculum is oriented more towards Programming and Software. Ability to apply the algorithmic principles, mathematical foundations and computer science theory for designing computer-based systems..

Goals:

- The Department BCA(Science) degree is to give students the information and skills required for careers in the software business, as well as computer application.
- To provide high-quality computer education to enhance logical programming and computing skills.
- To prepare students for carriers in software industry understanding and skills related to the use of computers and its applications.

Rules and Regulations:

1. National Credit Framework (NCrF): For creditisation and integration of all higher education qualifications leading to a certificate/ diploma/ degree with multiple entry and exit options, college will refer to National Credit Framework (NCrF) which encompasses the qualification frameworks for higher education, vocational and skill education and school education, namely National Higher Education Qualification Framework (NHEQF), National Skills Qualification Framework (NSQF) and National School Education Qualification Framework (NSEQF) respectively.
2. Structure of Four years multidisciplinary UG Programme and Five Years Integrated Multidisciplinary Master's Degree Programmes with Multiple Entry and Exit Options at Different Levels:
   i. Students will have the flexibility to enter four years multidisciplinary Under Graduate Programme in odd semesters and exit a programme after the successful completion of even semesters as per their future career needs.
   ii. Students will get a Certificate after a One year programme (minimum 40 Credits), a Diploma after two years (minimum 80 Credits), a Bachelor's degree after three years (minimum 120 Credits), and a Bachelor's degree with Research or Honours after Four years (minimum 160 Credits).

(i) Qualification Type and Credit Requirements of Four Years Multidisciplinary Degree Programme with Multiple Entry and Exit Options Details of qualifications, minimum credit requirements, exit credit courses, year and semester are as under:

Levels	**Qualification Title**	**Credit Requirements**		**Semester**	**Year**
		Minimum	Maximum		
4.5	UG Certificate	40	44	2	1
5.0	UG Diploma	80	88	4	2
5.5	Three Years Bachelor's degree	120	132	6	3
6.0	Bachelor's degre	160	176	8	4

	e Honour's with Major				
	Bachelor's degree Honour's with Major	160	176	8	4
7.0	Master's Degree	200	220	10	5
8.0	Ph. D.	----	-----	-----	----

(ii) An exit 6-credit bridge course(s) lasting two months, including at least 6-credit job specific internship/apprenticeship that will help the graduates acquire job-ready competencies required to enter the workforce will be an additional requirement for the award of the undergraduate Certificate/ Diploma/ three year Bachelor's Degree.

(iii) On exit, the students will have the option to re-enter the programme in the college, or in a different higher education institution. Re-entry at various levels for lateral entrants in academic programmes should be based on the earned and valid credits as deposited and accumulated in the Academic Bank of Credits (ABC) through Registered Higher Education Institutions (RHEI) and proficiency test records.

(iv) Eligibility for admission to the fourth year of four-year Honours with Research Degree Programmes as per UGC guidelines: Minimum CGPA of 7.5 or minimum 75% at three- year degree.

(v) PG curriculum, as illustrated below, have flexibility

a) One-year Post-Graduate Diploma (PGD), b) Two-year Post-graduate Programme and c) 5 Years Master's degree programmes with multiple Entry and Exit options at different levels.

(a) Post-Graduate Diploma (PGD): Programme duration- One year (2 semesters) after any bachelor's degree, min. 40 credits

(i) UGC: 1-Year (2 semesters) Post-Graduate Diploma (PGD) after 3-years Bachelor's degree: Level 6.0

(ii) UGC: 1-Year (2 semesters) PGD after 4 years Bachelor's degree (Honors/ Research): Level 6.5

(b) Master's Degree:

(c) UGC: 2-Years (four semesters) Master's Degree after obtaining a 3-years Bachelor's degree, Minimum 40 credits/year, second year devoted entirely to research, PG – 2nd year: Level 6.5 1-Year (two semesters) Master's Degree after obtaining a 4-year Bachelor's degree (Honours/Research): Minimum 40 credits: Level 6.5

(d) Level 8 represents Ph. D. Research Degree.

(e) A 5-year Integrated Bachelor's and Master's programme shall have a minimum of 220 credits.

(f) Master's and doctoral programmes, while providing rigorous research-based specialization, should also provide opportunities for multidisciplinary work, in academia, government, research institutions, and industry.

3. Lateral Entry/ Re-entry at higher Levels after exit from lower levels of four years multidisciplinary UG degree programme:

(i) The credit points earned and accumulated shall be used to determine the eligibility for taking admission to various programs at multiple levels, subject to fulfilment of the broad principles laid down under NCrF. Students who leave with a Certification, Diploma, or a Basic Bachelor's Degree will be eligible to re-enter the programme at the exit level to complete or progress to the next level through lateral entry mode. Depending upon the academic and physical facilities available, the State Universities/ Autonomous Colleges (Higher Education Institutions or HEI) may earmark specific seats/ intake for lateral

entry into the second year/ third year/ fourth year of a four years multidisciplinary UG degree programme as approved by Professional Standard Setting Bodies (PSSB/Govt. of Maharashtra/ statutory council of affiliating University plus any consequential vacancies caused by exits to an ongoing programme (four-year Degree Programme and Integrated Master's or second year Master's). Lateral entry or Re-entry is open to those students if he/she has either –

(a) successfully completed the first year/second year/third year of the particular four years multidisciplinary degree programme in any ABC registered HEI with valid credits in ABC and re-entering into the second year/third year/fourth year, respectively of the same four years degree programme of any ABC registered HEI, within stipulated/ permissible period of years as decided by Statutory Councils of that HEI

OR

(b) Already successfully completed a multidisciplinary four-year first- degree programme and is desirous of and academically capable of pursuing another multidisciplinary four years first-degree programme in an allied subject.

(ii) A student will be allowed to enter/re-enter only at the odd semester. Re-entry at various levels for lateral entrants in academic programmes should be based on the earned and valid credits as deposited and accumulated in Academic Bank of Credits (ABC) through Registered Higher Education Institutions (RHEI) and proficiency test records. However, in terms of the admission eligibility requirements, the student shall belong to the same faculty/ discipline in terms of Major Subject i.e., the Major subject of his earlier Programme and the Major subject of the new Programme for which he is seeking admission must be from the same faculty/discipline. Reservation for lateral entry will be executed as per the Government of Maharashtra norms.

4. Distribution of Credits across Multidisciplinary Four Years Degree Programme:

(i) Four-year multidisciplinary degree programme with Honours/ Specialization Degree will have Internship and Core /Major Courses with a minimum of 22 credits per sem. in the Fourth Year.

(ii) Four-year multidisciplinary degree programme with Research will have Research Projects, Seminars, Dissertations and Internships with a minimum of 22 credits per Sem. in the Fourth Year.

(iii) Students shall select a 'Major or Core Subject/ Discipline' and a 'Minor Subject/Discipline' from the lists of various Subject Combinations and Options provided the Colleges. In general, for the four years multidisciplinary bachelor's degree programme, the distribution of credits will be as follows:

(a) Disciplinary/interdisciplinary Major/ Core Subject (minimum of 68 credits)- Mandatory and Elective Courses

) Disciplinary/interdisciplinary Minor Subject (maximum of 22 credits)

(c) Skill based/Vocational studies corresponding to the Major/ Core Subject (8 credits)

(d) Field projects/internship/apprenticeship/community engagement and service corresponding to the Major/ Core Subject (14-22 credits) with a maximum of six credits per Semester

(e) Generic/ Open Electives through Baskets of Elective Courses (12 credits),

(f) Ability Enhancement Courses including Languages, Literature and Environmental Studies (12 credits),

(g) In-built modules on the Indian Knowledge System (IKS) in Major/ Core Subject at Level 4.5 – 2 credits

(h) Value-based Education, Life Skills and Professional Ethics: Co- curricular Courses such as Sports and Culture, NSS/NCC and Fine/ Applied/Visual Arts (8 credits).

Student can earn some credits (SEC/VSC/GE/OE) in the form of online from-

(i) The National Skills Qualifications Framework (NSQF) organizes qualifications for Vocational and Skill Courses in a series of 8 levels based on professional knowledge, professional skills, core skills and responsibilities, in the increasing order of complexity and competency.

(ii) University Grants Commission (Credit Framework For Online Learning Courses through Study Webs of Active-Learning for Young Aspiring Minds) Regulations, 2021, permits up to 40 per cent of the total courses being offered in a particular programme in a semester through the Online Learning Courses offered through the Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) platform.

5. Examination and Assessment Process:

(i) The basic principle of the credit framework is that credits are a function of the successful completion of a program of study/ vocational education/ training and assessment. No credit can be earned by the student unless the student is assessed for the achievement of the desired competencies and outcome of a program.

(ii) Exit options are provided with certification, diploma and basic Bachelor's degrees to the students at the end of the second, fourth and sixth semesters of a four years multidisciplinary degree programme. Students will receive a Bachelor's degree with Honours/ Research on successfully completing of all eight semesters of the UG Program either at a stretch or with opted exits and re-entries.

(iii) For the smooth success of four-year multidisciplinary degree programme with multiple entry and exit systems, the examination mode will be based on the combination of innovative trends in formative (informal and formal tests administered during the learning process) and summative (evaluation of students learning at the end of an instructional unit) examination modes. This is in line with the UGC Report on 'Evaluation Reforms in Higher Educational Institutions (2019)'.

(iv) Evaluation of each students in each course will be done as follows

a. Each theory or practical course will be of 2 credits = 50 mark
b. Internal evaluation 30% weightage (15 mark)
c. External evaluation 70% weightage (35 marks)
d. Students should secure 40% marks in each type of evaluation for successful completion of a course (student should secure at least 6 marks in internal and 14 marks in external evaluation).

(v) Evaluation Pattern.

a. Internal evaluation - Two written test, each of 20 marks will be conducted i. e. two tests on two modules. 1st assignment after completing 6 weeks of teaching and 2nd on completion of 13th week of teaching. Question paper should be designed so that evaluation of CO, PO, PSO can be performed. 10 marks out of 15 will be assigned from these written tests. Remaining 5 marks will be assigned from other types of evaluation such as seminars, orals, poster presentation, open book challenging tests, surprise test, objective test on whole syllabus of the course (at least 40 questions of objective type must be designed), etc. for 5 marks at least two different types technique must be utilized.

b. External Evaluation - External evaluation will be done at the end of semester. For theory, 35 marks written examination will be conducted and time of examination will be 2-hours.

6. Declaration of Results:

(i) Declaration of result is based on the Semester Grade Point Average (SGPA) earned towards the end of each semester or the Cumulative Grade Point Average (CGPA) earned at the completion of all eight semesters of the programme and the corresponding overall alpha-sign or letter grades as given in Table 2. If some candidates exit at the completion of the first, second or third year of the four years Undergraduate Programmes, with Certificate, Diploma or Basic Degree, respectively, then the results of successful candidates at the end of the second, fourth or sixth semesters shall also be classified on the basis of the CGPA obtained in the two, four, six or eight semesters, respectively. Successful candidates at the end of the tenth semester of the integrated Master's Degree Programmes shall also be classified on the basis of CGPA obtained in the ten semesters of the Programmes. Likewise, the successful candidates of one year or two semesters Master's Degree Programme are also classified on the basis of the CGPA of two semesters of the Master's Degree Programme.

Table-2: Grades on degree certificate/mark sheet will be assigned to the students as per the following table

Semester GPA/ Program CGPA Semester/Program	% of Marks	Alpha-Sign / Letter Grade Result
9.00-10.00	90-100	O (outstanding)
8.00 - <9.00	80.00 – <90.00	A+ (Excellent)
7.00 - <8.00	70.00-<80.00	A (Very Good)
6.00 - <7.00	60.00-<70.00	B+ (Good)
5.50 - <6.00	55.00-<60.00	B (Above Average)
5.00 - <5.50	50.00-<55.00	C (Average)
4.00 - <5.00	40.00-<50.00	P (Pass)
Below 4.00	< 40	F (Fail)
Ab	----------	Absent

(i) A student obtaining Grade F shall be considered failed and will be required to reappear in the examination. For non-credit courses 'Satisfactory' or "Unsatisfactory' shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.

1. Award of Major and Minor Degree:

(i) A student pursuing four-year multidisciplinary UG programme will be awarded an appropriate Honours/ Research degree in Major/ Core Subject on completion of VIII Semester with the minimum of 176 credits if he secures in that Subject at least 50% of the total credits for that programme. He shall thus study the specific number of Mandatory Core Courses, Core Electives, Vocational and Skill Courses and Field projects/ Internships connected to Core Subjects in eight semesters so as to cover at least 50% of the total credits.

(ii) In case of Research Degree, a student shall pursue research project and write dissertation in that Major in the VII and VIII semesters. On the basis of above rules and regulations under NEP-2020 following course frame work is adopted by the Prof. Ramkrishna More Arts, Commerce and Science College, Akurdi, Pune-411044 for the completing of four years honours degree in Major and Minor subjects.

2. Distribution of Credits across Four Years Degree Programmes: In general, for the four years' bachelor's degree programme, the distribution of credits will be as follows:

(a) Major (Core) Subject comprising Mandatory and Elective Courses:

i. Minimum 50% of total credits corresponding to Three/Four - year UG Degree- Mandatory Courses offered in all Four years;

ii. 2 credit course on Major Specific IKS shall be included under Major;

iii. Elective courses of Major will be offered in the third and/or final year.

iv. Vocational Skill Courses, Internship/ Apprenticeship, Field Projects, Research Projects connected to Major first to fourth year.

(b) Minor Subject: 18-20 Credits

i. The Minor subjects may be from the different disciplines of the same faculty of DSC Major (Core) or they can be from different faculty altogether.

ii. The credits of Minor subjects shall be completed in the first three years of UG Programme.

(b) Generic/ Open Elective Courses (OE): 10-12 credits

i. It is to be offered in I and/or II year

ii. Faculty-wise baskets of OE shall be prepared by University/ Autonomous Colleges.

iii. OE is to be chosen compulsorily from faculty other than that of the Major.
(c) Vocational and Skill Enhancement Courses (VSEC): 14-16 credits

Vocational Skill Courses (VSC): 8-10 credits, including Hands on Training corresponding to the Major and/or Minor Subject:
i. To be offered in first to three years;
ii. Wherever applicable vocational courses will include skills based on advanced laboratory practicals of Major

Skill Enhancement Courses (SEC): 06 credits
i. To be offered in I and II year;
ii. ii. To be selected from the basket of Skill Courses approved by University/ Autonomous Colleges
(a) Ability Enhancement Courses (AEC), Indian Knowledge System (IKS) and Value Education Courses (VEC): 14 Credits
• AEC: 08 credits
i. To be offered in I and II year
ii. English: 04 Credits
iii. Modern Indian Language: 04 credits
iv. To be offered from the Basket approved by the College;
The focus for both languages should be on linguistic and communication skills.
● IKS: 2 Credits
i. To be offered in I Year
ii. Courses on IKS to be selected from the basket of IKS courses approved by the Colleges
● VEC: 04 Credits
i. To be offered in I year
ii. Value Education Courses (VEC) Environmental Science Education (Compulsory), Understanding India, and Digital and Technological Solutions.
(a) Field Projects/ Internship/ Apprenticeship/ Community Engagement and Service corresponding to the Major (Core) Subject, Co-curricular Courses (CC) and Research Project
● Internship/Apprenticeship corresponding to the Major (Core) Subject: 8 CreditsField Projects/Community Engagement and Service corresponding to the Major (Core) Subject: minimum 4-6 credits
To be offered in II, and III years of UG Degree Programmes.
● Co-curricular Courses (CC) such as Health and Wellness, Yoga education sports, and fitness, Cultural Activities, NSS/NCC and Fine/ Applied/ Visual/ Performing Arts: 8 credits. To be offered in I and/or II year
● Research Projects: 12 credits

To be offered in the final year for 4-year Honours with Research UG Degree The UGC Regulations, 2021 permit up to 40% of the total courses being offered in a particular programme in a semester through the Online Learning Courses offered through the SWAYAM platform and/or other State Level Common Platforms which can be developed in due course with the participation of different Universities/ HEIs. Abbreviations: Generic/ Open Electives: GE/OE; Vocational Skill and Skill Enhancement Courses: VSEC; Vocational Skill Courses: VSC; Skill Enhancement Courses: SEC; Ability Enhancement Courses: AEC; Indian Knowledge System: IKS; Value Education Courses: VEC; OJT: On Job Training: Internship/ Apprenticeship; Field projects: FP; Community engagement and service: CEP; Co- curricular Courses: CC; Research Methodology-RM; Research Project: RP Note: The Credit Distribution Table given above is illustrative only. The Universities/ Autonomous Colleges may suitably modify within the broader framework of credit distribution across six verticals.

P.D.E. A's. Prof. Ramkrishna More Arts, Commerce and Science College Akurdi, Pune-411044 (Autonomous) Affiliated to Savitribai Phule Pune University

Revised Credit Framework / Structure for NEP-2020(II); CBCS Pattern-2024 with two Major at FY

Implemented from Academic Year 2024-25

Level / Difficulty	Sem	Subject-1				Subject-2	GE/OE	SEC	IKS	AEC
Certificate										
4.5 / 100	I	4T + 2P/T				4T + 2P/T	2T	2T/P	2T (General)	2T
	II	4T + 2P/T				4T + 2P/T	2T/P	2T/P	0	2T
Exit option: Award of UG Certificate in Major with 44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with **Continue option:** Student will select one subject among the (subject 1, subject 2 and subject 3) as major and another as minor and third sul										
Diploma										
Level / Difficulty	Sem	Credits Related to Major				Subject-2: Minor	GE/OE	SEC	IKS	AEC
		Major Core	Major Elective	VSC	FP / CEP / OJT					
5.0 / 200	III	4T + 2P/T	0	2T/P	2 FP	2T+ 2T/P	2T	0	2T (Major Specific)	2T
	IV	4T + 2P/T	0	2T/P	2 CEP	2T + 2P/T	2T/P	2T/P	0	2T
Exit option: Award of UG Diploma in Major and Minor with 88 credits and an additional 4 credits core NSQF course/ Internship OR Continue wi										
Three years Graduation Degree										
5.5 /300	V	8T + 4P/T	4T + 2P/T	2T/P	2 FP/RP	0	0	0	0	0
	VI	8T + 4P/T	2T + 2P/T	2T/P	4 OJT	0	0	0	0	0
	Total Credits	**48**	**10**	**8**	**10**	**20**	**8**	**6**	**4**	**8**
Four Years Graduate Degree with Honours (Major and Minor subjects)										
6.0 /400		10T + 4P/T	2T + 2P/T	0	0	4T RM	0	0	0	0
		10T + 4P/T	2T + 2P/T	0	4 OJT	0	0	0	0	0
	Total Credits	**76**	**18**	**8**	**14**	**24**	**8**	**6**	**4**	**8**
Four Years Graduate Degree with Honours (Research)										
6.0 /400		6T + 4P/T	2T + 2P/T	0	4 RP	4T RM	0	0	0	0
		6T + 4P/T	2T + 2P/T	0	8 RP	0	0	0	0	0
	Total Credits	**68**	**18**	**8**	**22**	**24**	**8**	**6**	**4**	**8**

Abbreviations:

VSC - Vocational Skill Course; **SEC –** Skill Enhancement Course; **IKS –** Indian Knowledge System

FP – Field Project **CEP –** Community Engagement Project **OJT –** On Job Training

AEC – Ability Enhancement Courses **VEC –** Value Education Course **CC –** Curricular Courses

GE/OE – Generic or Open elective courses **RP** – Research Project **RM** – Research Methodology

T – Theory **P –** Practical

1. A student can select two subject from the same faculty in first year. **At second year student will select any one subject from subject 1 and 2 at first year as major and another subject will be then minor**.
2. **VSC, IKS-2, OJT, FP, CEP, RP, RM should be related to Major subject**
3. OE/GE – Must be selected form basket approved by college and **selected from the faculty other than faculty of Major subject.**
4. **SEC should be selected from the basket of same faculty approved by the college**.
5. Each theory course may be of 2 or 4 credit; Each practical course should be of 2 credit only.
6. For those subject's practical cannot be conducted, they have to convert practical credits into theory credits. The decision should be taken BOS of respective subject.
7. This credit framework is applicable to all faculties in the college. The courses which are under AICET, they must take approval to this framework from AICET or respective body.
8. For any programs in any type course where practical are included (Major, Minor, VSC, SEC, GE/OE: Percent practical should be in the range 30 to 50%.

Post Graduate Degree Course Framework under Autonomy as per NEP-2020 2023 and 2024 Pattern

Implemented from Academic Year 2023-24

Sem.	Major Courses	Major Elective Curses	Min or Curses	FP/OJT/CEP	Total Credits
I	14 Credits (T + P) or (T only)	4 credits (T + P) or (T only)	RM 4 Credits (T)	0	**22-Credits**
II	14 Credits (T + P) or (T only)	4 credits (T + P) or (T only)	0	OJT (4 Credit) (P)	**22-Credits**
III	14 credits (T + P) or (T only)	4 credits (T + P) or (T only)	0	Research Project-I (4 credits) (P)	**22- Credits**
IV	12 credits (T + P) or (T only)	4 credits (T + P) or (T only)	0	Research Project-II (6 credits) (P)	**22 - Credits**
Total Credits	**54 Credits**	**16 Credits**	**4 Credits**	**14 Credits**	**88 Credits**

Important Note:

1. Theory course may be 2 or 4 credit.
2. Practical course for any type of course will be of 2 credits.
3. For any programs in any type course where practical are included (Major, Minor, VSC, SEC, GE/OE: Percent practical should be in the range 30 to 50%.

Long Forms:

T-Theory; **P-** Practical; **RM** – Research methodology; **RP -** Research Project; **OJT** – On Job training;

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Graduate and Honors Degree Course Framework under Autonomy as per NEP-2020
With Major B.C.A. (Science)

Sem.	Subject-1 (Major)	Major Elective Curses	Subject-2 (Minor)	VSC	IKS	FP/OJT/CEP	GE/OE	SEC	AEC	VEC	CC	Total Credits
First Year Certificate Course												
I	BSMAT-111 BSMAT-112 BSMAP-113	0	2 Theory + 1 Practical Other than BCA	0	GEIKT-111	0	BSGET-111	BSSEP-111	Marathi (MAAET-111) /Hindi (HIAET-111)	Environment Awareness VEEAT-111	0	22
II	BSMAT-121 BSMAT-122 BSMAP-123	0	2 Theory + 1 Practical Other than BCA	0	0	0	BSGET-121	BSSEP-121	Marathi (MAAET-121) /Hindi (HIAET-121)	Democracy and Indian Constitution VEPOT-121	Physical Education CCPEP-121	22
Second Year Graduate Diploma												
	Major		**Minor**	**VSC**	**IKS**	**FP/OJT/CEP**	**GE/OE**	**SEC**	**AEC**	**VEC**	**CC**	**Total Credits**
III	BSMAT-231 BSMAT-232 BSMAP-233	0	1 Theory + 1 Practical Other than BCA	BSVST-231	BSIKT-231	Field Project (2 Credit) BSFPP-231	BSGET-231	0	1 theory English AEENT-231		CCHRT-231 Human Rights	22
IV	BSMAT-241 BSMAT-242 BSMAP-243	0	1 Theory + 1 Practical Other than BCA	BSVSP-242	0	Community Engagement and Service (2 Credit) BSCEP-241	BSGET-241	BSSET-241	1 theory English AEENT-241		CCCST-241 Cyber Security	22
Third Year Graduate Degree												
V	BSMAT-351 BSMAT-352 BSMAP-353 BSMAP-354	BSMET-351-A (4 Credit) BSMEP-352-A Or BSMET-351-B (4 Credit) BSMEP-352-B		BSVST-351	0	Research project (2 Credit) BSRPP-351	0	0	0	0	0	22
VI	BSMAT-361 BSMAT-362 BSMAP-364 BSMAP-364	BSMET-361A BSMEP-361A Or BSMET-361B BSMEP-361B		BSVSP-351	0	OJT (4 Credit) BSOJP-361	0	0	0	0	0	22

S. Y. B.C.A. (Under AICTE) Syllabus

CBCS Semester Pattern

Under Autonomy and NEP-2020

To Be Implemented from

Academic Year 2025-2026

Courses Offered by B.C.A(Under AICTE) Department at Second year of Graduation Year 2025-26

Semester	Course code	Title of the paper	Credits
Major B.C.A.(Science) Courses			
III	BSMAT-231	Data Structures	2
	BSMAT-232	Database Management System	2
	BSMAP-233	DS and DBMS Laboratory	2
IV	BSMAT-241	Design and Analysis of Algorithms	2
	BSMAT-242	Basics of Data Analytics using Spreadsheet	2
	BSMAP-243	Basics of Data Analytics using Spreadsheet Laboratory	2
Vocational Skill Courses (VSC) Related to Major			
III	BSVST-231	Computer Networks	2
IV	BSVSP-241	Operating Systems Concepts Laboratory	2
SEC for BCA (Science)			
IV	BSSET-241	Probability and Statistics	2
IKS			
III	BSIKT-231	Software Engineering	2
Minor			
III	BSMIT-231	Communication Systems	2
	BSMIP-232	Electronics Lab-3	2
IV	BSMIT-241	Microcontroller and embedded systems	2
	BSMIP-242	Electronics Lab- 4	2
FP			
III	BSFPP-231	Field Project	2
CEP			
IV	BCCEP-241	Community Engagement and Service	2
AEC			
III	ENAET-231	English Communication & Soft Skill-I	2
IV	ENAET-241	English Communication & Soft Skill-II	2
CC			
III	CCHRT-231	Human Rights: An Introduction	2
IV	CCCST-241	Cyber Security	2
OE/GE (Other than BCA)			
III	BSGET-231	Cloud Computing	2
IV	BSGET-241	Internet of Things(IoT)	2
OE/GE Sem-III			
From Science Basket			
OE/GE Sem-IV			
From Science Basket			

SEMESTER III

NEP-2020: Second Year UG Major BCA

Course Code: BSMAT-231 **Course Type: Theory**
Course Name: Data Structures **Credits allotted:2**
Lectures allotted: 30 Lectures

Chapter No	Name of the Chapter	Lectures Assigned
1	Introduction to data structure	5L
2	Array as a data structure	4L
3	Linked List	6L
4	Stack and Queue	5L
5	Tree	5L
6	Graph	5L

MODULE-1 [12L+3T]

	Course Contents	
Unit I	**Introduction to data structure**	**[5L]**
	1.1 Data type and data object 1.2 Abstract Data Type (ADT),Type of data structure 1.3 Algorithm analysis 1.3.1 Space and Time complexity 1.3.2 Asymptotic notation – BigO, OmegaΩ	
Unit II	**Array as a data structure**	**[4L]**
	2.1 Array representation- Row and column major 2.2 Sorting techniques with time complexity: Bubble sort, Insertion sort, Merge sort, Quick sort. 2.3 Searching techniques with time Complexity: Linear search, Binary Search	
Unit III	**Linked List**	**[6L]**
	3.1 Introduction 3.2 Representation -Static & Dynamic 3.3 Types of linked lists- singly, doubly, circular 3.4 Operations-create, display, insert, delete, reverse, search, sort, concat, merge 3.5 Applications –single variable polynomial manipulation	
	MODULE-2 [12L+3T]	
Unit IV	**Stack and Queues**	**[5L]**
	4.1 Introduction 4.2 Representation -Static & Dynamic 4.3 Operations– push, pop 4.4 Applications of Stack – Recursion, Infix to postfix, Infix	

	to prefix, postfix evaluation 4.5 Representation of Queues -Static & Dynamic 4.7 Operations on Queues– insert, delete 4.8 Types of Queues- Circular Queue Priority queue 4.9 Real world Applications of queue	
Unit VI	**Tree**	**[5L]**
	6.1 Introduction 6.2 Tree terminologies- all definitions, root, leaf, level, height, depth 6.3 Binary tree 6.3.1 Types 6.3.2 Types of Traversal– Preorder, Inorder, Postorder 6.3.3 Representation – Static & Dynamic 6.4 Binary Search Tree (BST)	
Unit VII	**Graph**	**[5L]**
	7.1 Introduction 7.2 Graph terminologies 7.3 Representation – Adjacency matrix, Adjacency list, Adjacency multilist 7.4 Traversal– DFS, BFS 7.5 Applications: AOV network – Topological sort, AOE network – Critical path	

Course Outcome

After successfully completing this course, students will be able to:

CO1: Recall different types of data.
CO2: Identify linear and Non-linear data structures.
CO3: Recognize particular data structure as per the need of application.
CO4: Choose appropriate data structures.
CO5: Illustrate linear and nonlinear data structure diagrammatically.
CO6: Compare linear and nonlinear data structures.
CO7: Design different types of trees and Graphs for given data.
CO8: Apply the knowledge data structure for various data.

SEMESTER III

NEP-2020: First Year UG Major BCA

Course Code: BSMAT-232 **Course Type: Theory**

Course Name: Database Management Systems **Credits allotted:2 credits**

Lectures allotted: 30 Lectures

Chapter No	Name of the Chapter	Lectures Assigned
1	Introduction of DBMS	4L
2	Conceptual Design (E-R model)	5L
3	Relational Algebra and Calculus	6L
4	Structured Query Language (SQL)	5L
5	Advanced SQL	5L
6	Relational Database Design	5L

MODULE-1 [12L+3T]

	Course Contents	
Unit I	**Introduction of DBMS**	**4L**
	1.1 Definition of Data, Database, and DBMS, **1.2** Overview of Database Applications, Advantages and Disadvantages of DBMS **1.3 Roles** of Database Users and Administrators Introduction to Data Models, Types of Data Models (Hierarchical, Network, Relational, Object-oriented), Importance of Data Models in DBMS	
Unit II	**Conceptual Design (E-R model)**	**5L**
	2.1 Keys: Primary Key, Candidate Key, Super Key, Foreign Key, Composite Key, Alternate Key, Unique Key, Surrogate Key,Constraints in a table: Primary Key, Foreign Key, Unique Key, NOT NULL, CHECK, Entity-Relationship (ER) Model,Entities and Entity Sets, Attributes and Relationships,ER Diagrams,Key Constraints and Weak Entity Sets, Extended ER Features,Introduction to the Relational Model and Relational Schema	
Unit III	**Relational Algebra and Calculus**	**6L**

	: Introduction to Relational Algebra,Operations: Selection, Projection, Set Operations, Join Operations, Division,Tuple and Domain Relational Calculus	
MODULE-2 [12L+3T]		
Unit IV	**Structured Query Language (SQL)**	**5L**
	SQL Basics: DDL and DML, Aggregate Functions (Min(), Max(), Sum(), Avg(), Count()), Logical operators (AND, OR, NOT), Predicates (Like, Between, Alias, Distinct), Clauses(Group By, Having, Order by, top/limit), Inner Join, Natural Join, Full Outer Join, Left Outer Join, Right outer Join, Equi Join	
Unit V	**Advanced SQL**	**5L**
	: Analytical queries, Hierarchical queries, Recursive queries, Views, Cursors, Stored Procedures and Functions, Packages, Triggers, Dynamic SQL	
Unit VI	**Relational Database Design**	**5L**
	Functional Dependencies: Armstrong's Axioms, Definition, Properties (Reflexivity, Augmentation, Transitivity), Types (Trivial, Non-Trivial, Partial and Full Functional Dependency), Closure of Functional Dependencies, Normal Forms (1NF, 2NF, 3NF, BCNF), Denormalization.	
	Reference Books: **Reference Book 1:** Henry F. Korth, Abraham Silberschatz, S. Sudarshan, "Database System Concepts", Tata McGraw-Hill Education **Reference Book 2:** Raghu Ramakrishnan and Johannes Gehrke, "Database Management Systems", McGraw-Hill **Reference Book 3:** Alexis Leon, Mathews Leon, "Database Management Systems", Leon Vikas	

Course Outcomes:

On successful completion of the course, learners should be able to

CO-1: explain the concept of file;

CO-2: describe the fundamental concepts of database management systems;

CO-3: design ER-models to represent simple database application scenarios;

CO-4: convert the ER-model to relational tables, populate relational database and formulate SQL queries on data;

CO-5: explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL;

CO-6: improve the database design by normalization.

SEMESTER III

NEP-2020: Second Year UG Major BCA

Course Code: BSMAP-233 **Course Type: Practical**
Course Name: DS AND DBMS Laboratory **Credits allotted:2 credits**
Lectures allotted: 60 Lectures

Section A: Data Structures

Sr. No.	Assignment	No of Sessions
1.	Non-Recursive Sorting Techniques	01
2.	Recursive Sorting Techniques	01
3.	Searching Techniques	02
4.	Linked List	04
5.	Stack	01
6.	Queue	02
7.	Binary Search Tree (Dynamic)	02
8.	Graph	02
	Total 15	

Section B: DBMS

Sr. No.	Assignment	No of Sessions
1.	Using PostgreSQL (demo of PostgreSQL)	01
2.	Data Definition queries (Create with constraints,Alter,Drop)	02
3.	SQL DML Select queries	02
4.	Queries using joins	02
5.	Aggregate Functions and Group by and Having Clauses	02
6.	Views Creation , Stored Functions	02
7.	Cursors (Simple Cursor, Parameterize Cursor)	02
8.	Triggers	02
	Total 15	

SEMESTER III

NEP-2020: Second Year UG Major BCA

Course Code: BSVST-231 **Course Type: Theory**
Course Name: Computer Networks **Credits allotted:2**
Lectures allotted: 30 Lectures

Chapter No	Name of the Chapter	Lectures Assigned
1	Introduction to Data Communications and Computer Networks	4L
2	Network Models	5L
3	Physical Layer	6L
4	Data Link Layer	7L
5	Network Layer	8L

		Course Contents	
	Unit I	**Introduction to Data Communications and Computer Networks**	**[4L]**
		1.1 Data communications, Characteristics of Data Communication 1.2 Components of Data communication 1.3 Data Representation – Text, Numbers, Images, Audio, Video 1.4 Types of Data flow – Simplex, Half Duplex, Full Duplex 1.5 Computer Networks applications –Business Application, Home Application, Mobile User 1.6 Broadcast and point-to-point networks 1.7 Network Topologies - Bus, Star, Ring, Mesh 1.8 Network Types- LAN, MAN, WAN, PAN, Wireless Networks, Home Networks, internetworks 9 Protocols and standards	
	Unit II	**Network Models**	**[5L]**
		. OSI Model – layered architecture, Peer-to-peer processes, Encapsulation 2 TCP/IP Model – layers and Protocol Suite 3 Addressing- Physical, Logical, Port addresses, Specific addresses	
	Unit III	**Physical Layer**	**[6L]**
		Analog and Digital data, Analog and Digital signals, Digital Signals-Bit rate, Bit length 2 Baseband Transmission, Broadband Transmission 3 Performance of the Network Bandwidth, Throughput, Latency (Delay) 4 Line Coding Characteristics 5 Transmission Modes, Parallel Transmission and Serial Transmission– Asynchronous and Synchronous and Isochronous 6 Multiplexing FDM and TDM 7 Switching-Circuit Switching, Message Switching and Packet Switching.	
Unit IV		**Data Link Layer**	**[7L]**
		Framing – Concept, Methods – Character Count, Flag bytes with Byte Stuffing, Starting & ending Flags with Bit Stuffing 2 Elementary data link protocols - Simplex stop & wait protocol, PPP 3 Random Access Protocols - ALOHA, CSMA/CD, CSMA/CA 4 Controlled Access - Reservation, Polling and Token Passing 5 Channelization – Definitions – FDMA, TDMA and CDMA	
Unit V		**Network Layer**	**[8L]**
		IPv4 Addresses: Address space, Notation, Sub netting, Super netting 2 IPv4: Datagram, Fragmentation, checksum, options 3 IPv6 Addresses: Structure, address space 4 IPv6: Packet format, Extension headers	

Reference Books:

Computer Networks-Andrew S. Tanenbaum, 5th Edition, Pearson Education
Data Communication and Networking- Behrouz Fourouzan, 5th Edition, McGraw Hill Pvt. Ltd.

Course Outcomes:

CO1.: Have a good understanding of the OSI and TCP/IP Reference Models and in particular have a good knowledge of Layers.

CO2. :Understand the working of various protocols.

CO3: Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies

SEMESTER III

NEP-2020: Second Year UG Major BCA

Course Code: BSIKT-231 **Course Type: Theory**
Course Name: Software Engineering **Credits allotted:2**
Lectures allotted: 30 Lectures

Chapter No	Name of the Chapter	Lectures Assigned
1	Introduction to Software Agile software development	7L
2	Software Requirements Analysis	8L
3	Design and Testing Strategies	7L
4	Software Management and Maintenance	8L

	Course Contents	
Unit I	**Introduction to Software Agile software development**	**[7L]**
	The evolving role of software, changing nature of software, layered technology, a process framework, Process models: The waterfall model, incremental process models, evolutionary process models, the unified process. **Agile software development**: Agility Principles, Agile methods, Plan-driven and agile development, Extreme programming, Scrum, A Tool Set for the Agile Process.	
Unit II	**Software Requirements Analysis**	**[8L]**
	Software Requirements Engineering: Functional and non-functional requirements, the software requirements document, Requirements specification, Requirements engineering processes, Requirements elicitation and analysis, Requirements validation, Requirements management. **Risk management**: Reactive Vs proactive risk strategies, software risks, risk identification, risk projection, risk refinement, RMMM, RMMM plan. **Project planning**- Software pricing, Plan-driven development, Project scheduling, Agile planning, Estimation techniques.	
Unit III	**Design and Testing Strategies**	**[7L]**
	Design: Design process and design quality, design concepts, the design model, software architecture, data design, architectural design, Basic structural modeling, class diagrams, sequence diagrams, collaboration diagrams, use case diagrams, component diagrams. **Testing Strategies**: A strategic approach to software testing, test strategies for conventional software, black-box and white-box testing, validation testing, system testing, the art of debugging. **Product metrics**: Software quality, metrics for analysis model, metrics for design model, metrics for source code, metrics for testing, metrics for maintenance.	
Unit IV	**Software Management and Maintenance**	**[8L]**
	Quality Management: Quality concepts, software quality assurance, software reviews, formal technical reviews, statistical software quality assurance, software reliability. **Release Management**: Release planning, development and build plans, release strategies, risk management, and post-deployment monitoring.	

	Product sustenance: Maintenance, updates, End of life, migration strategies.	

Reference Books:

1. Stephen Schach, Software Engineering 7th ed, McGraw-Hill, 2007
2. Software Engineering: Principles and Practice Hans van Vliet

Course Outcomes:

CO1: To Acquire a comprehensive understanding of the software development lifecycle and its application in contemporary software engineering practices.

CO2: To Develop proficiency in project management methodologies and strategic decision-making for successful software project execution.

CO3: To Master the art of software design, development, and testing to produce robust and efficient software solutions.

Semester III

Communication Systems

Course code: BSMIT-231 **No. of Credits: 2**

Unit No.	Title and Contents
Module 1	
1	**Introduction to Electronic Communication (9)** Introduction to Communication, Elements of Electronic Communication system. Types of communication: simplex, half duplex, full duplex, baseband and broadband. **Electromagnetic spectrum**: Frequency, Amplitude, Noise, Signal and channel bandwidth. Serial and parallel communication, Types of Serial communication: synchronous, synchronous. **Information Theory**: rate of information (data rate, baud rate), channel capacity, Signal to noise ratio, Noise Figure, Nyquist theorem, Shannon theorem. Introduction and necessity of **Error handling codes**: Hamming code (in detail), CRC. **Antenna**: Introduction, Need, working Principle, Parameters of antenna: Gain, Directivity, Radiation pattern, Beam width, Bandwidth, front to back ratio (FBR).
2	**Modulation and Demodulation (9)** Introduction to concepts of modulation and demodulation. Need of Modulation, Modulation techniques: Analog modulation: Amplitude, Frequency and Phase modulation, Equation of AM and FM Modulated wave, modulation index and frequency spectrum, working of transistorized amplitude modulator and diode demodulator. (Phase and Frequency modulation circuits are not expected). Pulse Modulation, Pulse Amplitude Modulation (PAM), PWM, PPM (Concepts only). FSK, QPSK, QAM. Digital Modulation techniques: Pulse Code Modulation (PCM), delta modulation.
Module 2	
3	**Multiplexing, Multiple Access System and Spread Spectrum (7)** Introduction to Multiplexing Principles, Concept of Time division multiplexing and Code division multiplexing. Introduction to multiple access and corresponding access types: FDMA, TDMA, CDMA. Concept and types of Spread Spectrum techniques: Frequency hopping Spread Spectrum, Direct Sequence Spread Spectrum.
4	**Wireless Communication Systems [5]** Introduction to wireless communication system, Need of wireless communication systems. Introduction to mobile communication, Cellular concept, Working of GSM, Handover, Introduction to GPRS. Introduction to RFID, ZigBee, Bluetooth and Wi-Fi (Comparison Based on range, data rate, frequency, Power).
Text and Reference Books:	

1	**Communication Electronics: Principles and Applications**, by Frenzel, 5th edition, Tata McGraw Hill Publication.
2	**Electronic Communication Systems,** by George Kennedy, Bernard Davis, 5th Edition (2008), McGraw-Hill Education.
3	**Data Communication and Networking**, Forouzan, 5th edition, Mc Graw Hill publication.

Course Outcomes (COs) On completion of the course, the students will be able to:	
CO1:	**Demonstrate** of Electronic Communication Systems.
CO2:	**Apply** Information Theory to Communication Systems.
CO3:	**Analyze** Modulation Systems.
CO4:	**Implement and Compare** Multiplexing Techniques.
CO5:	**Understand** Wireless Communication Technologies.
CO6:	**Demonstrate** Modern Communication Systems and Applications.

S. Y. B. C.A. Semester III

Electronics Lab-3

Course Code: BSMIP-232 **Number of Credits : 02**

Sr. No.	Title of Experiment/ Practical
Total 10 experiments should be performed by the student.	
1	Study of Radiation Pattern of an Antenna.
2	Study the generation and detection of amplitude-modulated (AM) signals.
3	Study the generation of frequency-modulated (FM) signals.
4	Generate and analyze a pulse amplitude modulated (PAM) signal.
5	Study the generation of ASK signals.
6	Study the generation of FSK signals.
7	Implement and analyze 3 or 4 bit pulse code modulation.
8	Study of Sampling theorem.
9	Error Detection and Correction using Hamming code.
10	Study the principles of Time Division Multiplexing
11	Understand the concept of Code Division Multiplexing and its application.
12	To study the PN sequence generator.
13	Report writing on Wireless technologies like RFID, Zigbee, Bluetooth, and Wi-Fi.
14	Study of Frequency Division Multiplexing.

Course Outcomes (COs): On completion of the course, the students will be able to:	
CO1	Recognize need of various circuit elements in analogue and digital communication systems.
CO2	Acquire skills of studying and analyzing the responses of electronic communication circuits.
CO3	Analyze observations of each experiment based on the aim and objectives of an experiment.
CO4	Evaluate observed outputs with expected theoretical outputs.
CO5	Discuss the need and requirement of electronic communication systems in daily life.
CO6	Acquire the skill of design and build his /her simple circuit ideas

P.D.E.A's

Prof. Ramkrishna More Art's Commerce and Science College, Akurdi

IQAC

NEP and Autonomy Implementation

Date: 08/01/2025

Community Engagement Project Guidelines

Part-I: Government of Maharashtra Guidelines

Ref: https://dhepune.gov.in/wp-content/uploads/2017/01/RPT-20221020-Dr-R-D-Kulkarni-Committee-Report-1.pdf (Kulkarni Committee report 04-11-2022)

Community Engagement and Field Projects

The field-based learning/project should attempt to provide opportunities for students to understand the different socio-economic contexts. It should aim at giving students exposure to development-related issues in rural and urban settings. It will provide opportunities for students to observe situation in rural and urban contexts, and to observe and study actual field situations regarding issues related to socio-economic development. Students should be given opportunities to gain a first-hand understanding of the policies, regulations, organizational structures, processes, and programmes that guide the development process. They should have opportunity to gain an understanding of the complex socio-economic problems in the community, and innovative practices required to generate solutions to the identified problems.

The curricular component of 'community engagement and service' seeks to expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems. This component will include participation in activities related to National Service Scheme (NCC), National Cadet Corps (NCC), adult education/literacy initiatives and mentoring school students.

A minimum of 4-6 weeks of summer work, either on university campus in activities related to preservation of environment/biodiversity or community-based work in the neighboring community (through NSS unit) or field-level work with a recognized NGO or regional case studies programme at Villages may be undertaken as a part of Field projects.

As per UGC guidelines, Regional Case Study Course or Social Entrepreneurship Course, with 02 Credits, can be floated an optional mode or as add-on-credit with total duration of 30 hours. At least 50% of the course is to be done compulsorily in the field for all students.

c) **Study Tours:**

The NEP 2020 (Section 22.12.) recognizes that the knowledge of the rich diversity of India should be imbibed first hand by learners. This would mean including simple activities, like touring by students to different parts of the country, which will not only give a boost to tourism but will also lead to an understanding and appreciation of diversity, culture, traditions and knowledge of different parts of India. HEIs can plan study tours under 'Ek Bharat Shrestha Bharat' concept and send students to visit various important destinations and study their history, scientific contributions, traditions, indigenous literature and knowledge, etc., as a part of augmenting their knowledge about our country.

CEP-241: Community Engagement Project

Community Engagement is…the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people. It is a powerful vehicle for bringing about environmental and behavioural changes that will improve the health of the community and its members It often involves partnerships and coalitions that help mobilize resources and influence systems, change relationships among partners, and serve as catalysts for changing policies, programs, and practices.

At its most basic level, community engagement is striving towards improving the quality of life in a community through both political and non-political means. Community engagement is also commonly referred to as civic engagement or public participation, and all terms reference a desire to make a positive difference in one's community that manifests itself through action, combining knowledge, skills, values, and motivation.

The answer to "what is community engagement?" includes activism, volunteer work, such as community gardening, tutoring, , environment protection, socio-economic survey, . There are virtually limitless forms of community engagement. Some of the different forms of community engagement include:

- Maintaining a community garden
- Survey of peoples on their views on donating blood, promoting them for blood donation, etc.
- Helping to local farmers a) to set vermiculture b) organic farming c) water management
- Survey on waste generated in housing society and advocating to society for waste management.
- Psychological health survey of a) Primary school students b) School students c) House women's d) working women's, etc. and its analysis.
- Studding cultural, economic, regional diversity in housing society and its impact on social behaviour in society.
- Food quality survey in particular category of peoples (slum area, economically backward peoples, etc) its analysis and feedback.
- Nutritional Survey in society and its analysis.
- Water quality survey in a village and its analysis.
- Electricity utilization survey, its analysis and majors to minimize its utilization.
- Mobile screen time survey and analysis and majors to minimize mobile screen time.
- Survey on mobile addiction in school, college students and majors to minimize it.
- Survey on secure use of money transfer apps, e-purchase, e-banking, analysing problems of peoples and solution on it.
- Survey on health of girls in school and colleges, its analysis and feedback.
- Survey on gender sensitization, gender equality, its analysis and feedback.
- Survey on helpless peoples for their health, shelter, food, etc. problems, it analysis and feedback.
- Survey on awareness of college students of backward classes on awareness of

government scheme for then, its analysis and feedback.

GUIDELINE TO CARRY OUT COMMUNITY ENGAGEMENT PROJECT WORK

1. **Duration of Project work: -** One semester, minimum 60 hours field and laboratory work. At least 1 sessions of 4 hours per week should be allotted a students for 15 weeks.
2. Department should allot project guide (mentor) to each student. CEP can be assigned to individual student or in a group to 2 to 4 students.
3. **Choice of Research Problem and Workout:** Student/s should select appropriate problem for the community engagement project with the help of his/their mentor. Project problem should be related to the major subject or it may be inter-dispensary. Outline should be prepared by student with the help of mentor to perform and complete community engagement project within stipulated time.
4. **Type of work expected**: a) Selection of topic b) Preparation of background for project work, c) preparation of questionnaire for survey d) selection of area / category of people / places / for survey e) Collection of feedback of peoples through questionnaire d) Analysis feedback of peoples e) Identification of problems and its severe ness f) Your solution on problem and feed to peoples. g) Compiling project

4. Internal Evaluation and Schedule for Submission of Project Work:

a. Field work and related laboratory work must be completed by a student within 12 weeks from the commencement of the IIIrd semester.

b. Internal evaluation will be performed by mentor and one internal examiner when project is near to completion (10th week of semester).

c. Hard copy of the project work (two copies) should be submitted to department at the end of semester (15th week after commencement of IIIrd semester).

Format for submission of project report-

The hard copy of project should contain about 25-30 pages (*A4 size paper, 1 inch margin from all sides, font - Times New Roman, Font size – 12 pt, line spacing 1.5*). Should be divided into the following parts:

a. Tittle page
b. Certificate of completion of Project Work from mentor and HOD.
c. Declaration by candidate regarding plagiarism
d. Index
e. Abstract of the project
f. **Chapter-1:** Introduction to problem (introduction, signification of problems selected, aims and objectives) **(5 to 6 pages)**
g. **Chapter-2:** Review of Literature (Related Research Problem) **(5-6 pages)**
h. **Chapter-3:** Material and Methods/Methodology/Experimental **(5-7 pages)**
i. **Chapter-4:** Data analysis and Interpretation of data **(8 – 10 pages)**

k. **Chapter-5:** Feed back given to peoples / society /government agency / NGO, etc and Conclusions **(1-2 pages).**

i. Bibliography / References / webliography

Evaluation of Project

1) Certified Project Report	10 marks
2) Presentation	15 Marks
3) Viva Voce on Project	10 Marks

NEP Coordinator

1. Arts :

2. Commerce :

3. Science :

4. Inter-disciplinary :

Deans

Principal / Chairman Academic Council

Ability Enhancement Course, Semester-III,

ENAET-231: English Communication and Soft Skills-I; 2 Credits, 30 L

Unit-1: Defining Soft Skills [10 L]

i. Introduction to soft skills
ii. Soft skills and hards skills
iii. Enhancing soft skills
iv. Significance of soft skills in today's globalized world

Unit-2: Motivation, Goal Setting and Self-Esteem [10 L]

i. What is motivation?
ii. Importance of goal setting
iii. What is self-esteem?
iv. The power of positive thinking

Unit-3: Time Management [10 L]

i. Importance of time management
ii. Avoiding procrastination
iii. Developing priority-management skills
iv. Strategies for managing time

Course Outcome- At the end of course the students will be able to -

CO-1: Define soft skills.
CO-2: Distinguish between soft skills and hard skills.
CO-3: Define motivation and understand the importance of goal setting.
CO-4: Analyse the concept of self-esteem.
CO-5: Examine the power of positive thinking.
CO-6: Develop strategies for managing time.
CO-7: Relate soft skills to real life.

Human Rights: An Introduction (CCHRT-231)

Title of the Course	Human Rights: An Introduction	**Number of Credits**
Course Code	**CCHRT-231**	**02**
Course Outcomes (COs): On completion of the course, the students will be able to:		
CO1	Understand the historical development and philosophical foundations of human rights.	
CO2	Identify the contemporary human rights issues globally and locally.	
CO3	Demonstrate critical thinking skills by evaluating different perspectives and arguments related to human rights, including ethical, legal, and cultural dimensions.	

CO4	Apply human rights principles to real-world scenarios, proposing solutions to human rights violations through case studies and problem-based learning activities.
CO5	Cultivate a heightened awareness and empathy for individuals and communities affected by human rights abuses, fostering a commitment to social justice and human dignity in their personal and professional lives.
CO6	Develop skills in advocacy and effective communication, preparing them to engage in human rights promotion and protection efforts through various mediums such as writing, presentations, and social media.

Unit No.	Title of Unit and Contents	No. of Lectures
I	**Basic Concept** a) Human Values- Dignity , Liberty, Equality , Justice, Unity in Diversity, Ethics and Morals b) Meaning and significance of Human Rights Education	08
II	**Perspectives of Rights and Duties** a) Rights: Inherent-Inalienable-Universal- Individual and Groups b) Nature and concept of Duties c) Interrelationship of Rights and Duties	07
III	**Introduction to Terminology of Various Legal Instruments** a) Meaning of Legal Instrument- Binding Nature b) Types of Instruments: Covenant-Charter-Declaration-Treaty-Convention-Protocol- Executive Orders and Statutes	08
IV	**United Nations And Human Rights** a. Brief History of Human Rights- International and National Perspectives b. Provision of the charters of United Nations c. Universal Declaration of Human Rights- Significance-Preamble	07

References:

1. Donnelly, Jack. *Universal Human Rights in Theory and Practice*. Cornell University Press, 2013.

2. Nickel, James W. *Making Sense of Human Rights*. Wiley-Blackwell, 2007.

3. Clapham, Andrew. *Human Rights: A Very Short Introduction*. Oxford University Press, 2007.

4. Freeman, Michael. *Human Rights: An Interdisciplinary Approach*. Polity Press, 2017.

5. Ishay, Micheline R. *The History of Human Rights: From Ancient Times to the Globalization Era*. University of California Press, 2008.

6. Mertus, Julie A. *The United Nations and Human Rights: A Guide for a New Era*. Routledge, 2005.

7. Hunt, Lynn. *Inventing Human Rights: A History*. W.W. Norton & Company, 2008.

8. Goodhart, Michael, editor. *Human Rights: Politics and Practice*. Oxford University Press, 2013.

9. Moyn, Samuel. *The Last Utopia: Human Rights in History*. Harvard University Press, 2012.

10. Steiner, Henry J., Philip Alston, and Ryan Goodman. *International Human Rights in Context: Law, Politics, Morals*. Oxford University Press, 2007.

अ.न.	**CCHRT-231:** मानवी हक्क : परिचय (क्रेडिट: 2, 30 L)	
I	**मूलभूत संकल्पना** अ) मानवी मूल्ये- प्रतिष्ठा, स्वातंत्र्य, समानता, न्याय, विविधतेतील एकता, नैतिकता आणि नैतिकता ब) मानवी हक्क शिक्षणाचा अर्थ आणि महत्त्व	०८
II	**अधिकार आणि कर्तव्यांचा दृष्टीकोन** अ) हक्क: अंतर्निहित-अविभाज्य-सार्वत्रिक-वैयक्तिक आणि गट ब) कर्तव्याचे स्वरूप आणि संकल्पना क) हक्क आणि कर्तव्यांचा परस्परसंबंध	०७
III	**विविध कायदेशीर साधनांच्या शब्दावलीचा परिचय** अ) कायदेशीर साधनाचा अर्थ- बंधनकारक निसर्ग ब) साधनांचे प्रकार: करार-सनद-घोषणा-करार-कन्व्हेन्शन-प्रोटोकॉल- कार्यकारी आदेश आणि कायदे	०८
IV	**संयुक्त राष्ट्र आणि मानवाधिकार** अ) मानवी हक्कांचा संक्षिप्त इतिहास- आंतरराष्ट्रीय आणि राष्ट्रीय दृष्टीकोन ब) संयुक्त राष्ट्रांच्या चार्टरची तरतूद क) मानवी हक्कांची सार्वत्रिक घोषणा- महत्त्व- प्रस्तावना	०७

SY_BCA(Under AICTE) OE/GE 2024 Semester –III
Other than BCA Students

SEMESTER III

NEP-2020: Second Year UG Major BCA(Science) GE/OE

Course Code: BSGET-231 **Course Type: Theory**

Course Name: Cloud Computing **Credits allotted:2 credits**

Lectures allotted: 30 Lectures

Chapter No	Name of the Chapter	Lectures Assigned
1	Introduction To cloud Computing	6L
2	Abstraction And Virtualization	9L
3	Programming Environment	7L
4	Deploying Applications and Cloud Services	8L

	Course Contents	
Unit I	**Introduction To cloud Computing**	**[6L]**
	1.1.Over view, Layers and Types of Cloud 1.2.Desired Features of a cloud 1.3.Benefits and Disadvantages of Cloud Computing 1.4.Cloud Infrastructure Management	
Unit II	Abstraction And Virtualization	**[9L]**

		2.1 Using Virtualization Technology 2.2 Load Balancing and Virtualization-the Google Cloud 2.3 Understanding Hypervisors-Virtual Machine Types	
	Unit III	Programming Environment	**[7L]**
		3.1 Features of Cloud and Grid Platforms 3.2 Programming Support of Google App Engine 3.3 Programming on Amazon AWS	
Unit IV		Deploying Applications and Cloud Services	**[8 L]**
		4.1 Moving Application to Cloud 4.2 Microsoft Cloud Services 4.3 Google Cloud Applications 4.4Amazon Cloud Services 4.5Cloud Applications	

Reference Books:

1) Cloud Computing: Principles and Paradigms, Editors, RajkumarBuyya, James Broberg, Andrzej M. Goscinski, Wiley,2011.

2) Enterprise Cloud Computing - Technology, Architecture, Applications, Gautam Shroff, Cambridge University Press, 2010.

3) Cloud Computing Bible, Barrie Sosinsky, Wiley-India, 2010.

4) Cloud Security: A Comprehensive Guide to Secure Cloud Computing, Ronald L. Krutz, Russell Dean Vines, Wiley- India,2010.

Course Outcomes:
After studying this course, students will able to.

CO1 : Compare and contrast various cloud services
CO2 : Explain the core issues in cloud computing such as security, privacy, and interoperability.
CO3: Choose the appropriate technologies, algorithms, and approaches for the given application.

SEMESTER IV

SEMESTER IV	
NEP-2020: Second Year UG BCA	
Course Code: BSMAT-241	Course Type: Theory
Course Name: Design and Analysis of Algorithms	
Lectures allotted: 30 Lectures	Credits allotted: 2 credits

Chapter No	Name of the Chapter	Lectures Assigned
1	Fundamentals of Algorithms and mathematics	2L
2	Analysis of Algorithm	8L
3	Divide and conquer design strategy	5L
4	Greedy Method	5L
5	Dynamic programming	4L
6	Graph Algorithms	4L
7	Problem classification	2L

MODULE-1 [12L+3T]		
	Course Contents	
Unit I	Fundamentals of Algorithms and mathematics	[2L]

	1.1 Problem, algorithm definitions 1.2 Mathematics for algorithmic 1.3 Sets 1.4 Functions and relations 1.5 Combinations 1.6 Vectors and matrices 1.7 Linear inequalities and linear equations	
Unit II	**Analysis of Algorithm**	**[8L]**
	2.1 Algorithm 2.2 Performance Analysis - space complexity, time complexity, worst case – best case – average case complexity, 2.3 Asymptotic notations 2.4 Sorting algorithms (Bubble sort , insertion sort, heap sort) 2.5 Sorting in linear time (Counting , radix and Bucket Sort) 2.6 Searching algorithms 2.7 Recursive algorithms (Tower of Hanoi , Permutations)	
MODULE-2 [12L+3T]		
Unit III	**Divide and conquer design strategy**	**[5L]**
	3.1 Control abstraction 3.4 Recurrence and different methods to solve recurrence 3.5 Binary search 3.6 Max-Min problem 3.7 Merge sort 3.8 Quick sort	
Unit IV	**Greedy Method**	**[5L]**
	4.1 General strategy 4.2 Knapsack problem 4.3 Job sequencing with deadlines, 4.4 Minimum-cost spanning trees, Kruskal and Prim’s algorithm 4.5 Optimal storage on tapes 4.6 Optimal merge patterns	
Unit V	**Dynamic programming**	**[4L]**
	5.1 General Strategy 5.2 The Principle of Optimality 5.3 Matrix chain multiplication 5.4 Longest common subsequence 5.6 String editing 5.7 0/1 knapsack problem, 5.8 Traveling salesperson problem	
Unit VI	**Graph Algorithms**	**[4L]**

	6.1 Introduction – Basic definitions of graph 6.2 Graph Traversals- BFS, DFs, classification of edges 6.3 Topological sort 6.4 Strongly connected components 6.5 Single source shortest paths- Dijkstra's algorithm	
Unit VII	**Problem classification**	**[2L]**
	7.1 Nondeterministic algorithm 7.2 The class of P, NP, NP-hard and NP- Complete problems 7.3 Significance of Cook's theorem	

Course Outcomes:

After studying this course, students will be able to.

CO1: Analyze the time and space complexity of algorithms using asymptotic notations and worst, best, and average case analysis.

CO2: Implement and compare different sorting algorithms, including bubble sort, insertion sort, heap sort, counting sort, radix sort, and bucket sort.

CO3: Design and analyze divide and conquer algorithms, such as merge sort, quicksort, binary search, and solving max-min problems.

CO4: Gain proficiency in implementing and analyzing sorting, searching, and graph algorithms.

CO5: Apply the greedy method to solve problems like the knapsack problem, job sequencing with deadlines, minimum-cost spanning trees, optimal storage on tapes, and optimal merge patterns.

Reference Books:

1. Computer Algorithms, Ellis Horowitz, Sartaj Sahni & Sanguthevar Rajasekaran, Galgotia
2. Introduction to Algorithms, Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein, PHI.
3. The Design and Analysis of Computer Algorithms, A. Aho, J. Hopcroft, & J. Ullman, Addison Wesley, 1974
4. The Art of Computer Programming (3 vols., various editions, 1973-81) Donald Knuth,Addison Wesley
5. Fundamental of Algorithms, Gills Brassard, Paul Bratley, PHI.
6. Introduction to Design and Analysis of Algorithms, Anany Levitin, Pearson.
7. Foundations of Algorithms, Shailesh R Sathe, Penram
8. Design and Analysis of Algorithms, S. Sridhar, Oxford University press, 2014.
9. http://www.personal.kent.edu/~rmuhamma/Algorithms/algorithm.html
10. https://nptel.ac.in/courses/106106131/
11. http://openclassroom.stanford.edu

SEMESTER
IV

NEP-2020: Second Year UG BCA

Course Code: BSMAT-242 **Course Type: Theory**

Course Name: Basics of Data Analytics using spreadsheet

Lectures allotted: 30 Lectures **Credits allotted: 2 credits**

Chapter No	Name of the Chapter	Lectures Assigned
1	Introduction to Data analytics	8L
2	Big Data	7L
3	Data Visualization	7L
4	Data, Ethics, and Industry: Case Studies	8L

	MODULE-1 [12L+3T]	
	Course Contents	
Unit I	**Introduction to Data analytics**	**[8L]**
	1.1 Understanding data and its types (structured, unstructured, semi-structured) 1.2 Types of Data attributes 1.3 What is Data Analytics 1.4Types of data Analytics 1.5 Importance of Data Analytics 1.6 Data Analytics Lifecycle 1.7 Need of Data Analytics 1.8 Applications of Data Analytics	
Unit II	**BIG DATA**	**[7L]**
	2.1 Introduction to Big Data 2.2 5 V's of Big Data 2.3 Impact of Big Data on DBMS 2.4 Big Data Platforms 2.5 Introduction to HADOOP 2.6 Big Data Infrastructure 2.7 Use of Big Data in Data Analytics 2.8 Challenges with Big Data	
	MODULE-2 [12L+3T]	
Unit III	**DATA VISUALIZATION**	**[7L]**
	3.1 Introduction to Data visualization 3.2 Principles of Data visualization 3.3 Types of Data visualization 3.4 Process and Applications of Data visualization 3.5 Choosing the right visualization 3.6 Dashboard development tools 3.7 Creating an interactive dashboard with slicers and timeline 3.8 Creating and customizing PivotTables and Pivot Charts	
Unit IV	**DATA, ETHICS, AND INDUSTRY: CASE STUDIES**	**[8L]**

	4.1 Data Collection Methods 4.2 Different Data Sources & format 4.3 Data Cleaning and Transformation 4.5 Handling Missing Data and Outliers 4.6 Ethical considerations in data analytics 4.7 Real-world Applications of Data Analytics 4.8 Industry-specific applications (finance, marketing, operations) - Case Study **Note**: Case study is for discussion not to be considered for evaluation.	

Course Outcomes:

After studying this course, students will be able to.
CO1: Identify the fundamental concepts of data analytics
CO2: Apply data analysis techniques for applications handling large data
CO3: Explain the design process to develop visualization methods and visualization systems, and methods for their evaluation
CO4: Visualize and present the inference using various tools
CO5: Analyze through the ethics surrounding privacy, data sharing and algorithmic decision-making

Reference Books:

- Too Big to Ignore: The Business Case for Big Data - *By Phil Simon*
- Creating Value with Social Media Analytics: Managing, Aligning, and Mining Social Media Text, Networks, Actions, Location, Apps, Hyperlinks, Multimedia, & Search Engines Data - *By Gohar F. Khan*

SEMESTER
IV

NEP-2020: Second Year UG Major BCA
Course Code: BSMAP-243 **Course Type: Practical**
Course Name: Basics of Data Analytics using spreadsheet Laboratory
Credits allotted:2 credits **Lectures allotted: 60 Lectures**

Sr. No.	Assignment	No of Sessions
1	Introduction to Excel and Basic Functions	2
2	Descriptive Statistics Using Excel	3
3	Advanced Spreadsheet Functions	3
4	Data Visualization Techniques	3
5	Dashboard Creation	2
6	Data Importing and Pre-processing	2
	Total 15	

Course Outcome
After studying this course, student will able to –

CO-1: understand basic functions using Excel;
CO-2: illustrate statistics functions using Excel;
CO-3: Develop proficiency in using spreadsheet software for data manipulation and analysis;
CO-4: visualize data by applying different techniques;
CO-5: implement dashboard creation by different dashboard elements;
CO-6: analyze data by applying Preprocessing methods

SEMESTE R IV

NEP-2020: Second Year UG Major BCA
Course Code: BSVSP-241 **Course Type: Practical**
Course Name: Operating Systems Concepts Laboratory
Credits allotted:2 credits **Lectures allotted: 60 Lectures**

Sr. No.	Assignment	No of Sessions
1	Linux Commands-I (Basic Linux shell commands)	2
2	Linux Commands-II (Redirection and simple filters)	2
3	Linux Commands-III (File and Networking Security commands)	2
4	Vi Editor Commands	2
5	Shell Programming – I (Basics of shell Programming)	2
6	Shell Programming – II (Conditional Statement)	2
7	Shell Programming – III (Looping control statement)	3
	Total 15	

Course Outcome
After studying this course, student will able to –

CO-1: study different basic Linux Commands.;
CO-2: study redirection and simple filters in Linux commands;
CO-3: study File permission, Process Management, Device Configuration, Network Configuration and System Security Linux Commands**;**
CO-4: use Vi editor can benefit user in creating scripts and editing files;
CO-5: study basic commands of shell programming;
CO-6: exercise control structures and conditional statements in shell programming.

SEMESTER IV

NEP-2020: Second Year UG BCA

Course Code: BSSET-241 **Course Type: Theory**

Course Name: Probability and Statistics

Lectures allotted: 30 Lectures **Credits allotted: 2 credits**

Chapter No	Name of the Chapter	Lectures Assigned
1	Summary Statistics	7L
2	Correlation and Linear regression	8L
3	Elementary Probability Theory	7L
4	Random Variables and Standard Probability Distributions	8L

MODULE-1 [12L+3T]

	Course Contents	
Unit I	**Measures of Central Tendency and Dispersion**	**[7L]**
	Basic concepts of Statistics, qualitative and quantitative data, classification of data, construction of frequency distribution, diagrammatic representation of data. **Measures of Central Tendency**: Arithmetic mean, median and mode—their properties **Measures of Dispersion**: Range, quartile deviation, variance and standard deviation.	
Unit II	**Correlation and Linear regression**	**[08L]**
	Correlation: Definition, scatter diagram, types of correlation, measures—Karl Pearson's correlation coefficient and Spearman's rank correlation coefficient. **Regression**: Linear regression-fitting by least square method and interpretation.	

MODULE-2 [12L+3T]

Unit III	**Elementary Probability Theory**	**[7L]**
	Concepts of probability: Experiment and sample space, events and operations with events, probability of an event, basic probability rules, applications of probability rules, conditional probability.	
Unit IV	**Random Variables and Standard Probability Distributions**	**[8L]**

	Random Variables: Discrete and continuous random variable, probability distribution of a random variable, probability mass function, probability density function, expectation and variance of a random variable. **Standard Probability Distributions**: Binomial probability distribution, Poisson probability distribution, Normal probability distribution.	

Course Outcomes:

After completion of this course, the student will be able to

CO1: handle randomness scientifically using theory of probability.
CO2: represent the statistical data in a systematic way and analyze it to draw meaningful information from them.
CO3: provides the students scope to apply probabilistic and statistical techniques to deal with the real-life problems.

References:

1. Fundamentals of Applied Statistics (3rd Edition), Gupta and Kapoor, S. Chand and Sons, New Delhi, 1987
2. Fundamentals of Statistics, Vol. 1, Sixth Revised Edition, Goon, A. M., Gupta, M. K. and Dasgupta, B. (1983). The World Press Pvt. Ltd., Calcutta

Text Books:

1. Manish Sharma, Amit Gupta, The Practice of Business Statistics, Khanna Book Publishing Company, 2010 (AICTE Recommended Textbook)
2.Das N. G., Statistical Methods, Combined Edition, Tata McGraw Hill, 2010.
3. Ross Sheldon M., Introduction to Probability and Statistics for Engineers and Scientists, 6th Edition, Elsevier, 2021.
4. Miller Irwin and Miller Marylees, Mathematical Statistics with Applications, Seventh Edition, Pearson Education, 2005

SEMESTER
IV

NEP-2020: Second Year UG BCA

Course Code: BSMIT-241 **Course Type: Theory**
Course Name: Microcontroller and Embedded Systems
Lectures allotted: 30 Lectures **Credits allotted: 2 credits**

Chapter No	Name of the Chapter	Lectures Assigned
1	**Basics of Microcontroller & Intel 8051 architecture**	7L
2	**Programming model of 8051**	8L
3	**Serial communication**	8L
4	**Applications of 8051 using Embedded 'C'**	7L

MODULE-1 [12L+3T]

	Course Contents	
Unit I	**Basics of Microcontroller & Intel 8051 architecture**	**[7L]**
	Introduction to microcontrollers, difference in microcontroller and microprocessor. Architecture of 8051: Internal block diagram of 8051: ALU, PC, DPTR, PSW, Latch, SFRs, General purpose registers, pin diagram and pin functions of 8051, I/O ports: Port0, Port1, Port2, and Port3. Structure, Operation and specifications of I/O Ports, Memory organization: Program and Data Memory Map, Internal RAM organization, Internal ROM. External Memory Interface. Stack, Stack Pointer and Stack operation.	
Unit II	**Programming model of 8051**	**[8L]**
	Instruction set: Instruction classification, Data Transfer, Arithmetic, Logical, Branching, Machine Control, Stack operations and Boolean operations. Addressing Modes: Immediate, register, direct, indirect and relative, Assembler directives: ORG, DB, EQU, END, CODE, DATA. Software development cycle: editor, assembler, simulator, cross-compiler, linker, compiler. 8051 Assembly language programming and C programming: arithmetic and logical programming, Looping, Counting, Time delay loop, Look-up table, Bit addressability, I/O Bit & Byte programming	
MODULE-2 [12L+3T]		
Unit III	**Serial communication**	**[8L]**
	Timers & Counters: Timers/Counters SFRs: TMOD, TCON logic diagram and its operation in various Timer modes: mode 0, mode 1 and mode 2. Programming for time delay Interrupt: Introduction to interrupt, Interrupt types Interrupt structure, SFRs - Interrupt enable register (IE) and interrupt priority register(IP). vector address, priority and operation. ISR – Interrupt Service Routine. Serial Communication: Definition, various modes Synchronous and asynchronous, baud rate for serial communication. Configuration, using SFRs - SCON, SBUFF, PCON Programming serial port without interrupt, Use of timer/counter Programming serial port with interrupt: Configuration of interrupts for serial communication,	
Unit IV	**Applications of 8051 using Embedded 'C'**	**[7L]**
	Interfacing Input Devices: Pushbutton, thumb wheel switch ADC, LM35, rain sensor. Interfacing Output Digital Devices: LED, 7-segment LED display, LCD display, DC and Stepper motor, DAC.	

Course Outcomes:

After studying this course, students will be able to.

CO1: Demonstrate the basic concepts of microcontrollers and differentiate between microcontrollers and microprocessors.

CO2: Familiarize with the 8051 instruction set, including the classification of instructions

(data transfer, arithmetic, logical, branching, machine control, etc.).
CO3: Understand the operation of timers and counters in 8051, including the programming for various timer modes (mode 0, mode 1, mode 2) and time delay generation.
CO4: Develop 8051 Assembly and 'C' programs using 8051 instruction set for embedded systems using microcontroller.
CO5: Interface various input devices (pushbutton, thumb wheel switch, LM35, rain sensor etc.) with the 8051 and develop programs for their control.
CO6: Interface various output devices (DAC, LED, LCD, SSD, stepper motor, DC motor etc.) with the 8051 and develop programs for their control.
CO7: Design and implement application circuits using the 8051..

Reference Books:

1. 8051 microcontroller and Embedded system using assembly and C:Mazidi, Mazidi and McKinley, Pearson pub.
2. The 8051 microcontroller Architecture, programming and applications:K.Uma Rao and AndhePallavi, Pearson pub

S. Y. B.C.A. Semester IV	
Electronics Lab-4	
Course Code: BSMIP-242	**Number of Credits : 02**
Sr. No.	**Title of Experiment/ Practical**
Total 10 experiments are to be performed by student. Any five experiments from each group	
Group A	
1	rite and execute programs based on Arithmetic Instructions (8/16 bit Addition, Subtraction, Multiplication, Division) in Assembly and Embedded C.
2	rite and execute programs based on Logical Instructions (AND, OR, Rotate, etc.) in Assembly and Embedded C
3	rite and execute programs based on various addressing modes and assembler directives.
4	rite and execute programs based on Branch Instructions in Assembly and Embedded C.
5	rite and execute programs based on Looping, Counting, and Indexing concept in Assembly and Embedded C.
6	rite and execute program to introduce delay (e.g.1ms Delay) using Timer/Counter in Assembly and Embedded C.
7	rite and execute programs to generate various waveforms (square, triangular, saw tooth, trapezoidal) using timers in Assembly and C.
8	rite and execute programs to turn ON/OFF LED using interrupt in Assembly and Embedded C.
9	rite and execute programs to interface 4x4 matrix keypad in Assembly and Embedded C.
Group B (Based on Embedded 'C')	
1	erfacing of thumbwheel & seven segment display to 8051 microcontroller
2	erfacing LCD to 8051Microcontroller
3	erfacing temperature sensor LM35/DHT11 and displaying temperature by configuring ADC (ADS1115).
4	ent counter using opto-coupler, seven segment LED/LCD display interface to 8051Microcontroller
5	aveform generation using DAC Interface to 8051Microcontroller
6	erface stepper motor and rotate in clockwise and anticlockwise.
7	N/OFF temperature controller using LM35/DHT11 and switching relay.
8	Traffic light controller using 8051 microcontroller.

9	Speed control of DC motor.
Course Outcomes (COs): On completion of the course, the students will be able to:	
CO1	**Familiarize** with assembler directives and syntax of embedded C programs used for 8051 Controller.
CO2	**Write programs** with data transfer, arithmetic, logical, branching, machine control, instructions of the 8051 instruction set.
CO3	Write Functions to introduce delay (e.g.1ms Delay) using Timer/Counter in Assembly and embedded C programming
CO4	**Interface** various digital input/ output devices (pushbutton, thumb wheel switch, matrix keypad, LED, LCD, SSD, stepper motor etc.) with the 8051 and develop programs for their control
CO5	**Interface** various Analogue input/ output devices (LM35, rain sensor, DAC, thumb wheel switch, LED, LCD, SSD) with the 8051 and develop programs for their control.
CO6	Analyze observations of each experiment based on the aim and objectives of an experiment.
CO7	Acquire the skill to design and build his /her simple circuit ideas

P.D.E.A's

Prof. Ramkrishna More Art's Commerce and Science College, Akurdi

IQAC

NEP and Autonomy Implementation

Date: 08/01/2025

Community Engagement Project Guidelines

Part-I: Government of Maharashtra Guidelines

Ref: https://dhepune.gov.in/wp-content/uploads/2017/01/RPT-20221020-Dr-R-D-Kulkarni-Committee-Report-1.pdf (Kulkarni Committee report 04-11-2022)

Community Engagement and Field Projects

The field-based learning/project should attempt to provide opportunities for students to understand the different socio-economic contexts. It should aim at giving students exposure to development-related issues in rural and urban settings. It will provide opportunities for students to observe situation in rural and urban contexts, and to observe and study actual field situations regarding issues related to socio-economic development. Students should be given opportunities to gain a first-hand understanding of the policies, regulations, organizational structures, processes, and programmes that guide the development process. They should have opportunity to gain an understanding of the complex socio-economic problems in the community, and innovative practices required to generate solutions to the identified problems.

The curricular component of 'community engagement and service' seeks to expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems. This component will include participation in activities related to National Service Scheme (NCC), National Cadet Corps (NCC), adult education/literacy initiatives and mentoring school students.

A minimum of 4-6 weeks of summer work, either on university campus in activities related to preservation of environment/biodiversity or community-based work in the neighboring community (through NSS unit) or field-level work with a recognized NGO or regional case studies programme at Villages may be undertaken as a part of Field projects.

As per UGC guidelines, Regional Case Study Course or Social Entrepreneurship Course, with 02 Credits, can be floated an optional mode or as add-on-credit with total duration of 30 hours. At least 50% of the course is to be done compulsorily in the field for all students.

c) **Study Tours:**

The NEP 2020 (Section 22.12.) recognizes that the knowledge of the rich diversity of India should be imbibed first hand by learners. This would mean including simple activities, like touring by students to different parts of the country, which will not only give a boost to tourism but will also lead to an understanding and appreciation of diversity, culture, traditions and knowledge of different parts of India. HEIs can plan study tours under 'Ek Bharat Shrestha Bharat' concept and send students to visit various important destinations and study their history, scientific contributions, traditions, indigenous literature and knowledge, etc., as a part of augmenting their knowledge about our country.

CEP-241: Community Engagement Project

Community Engagement is…the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people. It is a powerful vehicle for bringing about environmental and behavioural changes that will improve the health of the community and its members It often involves partnerships and coalitions that help mobilize resources and influence systems, change relationships among partners, and serve as catalysts for changing policies, programs, and practices.

At its most basic level, community engagement is striving towards improving the quality of life in a community through both political and non-political means. Community engagement is also commonly referred to as civic engagement or public participation, and all terms reference a desire to make a positive difference in one's community that manifests itself through action, combining knowledge, skills, values, and motivation.

The answer to "what is community engagement?" includes activism, volunteer work, such as community gardening, tutoring, , environment protection, socio-economic survey, . There are virtually limitless forms of community engagement. Some of the different forms of community engagement include:

- Maintaining a community garden
- Survey of peoples on their views on donating blood, promoting them for blood donation, etc.
- Helping to local farmers a) to set vermiculture b) organic farming c) water management
- Survey on waste generated in housing society and advocating to society for waste management.
- Psychological health survey of a) Primary school students b) School students c) House women's d) working women's, etc. and its analysis.
- Studding cultural, economic, regional diversity in housing society and its impact on social behaviour in society.
- Food quality survey in particular category of peoples (slum area, economically backward peoples, etc) its analysis and feedback.
- Nutritional Survey in society and its analysis.
- Water quality survey in a village and its analysis.
- Electricity utilization survey, its analysis and majors to minimize its utilization.
- Mobile screen time survey and analysis and majors to minimize mobile screen time.
- Survey on mobile addiction in school, college students and majors to minimize it.
- Survey on secure use of money transfer apps, e-purchase, e-banking, analysing problems of peoples and solution on it.
- Survey on health of girls in school and colleges, its analysis and feedback.
- Survey on gender sensitization, gender equality, its analysis and feedback.
- Survey on helpless peoples for their health, shelter, food, etc. problems, it analysis and feedback.
- Survey on awareness of college students of backward classes on awareness of government scheme for then, its analysis and feedback.

GUIDELINE TO CARRY OUT COMMUNITY ENGAGEMENT PROJECT WORK

1. **Duration of Project work: -** One semester, minimum 60 hours field and laboratory work. At least 1 sessions of 4 hours per week should be allotted a students for 15 weeks.

2. Department should allot project guide (mentor) to each student. CEP can be assigned to individual student or in a group to 2 to 4 students.

3. **Choice of Research Problem and Workout:** Student/s should select appropriate problem for the community engagement project with the help of his/their mentor. Project problem should

be related to the major subject or it may be inter-dispensary. Outline should be prepared by student with the help of mentor to perform and complete community engagement project within stipulated time.

4. **Type of work expected**: a) Selection of topic b) Preparation of background for project work, c) preparation of questionnaire for survey d) selection of area / category of people / places / for survey e) Collection of feedback of peoples through questionnaire d) Analysis feedback of peoples e) Identification of problems and its severe ness f) Your solution on problem and feed to peoples. g) Compiling project

4. Internal Evaluation and Schedule for Submission of Project Work:

a. Field work and related laboratory work must be completed by a student within 12 weeks from the commencement of the IIIrd semester.

b. Internal evaluation will be performed by mentor and one internal examiner when project is near to completion (10th week of semester).

c. Hard copy of the project work (two copies) should be submitted to department at the end of semester (15th week after commencement of IIIrd semester).

Format for submission of project report-

The hard copy of project should contain about 25-30 pages (*A4 size paper, 1 inch margin from all sides, font - Times New Roman, Font size – 12 pt, line spacing 1.5*). Should be divided into the following parts:

a. Tittle page
b. Certificate of completion of Project Work from mentor and HOD.
c. Declaration by candidate regarding plagiarism
d. Index
e. Abstract of the project
f. **Chapter-1:** Introduction to problem (introduction, signification of problems selected, aims and objectives) **(5 to 6 pages)**
g. **Chapter-2:** Review of Literature (Related Research Problem) **(5-6 pages)**
h. **Chapter-3:** Material and Methods/Methodology/Experimental **(5-7 pages)**
i. **Chapter-4:** Data analysis and Interpretation of data **(8 – 10 pages)**
k. **Chapter-5:** Feed back given to peoples / society /government agency / NGO, etc and Conclusions **(1-2 pages).**
i. Bibliography / References / webliography

Evaluation of Project

1) Certified Project Report	10 marks
2) Presentation	15 Marks
3) Viva Voce on Project	10 Marks

NEP Coordinator

1. Arts :

2. Commerce :

3. Science :

4. Inter-disciplinary :

Deans

NEP-2020: Second Year UG BCA

Course Code: ENAET-241 **Course Type: Theory**

Course Name: English Communication and Soft Skills-II

Lectures allotted: 30 Lectures **Credits allotted: 2 credits**

Chapter No	Name of the Chapter	Lectures Assigned
1	**Creative Thinking and Problem Solving**	**10L**
2	**Team Building**	**10L**
3	**Leadership**	**10L**

MODULE-1

	Course Contents	
Unit I	**Creative Thinking and Problem Solving**	**[10L]**
	1. What is creative thinking? 2. Difference between critical and creative thinking 3. Importance of creative thinking in problem solving 4. Strategies for developing creative thinking for solving problems	
Unit II	**Team Building**	**[10L]**
	1. What is a team? 2. Strategies for resolving the interpersonal conflicts 3. Developing the interpersonal negotiation skills 4. Importance and significance of effective team building	

MODULE-2

Unit III	**Leadership**	**[10L]**
	1.What are leadership skills? 2.Types of leadership 3.Developing leadership skills 4.Strategies for developing leadership	

Course Outcome-

At the end of course the students will be able to -

CO-1: Distinguish between critical and creative thinking.

CO-2: Explore strategies for developing creative thinking for solving problems.

CO-3: Analyse the concept of self-esteem and apply it to real life.

CO-4: Examine the power of positive thinking.

CO-5: Develop interpersonal negotiation skills for resolving interpersonal conflicts.

CO-6: Identify different types of leadership and choose strategies for developing leadership.

CO-7: Apply soft skills to real life.

NEP-2020: Second Year UG BCA

Course Code: CCCST-241 **Course Type: Theory**

Course Name: Cyber Security

Lectures allotted: 30 Lectures **Credits allotted: 2 credits**

Chapter No	Name of the Chapter	Lectures Assigned
1	**Overview of Networking Concepts**	**7L**
2	**Information Security Concepts**	**8L**
3	**Security Threats and Vulnerabilities**	**6L**
4	**Cryptography / Encryption**	**9L**

MODULE-1 [12L+3T]

	Course Contents	
Unit I	**Overview of Networking Concepts**	**[7L]**
	1. Basics of Communication Systems 2. Transmission Media 3. Topology and Types of Networks 4. TCP/IP Protocol Stacks 5. Wireless Networks 6. The Internet	
Unit II	**Information Security Concepts**	**[8L]**
	1. Information Security Overview: Background and Current Scenario 2. Types of Attacks 3. Goals for Security 4. E-commerce Security 5. Computer Forensics 6. Steganography	

MODULE-2 [12L+3T]

Unit III	**Security Threats and Vulnerabilities**	**[6L]**
	1. Overview of Security threats 2. Weak / Strong Passwords and Password Cracking 3. Insecure Network connections 4. Malicious Code 5. Programming Bugs 6. Cyber crime and Cyber terrorism 7. Information Warfare and Surveillance	
Unit IV	**Cryptography / Encryption**	**[9L]**
	1. Introduction to Cryptography / Encryption 2. Digital Signatures 3. Public Key infrastructure 4. Applications of Cryptography 5. Tools and techniques of Cryptography	

Course Outcomes:

After studying this course, students will be able to.

CO1 : Understand the concepts of networking and it's type

CO2 : Interpret the concepts of Information Security
CO3 : Understand the concepts of Security Threats
CO4 : Describe insecure Network Connections, Cyber Crime
CO5 : Interpret the concepts of Basic Cryptography
CO6 : Define the tools and techniques of Cryptography

Reference Book:

Ref Book 1 : Computer Networks By Andrew S. Tanenbaum, 5th Edition By Pearson Education
Ref Book 2 : Network Security: A Beginner's Guide, 3rd Edition by Eric Maiwald
Ref Book 3 : Handbook of Information Security: Threats, Vulnerabilities, Prevention, Detection, and Management, Volume 3 by Hossein Bidgoli, Wiley

SY BCA (Under AICTE) OE/GE 2024 Sem-IV
Other than BCA Science

SEMESTER IV

NEP-2020: Second Year UG OPEN ELECTIVE COURSE (OE) BCA

Course Code: BSGET-241 **Course Type: Theory**
Course Name: Internet Of Things(IoT) **Credits allotted:2 credits**
Lectures allotted: 30 Lectures

Chapter No	Name of the Chapter	Lectures Assigned
1	Introduction to Embedded Systems	8L
2	Internet of Things : Concepts	7L
3	Introduction to IoT Architecture	8L
4	Introduction to IoT Protocols	4L
5	IoT Application and Security	3L

MODULE-1 [12L+3T]

	Course Contents	
Unit I	**Introduction to Embedded Systems**	**[8L]**
	• Definition, Characteristics of Embedded System, • Processor basics: General Processors in Computer Vs Embedded Processors, Micro controllers and Properties, Components of Microcontrollers • Components of Embedded Systems, Introduction to embedded processor. • System-On- Chip and its examples.	
Unit II	**Internet of Things : Concepts**	**[7 L]**

	• Concepts and Definitions of the Internet of Things (IoT) • History of IoT • Requirements • Functionalists • structure of IoT • IoT enabling technologies	
	MODULE-2 [12L+3T]	
Unit III	**Introduction to IoT Architecture**	**[8 L]**
	• IoT Architecture. • Major component of IoT(Hardware & Software)	
Unit IV	**Introduction to IoT Protocols**	**[4 L]**
	• IoT communication and networking protocols • Role of wired and wireless communication	
Unit V	**IoT Application and Security**	**[3 L]**
	• IoT services and applications. • IoT Standards, Connectivity	

TEXT BOOKS:

1. 6LoWPAN: The Wireless Embedded Internet, Zach Shelby, Carsten Bormann, Wiley
2. Internet of Things: Converging Technologies for Smart Environments and Integrated Ecosystems, Dr. Ovidiu Vermesan, Dr. Peter Friess, River Publishers
3. Interconnecting Smart Objects with IP: The Next Internet, Jean-Philippe Vasseur,
Adam Dunkels, Morgan Kuffmann
4. Internet of Things : A hands- on Approach by Arshdeep Bahga, Vijay Madisetti
5. IoT Programming: A Simple and Fast Way of Learning IOT by David Etter

REFERENCES:

1. The Internet of Things: From RFID to the Next-Generation Pervasive Networked Lu Yan, Yan Zhang, Laurence T. Yang, Huansheng Ning
2. Internet of Things (A Hands-on-Approach) , Vijay Madisetti , Arshdeep Bahga
3. Designing the Internet of Things , Adrian McEwen (Author), Hakim Cassimally
4. "Mobile Computing," Tata McGraw Hill, Asoke K Talukder and Roopa R Yavagal, 2010.
5. Computer Networks; By: Tanenbaum, Andrew S; Pearson Education Pte. Ltd., Delhi, 4th Edition

Course Outcome:

After successfully completing this course, students will be able to:

CO1 : Define the Embedded System
CO2 : understand Micro controllers
CO3 : Define the vision and introduction of IoT.
CO4 : understand IoT Architecture
CO5 : understand protocols for IoT
CO6 : explain application and Security in IoT

PDEA's
Prof. Ramkrishna More ACS College, Akurdi, Pune 44 (Autonomous)
Internal Examination March-2025 (Term-II)
Class: F.Y. B.C.A.Under AICTE

Marks: 20 **Time:** 1 Hour
Subject Code/Name: **Date:**

Q.1) Multiple Choice Questions/ Fill in the Blanks **[1M X 5 = 5 Marks]**

Q.2) State whether the following statements are true or false **[1M X 5 = 5 Marks]**

Q.3) Answer the following questions. **[1M X 10 = 10 Marks]**

Total No of Questions: 4 **Seat No**:

PDEA's, Prof. Ramkrishna More
Arts Commerce and Science College Akurdi (Autonomous), Pune, 411044

S. Y. B. C.A. Semester End Examination

NEP -2020; CBCS Pattern - 2024

Course Code and Course Name:

Instructions to the Candidate:	
1. All questions are compulsory.	**Time: 2 Hours**
2. Figures to right indicate full marks.	**Marks: 35**
3. Use of log table and scientific calculator is allowed.	**Credits: 02**

Q-1] Solve any five of the following [5 marks]

i. [CO----]
ii. [CO----]
iii. [CO----]
iv. [CO----]
v. [CO----]
vi. [CO----]
vii. [CO----]

Q-2: A] Solve any two of the following [6 marks]

i. [CO----]
ii. [CO----]
iii. [CO----]

Q-2: B] Answer any one of the following [4 marks]

i. [CO----]
ii. [CO----]

Q-3: A] Attempt any two of the following **[6 marks]**

i . [CO----]
ii. [CO----]
iii. [CO----]

Q-3: B] Answer any one of the following **[4 marks]**

i. [CO----]
ii. [CO----]

Q-4] Answer any four of the following **[10 marks]**

i. [CO----]
ii. [CO----]
iii. [CO----]
iv. [CO----]
v. [CO---

OE/GE Basket For BCA Students

Psychology F.Y GE/OE 2023 Pattern

NEP-2020: First Year UG SEM-I- OE/GE – Psychology 2023 Pattern

Course Code: PSGET-111 **Course Type:** Theory

Course Name: Personality Development-I **Credit Allotted – 2**

Lectures Allotted: 24+6 lectures

Module 1: Introduction (12+3 lectures)

1.1 Personality: Definition and Meaning

1.2 Factor Effecting on Personality development.

1.3 SWOT Analysis

1.4 Five Pillars of personality development

1.5 Assessment of personality

Module 2: Core factors of personality (12+3 lectures)

2.1 Self Esteem: Definition and Nature

2.2 Positive & Negative Self Esteem

2.3 Habits: Definition and Nature

2.4 Seven habits of highly effective people

2.5 Bad habits effect on personality development-

(Emotional immaturity, Over thinking, lack of sleep, lack of healthy food, & lack of exercise)

Reference:

1. Parulekar, A. (2003) Vyaktimatva Kase Ghadval Unmesh Prakashan.
2. Nemade, J. M. (2021) Personality Development. Prashant Publications
3. Covey, S. R. (2011) Seven habits of highly effective people Franklin Covey Company
4. Ghate, D.D. (2021) Personality Development. Vision Publications

Course Outcome

At the end of course, student will able -

CO1: To help students understand meaning of personality.

CO2: Students will be getting knowledge self-analyse process**.**

CO3: Students will be getting knowledge process of personality.

CO4: Will be get knowledge and gain insight about self.

CO5: Summarize and point out factors of habits.

CO6: Gain insight into complex and analyse the experience of self in day-to-day life.

NEP-2020: First Year UG SEM-I- OE/GE – Psychology (2023 Pattern)

Course Code: PSGET-112 **Course Type:** Theory

Course Name: Personality Development-II **Credit Allotted – 2**

Lectures Allotted: 24+6 lectures

Module 1: Personality Determinants (12+3 lectures)

1.1 Physical & Intellectual Determinant

1.2 Emotional & Social Determinant

1.3 Sex & Family Determinant

1.4 Aspiration & Achievements Determinant

1.5 Educational Determinant

Module 1: Symbol of self (12+3 lectures)

1.1 Names and Nicknames, Clothing, Speech

1.2 Age, Success, Reputation

1.3 Roger's Self-Concept: Ideal & Real

1.4 Locus of Control

1.5 Development of Self Concept

Reference:

1. Parulekar, A. (2003) Vyaktimatva Kase Ghadval Unmesh Prakashan.
2. Nemade, J. M. (2021) Personality Development. Prashant Publications.
3. Hurlok, E. B. (2004) Personality Development Tata McGraw-Hill.
4. Ghate, D.D. (2021) Personality Development. Vision Publications

Course Outcome

At the end of course, student will able -

CO-1: To help students understand Theory of personality.

CO-2: Students will be getting knowledge Characteristics of Sick & Healthy Personality**.**

CO-3: Students will be getting knowledge process of Sick & Healthy personality.

CO-4: will be get knowledge and gain insight about Coping with sickness.

CO-5: Summarize and point out Enhanced healthy Personality of personality.
CO-6: Gain insight into complex and analyse the experience of self in day-to-day life.

NEP-2020: First Year UG SEM-II -OE/GE – Psychology (2023 Pattern)

Course Code: PSGET-121 **Course Type:** Theory

Course Name: Personality Development-III **Credit Allotted – 2**
Lectures Allotted: 24+6 lectures

Module 1: Factors of personality development (12+3 lectures)

1.1 Communication

1.2 Teamwork

1.3 Time management

1.4 Decision making

1.5 Interpersonal relationships

Module 2: Factors of Ideal personality (12+3 lectures)

2.1 Assertiveness

2.2 Analysis of Strength

2.3 Emotional Awareness

2.4 Empathy of others

2.5 Good Manners and etiquette

Reference:

1. Parulekar, A. (2003) Vyaktimatva Kase Ghadval Unmesh Prakashan.
2. Nemade, J. M. (2021) Personality Development. Prashant Publications
3. Covey, S. R. (2011) Seven habits of highly effective people Franklin Covey Company

Course Outcome
At the end of course, student will able –
CO1: To help students understand Concept of role in personality development.
CO2: Students will be getting knowledge self-analyse process.
CO3: Students will be getting knowledge process of personality.
CO4: Will be get knowledge and gain insight about self.
CO5: Summarize and point out factors of habits.
CO6: Gain insight into complex and analyse the experience of self in day-to-day life.

NEP-2020: First Year UG SEM-II -OE/GE - Psychology

Course Code: PSGET-122 **Course Type:** Theory

Course Name: Personality Development-IV **Credit Allotted – 2**

Lectures Allotted: 24+6 lectures

Module 1: Sick & Healthy Personality (12+3 lectures)

1.1 Characteristics of Sick & Healthy Personality

1.2 Causes of sickness Personality

1.3 Causes of healthy Personality

1.4 Coping with sickness Personality

1.5 Enhanced healthy Personality

Module 1: Personality Theory (12+3 lectures)

2.1 Freud Personality theory: Id, Ego, Super Ego

2.2 Freud: Conscious, subconscious & unconscious mind

2.3 Freud: Defense Mechanism

2.4 Transaction Analysis: PCA ego states

2.5 Personality theory: Karl Jung & Allport's Trait Theory

Reference:

1. Parulekar, A. (2003) Vyaktimatva Kase Ghadval Unmesh Prakashan.
2. Nemade, J. M. (2021) Personality Development. Prashant Publications.
3. Hurlok, E. B. (2004) Personality Development Tata McGraw-Hill.

Course Outcome

At the end of course, student will able -

CO-1: To help students understand Theory of personality.

CO-2: Students will be getting knowledge Characteristics of Sick & Healthy Personality**.**

CO-3: Students will be getting knowledge process of Sick & Healthy personality.

CO-4: will be get knowledge and gain insight about Coping with sickness.

CO-5: Summarize and point out Enhanced healthy Personality of personality.

CO-6: Gain insight into complex and analyse the experience of self in day-to-day life.

Psychology GE/OE S.Y.2023 Pattern

Name of the Programme	**: B.A. Psychology**	**Program Code**	**: BAPSY**
Class	**: B.A. II**	**Semester**	**: III**
Course Type	**: Generic Elective**		
Course Name	**: Psychology of Health and Well-being**		
Course Code	**: PSGET-231**		
No. of hours	**: 30**		
No. of Credits	**: 02**		

Course Outcome

At the end of course, student will able -

CO1: To understand the basics of health and well-being.
CO2: To understand the basics of stress and coping.
CO3: To manage stress through coping strategies.
CO4: To understand importance of health management
CO5: To develop health enhancing and protective behaviour
CO6: To promoting human strengths and life enhancement

Unit-1: Health, Wellbeing and Stress **[15]**

1.1 Illness, Health and Wellbeing: meaning and nature
1.2 Models of health and illness: Medical, Bio psychosocial; Holistic Health;
1.3 Stress and Coping: Nature and Sources of Stress; Personal and Social
1.4 Mediators of Stress; Effects of Stress on Physical and Mental Health;
1.5 Coping and Stress management

Unit-2: Enhancing Health Management **[15]**

2.1 Health Management: Meaning and Nature
2.2 Health enhancing behaviours: Exercise,Nutrition, Meditation, Yoga
2.3 Health compromising behaviours (alcoholism, smoking, internet addiction);
2.4 Health Protective behaviours, Illness Management.
2.5 Promoting Human Strengths and Life Enhancement: Strength realizing and overcoming weakness

READINGS:

Ogden, J. (2017). Health psychology: A textbook (4th ed.).McGraw Hill Education.
Sarafino, Edward P and Smith, Timothy W (2012). Health Psychology - Bio psychosocial Interaction (7th ed). Wiley India Edition.
Taylor, Shelley E. (2018). Health Psychology (10th ed). McGraw Hill Higher Education. Indian Edition
Weiten, W. and Lloyd, M. (2007). Psychology applied to modern life: Adjustment in the 21st century, Indian Edition 8th. Thomson
देशमुख एन. व्ही., निकम, आर. एन., दरेकर. डी. जे. (२०२०). आरोग्य मानसशास्त्र. प्रशांत पब्लिकेशन्स.
गाडेकर के. (२०२०). आरोग्याचे मानसशास्त्र. डायमंड पब्लिकेशन्स, पुणे.

Psychology GE/OE S.Y. 2023 Pattern

Name of the Programme	**: B.A. Psychology**	**Program Code**	**: BAPSY**
Class	**: B.A. II**	**Semester**	**: IV**
Course Type	**: Generic Elective**		
Course Name	**: Psychology of Physical and Mental Health**		
Course Code	**: PSGET-241**		
No. of hours	**: 30**		
No. of Credits	**: 02**		

Course Outcome

At the end of course, student will able -

CO1: Understand nature of Stress, Personality and Illness
CO2: Explore relationship between Personality, Emotions and diseases
CO3: Understand Habits, Lifestyles, and Health
CO4: Understand the concept of abnormality.
CO5: Understand criterias and classifications of disorders.
CO6: Explore the process of treatment for abnormalities.

UNIT-1: PSYCHOLOGY AND PHYSICAL HEALTH [15]

1.1 Stress, Personality, and Illness
1.2 Personality, Emotions, and Heart disease
1.3 Stress, Cancer, Other diseases, immune functioning
1.4 Habits, Lifestyles, and Health: Smoking, Drinking, Overeating, Poor nutrition, Lack of exercise
1.5 Reactions to illness: the decision to seek treatment, the sick role, communicating with health providers, adherence to medical advice

UNIT-2: INTRODUCTION TO PSYCHOLOGICAL DISORDERS [15]

2.1 Definition and concept of abnormality.
2.2 Abnormal behavior: myths and realities, the medical model applied to abnormal behavior
2.3 Criteria of abnormal behavior: Biological, Psychological, Socio-cultural
2.4 Psychodiagnosis: the classification of disorders, the prevalence of psychological disorders
2.5 The Elements of the Treatment Process: Treatments, Clients, Therapists - Psychologists, Psychologists, & Other Mental Health Professionals.

Reading:

Weiten, W. and Lloyd, M. (2018). Psychology applied to modern life: Adjustment in the 21st century, Thomson

Butcher, J. N., Hooley, J. M., & Mineka, S., (2014). Abnormal Psychology. (16th ed.). Pearson education.

राजहंस, एम., पाटील, ए., सुर्वे, एस. (२०१२). अपसामान्यांचे मानसशास्त्र. उन्मेष प्रकाशन, पुणे.

Psychology F.Y GE/OE 2024 Pattern

Name of the Programme	**: B.A. Psychology**	**Program Code**	**: BAPSY**
Class	**: B.A. I**	**Semester**	**: I**
Course Type	**: Generic Elective – 1A**		
Course Code	**: PSGET-111**		
Course Name	**: Psychology of Adjustment and Stress**		
No. of hours	**: 30**		
No. of Credits	**: 02**		

Course Outcome

At the end of course, student will able -

CO1: Understand nature and goals of psychology
CO2: Describe determinants of adjustment
CO3: Describe determinants of perception towards change.
CO4: Discuss the different types of stress and responses to it.
CO5: Understand common coping patterns.
CO6: Differentiate ways of coping with stressors in modern life.

UNIT 1: INTRODUCTION TO PSYCHOLOGY, ADJUSTMENT AND STRESS [15]

1.1 Psychology: Definition, Nature, Scope and Goals
1.2 Adjustment: Definition, Determining Adjustment in Individuals
1.3 Perception of Change: Positive and Negative Change Events, Planned and Unplanned Change,
1.4 Stress: Meaning and Nature; Types of stress
1.5 Responses to Stress: Emotional, Physiological, Behavioural
Responses

UNIT 2: COPING WITH STRESS [15]

2.1 Common Coping Patterns: Giving Up, Striking Out at Others, Indulging Yourself, Blaming Yourself, Using Defensive Coping
2.2 Appraisal-Focused Constructive Coping: Ellis's Rational Thinking and Humor
2.3 Problem-Focused Constructive Coping: Using Systematic Problem Solving, Seeking Help, and Using Time More Effectively
2.4 Emotion-Focused Constructive Coping: Enhancing Emotional Intelligence, Releasing Pent-Up Emotions
2.5 Coping with Occupational Hazards: Job Stress, Sexual Harassment, and Unemployment

READINGS:

Ciccarelli, S. K., White, J. N., & Mishra, G. (2018). Psychology (5th Ed. Indian Adaptation). Pearson India Education Services Pvt. Ltd. 15
Feldman, S. R. (2021). Essentials of understanding psychology (14th Ed.) McGraw Hill.
Moritsugu, J., Vera, E.M., Jacobs, J.H. & Kennedy, M. (2017). Psychology of Adjustment: The Search for Meaningful Balance. New Delhi: Sage Publications, Inc.
Ogden, J. (2017). Health psychology: A textbook (4th ed.).McGraw Hill Education.
Taylor, S. E. (2018). Health Psychology (10th ed). McGraw Hill Higher Education. Indian Edition
Weiten, W.; Dunn, D. S. & Hammer, E. Y. (2018). Psychology applied to modern life: Adjustment in the 21st century (12th Ed.). Canada: Cengage L

Psychology F.Y. GE/OE 2024 Pattern

Name of the Programme	**: B.A. Psychology**	**Program Code**	**: BAPSY**
Class	**: B.A. I**	**Semester**	**: II**
Course Type	**: Generic Elective-1B**		

Course Code : **PSGET-121**
Course Name : **Psychology of Interpersonal Relationships**
No. of hours : **30**
No. of Credits : **02**

Course Outcome

At the end of course, student will able –

CO1: Explain perspectives on close relationships.
CO2: Discuss psychological aspects of friendship and romantic love.
CO3: Discuss Initial Attraction and Relationship Development.
CO4: Understand basics of counselling in marital setups.
CO5: To discuss marriage related process and adjustment.
CO6: Evaluate factors related to vulnerable areas in marital adjustment.

UNIT 1: FRIENDSHIP AND LOVE [15]

1.1 Perspectives on Close Relationships: The Ingredients of Close Relationships, Culture and Relationships, and the Internet and Relationships
1.2 Initial Attraction and Relationship Development: Initial Encounters, Getting Acquainted, and Established Relationships
1.3 Friendship: What Makes a Good Friend? Gender Differences in Friendship
1.4 Romantic Love: Sexual Orientation and Love, Gender Differences Regarding Love,
1.5 Theories of Love: Sternberg and Hendricks theory

UNIT 2: ISSUES IN MARRIAGE [15]

2.1 Counselling: nature and Definition
2.2 Pre-marital counselling: nature and steps
2.3 Moving Toward Marriage: The Motivation to Marry, Selecting a Mate, Predictors of Marital Success
2.4 Marital Adjustment: across the Family Life Cycle
2.5 Vulnerable Areas in Marital Adjustment: Gaps in Role Expectations, Work and Career Issues, Financial Difficulties, Inadequate Communication

References:

Baron, R. A., Branscombe, N. R., and Byrne, D. Bhardwaj, Gopa. (2008). Social Psychology. (12th ed.). New Delhi: Pearson Education, Indian subcontinent adaptation 2009.
Weiten, W.; Dunn, D. S. and Hammer, E. Y. (2018). Psychology applied to modern life: Adjustment in the 21st century (12th ed.). Cengage Learning, Canada.

Psychology S.Y.GE/OE 2024 Pattern

Name of the Programme : **B.A. Psychology** **Program Code** : **BAPSY**
Class : **B.A. II** **Semester** : **III**
Course Type : **Generic Elective**
Course Name : **Psychology of Health and Well-being**
Course Code : **PSGET-231**
No. of hours : **30**
No. of Credits : **02**

Course Outcome
At the end of course, student will able -

CO1: To understand the basics of health and well-being.
CO2: To understand the basics of stress and coping.
CO3: To manage stress through coping strategies.
CO4: To understand importance of health management
CO5: To develop health enhancing and protective behaviour
CO6: To promoting human strengths and life enhancement

Unit-1: Health, Wellbeing and Stress **[15]**

1.1 Illness, Health and Wellbeing: meaning and nature
1.2 Models of health and illness: Medical, Bio psychosocial; Holistic Health;
1.3 Stress and Coping: Nature and Sources of Stress; Personal and Social
1.4 Mediators of Stress; Effects of Stress on Physical and Mental Health;
1.5 Coping and Stress management

Unit-2: Enhancing Health Management **[15]**

2.1 Health Management: Meaning and Nature
2.2 Health enhancing behaviours: Exercise,Nutrition, Meditation, Yoga
2.3 Health compromising behaviours (alcoholism, smoking, internet addiction);
2.4 Health Protective behaviours, Illness Management.
2.5 Promoting Human Strengths and Life Enhancement: Strength realizing and overcoming weakness

READINGS:

Ogden, J. (2017). Health psychology: A textbook (4th ed.).McGraw Hill Education.
Sarafino, Edward P and Smith, Timothy W (2012). Health Psychology - Bio psychosocial Interaction (7th ed). Wiley India Edition.
Taylor, Shelley E. (2018). Health Psychology (10th ed). McGraw Hill Higher Education. Indian Edition
Weiten, W. and Lloyd, M. (2007). Psychology applied to modern life: Adjustment in the 21st century, Indian Edition 8th. Thomson
देशमुख एन. व्ही., निकम, आर. एन., दरेकर. डी. जे. (२०२०). आरोग्य मानसशास्त्र. प्रशांत पब्लिकेशन्स.
गाडेकर के. (२०२०). आरोग्याचे मानसशास्त्र. डायमंड पब्लिकेशन्स, पुणे.

Psychology S.Y GE/OE 2024 Pattern

Name of the Programme	**: B.A. Psychology**	**Program Code**	**: BAPSY**
Class	**: B.A. II**	**Semester**	**: IV**
Course Type	**: Generic Elective**		
Course Name	**: Psychology of Physical and Mental Health**		
Course Code	**: PSGET-241**		
No. of hours	**: 30**		
No. of Credits	**: 02**		

Course Outcome
At the end of course, student will able -

CO1: Understand nature of Stress, Personality and Illness
CO2: Explore relationship between Personality, Emotions and diseases
CO3: Understand Habits, Lifestyles, and Health
CO4: Understand the concept of abnormality.
CO5: Understand criterias and classifications of disorders.
CO6: Explore the process of treatment for abnormalities.

UNIT-1: PSYCHOLOGY AND PHYSICAL HEALTH [15]

1.1 Stress, Personality, and Illness
1.2 Personality, Emotions, and Heart disease
1.3 Stress, Cancer, Other diseases, immune functioning
1.4 Habits, Lifestyles, and Health: Smoking, Drinking, Overeating, Poor nutrition, Lack of exercise
1.5 Reactions to illness: the decision to seek treatment, the sick role, communicating with health providers, adherence to medical advice

UNIT-2: INTRODUCTION TO PSYCHOLOGICAL DISORDERS [15]

2.1 Definition and concept of abnormality.
2.2 Abnormal behavior: myths and realities, the medical model applied to abnormal behavior
2.3 Criteria of abnormal behavior: Biological, Psychological, Socio-cultural
2.4 Psychodiagnosis: the classification of disorders, the prevalence of psychological disorders
2.5 The Elements of the Treatment Process: Treatments, Clients, Therapists - Psychologists, Psychologists, & Other Mental Health Professionals.

Reading:

Weiten, W. and Lloyd, M. (2018). Psychology applied to modern life: Adjustment in the 21st century, Thomson
Butcher, J. N., Hooley, J. M., & Mineka, S., (2014). Abnormal Psychology. (16th ed.). Pearson education.
राजहंस, एम., पाटील, ए., सुर्वे, एस. (२०१२). अपसामान्यांचे मानसशास्त्र. उन्मेष प्रकाशन, पुणे.

PDEA'S
Prof.Ramkrishna More Arts Commerce and Science College Akurdi-44.
Department of Political Science
2023-2024
F.Y Open Elective, Semester I
POGET-111: Indian Constitution and Political Process A
[Theory Credit :2, lectures-30]

Chapter Scheme

Unit I : The making of Indian Constitution and its Sources : [15 L]

A) Historical Background
B) Preamble –
C) Salient features of the Indian Constitution.
D) Critiques

Unit II : Fundamental Right, Duties & SPDP **[15 L]**

A) Fundamental Right.
B) Fundamental Duties.
C) Directive Principles of State Policy.

Reference and Text Books

1.Bhartiya Rajyaghatna v Ghatnatmak Prakriya
Author : Tukaram Jadhav.
Publication Unique Academy Pune.
2. Introduction to the Constitution of India.
Author Dr.Durga Das Basu.
Publication Wadhwa and Company Law publisher Nagpur Maharashtra.

मराठी संदर्भ पाठ्यपुस्तके

१. लेखक डॉ बाळ कांबळे २०१२ भारताची राज्यघटना राजकारण व कायदा डायमंड प्रकाशन पुणे
२. पाटील बी.बी 2016 भारतीय शासन आणि राजकारण फडके प्रकाशन कोल्हापूर.
३. डॉ.ज्योती बिडलन - डॉ. देशपांडे भारतीय संविधानाचा परिचय निराली प्रकाशन पुणे.
४. भारतीय शासन आणि राजकारण व राज्याचे शासन
5.प्रा. डॉ.विमल राठोड अंशुल पब्लिकेशन शक्ती माता नगर नागपूर.

Course Outcomes: At the end of syllabus student will able-

CO-1: The new Syllabus for all Faculty Recognise the need to deepen the Students understanding of the provisions & Working of the Constitution of India.
CO-2: This Course Syllabus Will Introduce you to idea of Constitution and the Story of the Making & Working of the Constitution.
CO-3: This Course allows you to Compare India and its Constitution to other Countries in the world having many Similar Concerns.
CO-4: To acquaint Students with the important features of the Constitution of India & with basic frame work of Indian Government and Administrative Structure and Bureaucracy System.

PDEA'S
Prof.Ramkrishna More Arts Commerce and Science College Akurdi-44.
Department of Political Science
2023 Pattern 2023-24
F.Y Open Elective, Semester I
POGET-112 Indian Constitution and Political Process B
[Theory Credit: 2, lectures-30]

Chapter Scheme

Unit I - Nature of Indian Federation and Centre **[15 L]**

A) Features.
B) State Government Relations

Unit II - Issues of Conflict. **[15 L]**

A) River – Water.
B) Border.
C) Language.

Reference and Text Books

1.Bhartiya Rajyaghatna v Ghatnatmak Prakriya
Author : Tukaram Jadhav.
Publication Unique Academy Pune.
2. Introduction to the Constitution of India.
Author Dr.Durga Das Basu.
Publication Wadhwa and Company Law publisher Nagpur Maharashtra.

मराठी संदर्भ पाठ्यपुस्तके

१. लेखक डॉ बाळ कांबळे २०१२ भारताची राज्यघटना राजकारण व कायदा डायमंड प्रकाशन पुणे
२. पाटील बी.बी 2016 भारतीय शासन आणि राजकारण फडके प्रकाशन कोल्हापूर.
३. डॉ.ज्योती बिडलन - डॉ. देशपांडे भारतीय संविधानाचा परिचय निराली प्रकाशन पुणे.
४. भारतीय शासन आणि राजकारण व राज्याचे शासन
5.प्रा. डॉ.विमल राठोड अंशुल पब्लिकेशन शक्ती माता नगर नागपूर.

Course Outcomes: At the end of syllabus student will able-

CO-1: This Course allows you to Compare India and its Constitution to other Countries in the world having many Similar Concerns.

CO-2: To acquaint Students with the important features of the Constitution of India & with basic frame work of Indian Government and Administrative Structure and Bureaucracy System.

PDEA'S
Prof.Ramkrishna More Arts Commerce and Science College Akurdi-44.
Department of Political Science
2023-24 2023 Pattern
F.Y Open Elective, Semester II
POGET-121 Indian Constitution and Political Process A
[Theory Credit: 2, lectures-30]

Chapter Scheme

Unit I : Union Government and Legislature **[15 L]**

A) Structure of Union Government.
B) Legislature - Structure & Power.

Unit II : Executive **[15 L]**

A) Executive - President , Vice President.
B) Prime Minister & Council of Minister.

Reference and Text Books

1.Bhartiya Rajyaghatna v Ghatnatmak Prakriya
Author : Tukaram Jadhav.
Publication Unique Academy Pune.
2. Introduction to the Constitution of India.

Author Dr.Durga Das Basu.
Publication Wadhwa and Company Law publisher Nagpur Maharashtra.

मराठी संदर्भ पाठ्यपुस्तके

१. लेखक डॉ बाळ कांबळे २०१२ भारताची राज्यघटना राजकारण व कायदा डायमंड प्रकाशन पुणे
२. पाटील बी.बी 2016 भारतीय शासन आणि राजकारण फडके प्रकाशन कोल्हापूर.
३. डॉ.ज्योती बिडलन - डॉ. देशपांडे भारतीय संविधानाचा परिचय निराली प्रकाशन पुणे.
४. भारतीय शासन आणि राजकारण व राज्याचे शासन
५.प्रा. डॉ.विमल राठोड अंशुल पब्लिकेशन शक्ती माता नगर नागपूर.

Course Outcomes: At the end of syllabus student will able-

CO-1: The new Syllabus for all Faculty Recognize the need to deepen the Students understanding of the provisions & Working of the Constitution of India.
CO-2: This Course Syllabus Will Introduce you to idea of Constitution and the Story of the Making & Working of the Constitution.

PDEA'S
Prof.Ramkrishna More Arts Commerce and Science College Akurdi-44.
Department of Political Science
2023 Pattern 2023-2024
F.Y Open Elective , Semester II
POGET-122 Indian Constitution and Political Process B
[Theory Credit: 2, lectures-30]

Chapter Scheme

Unit I : Indian Judiciary System. **[15 L]**
A) The Supreme Court - Nature Structure, Power and Function.
B) Judicial Review

Unit II: Constitutional Amendments: Scope and Limitations **[15 L]**
A) Constitutional provisions
B) Major Constitutional Amendments (42, 44, 52 & 86)
C) Basic Structure of the Indian Constitution

Reference and Text Books

1.Bhartiya Rajyaghatna v Ghatnatmak Prakriya
Author : Tukaram Jadhav.
Publication Unique Academy Pune.

2. Introduction to the Constitution of India.
Author Dr.Durga Das Basu.
Publication Wadhwa and Company Law publisher Nagpur Maharashtra.

मराठी संदर्भ पाठ्यपुस्तके

१. लेखक डॉ बाळ कांबळे २०१२ भारताची राज्यघटना राजकारण व कायदा डायमंड प्रकाशन पुणे
२. पाटील बी.बी 2016 भारतीय शासन आणि राजकारण फडके प्रकाशन कोल्हापूर.
३. डॉ.ज्योती बिडलन - डॉ. देशपांडे भारतीय संविधानाचा परिचय निराली प्रकाशन पुणे.
४. भारतीय शासन आणि राजकारण व राज्याचे शासन
५.प्रा. डॉ.विमल राठोड अंशुल पब्लिकेशन शक्ती माता नगर नागपूर.

Course Outcomes: At the end of syllabus student will able-

CO-1: This Course allows you to Compare India and its Constitution to other Countries in the world having many Similar Concerns.
CO-2: To acquaint Students with the important features of the Constitution of India & with basic frame work of Indian Government and Administrative Structure and Bureaucracy System.

PDEA'S
Prof.Ramkrishna More Arts Commerce and Science College, Akurdi-44.
Department of Political Science
2023-24 -2023 pattern

S.Y Open Elective, Semester III

POGET-231 An Introduction to Political Science-I

[Theory Credit: 2, lectures-30]

Chapter Scheme

Unit I – Introduction to Political Science 12
a. Meaning and Definition.
b. Nature of Political Science.
c. Scope of Political Science.
d. Approaches to the Study Political Science -Traditional and Modern.

Unit II – The State 10
a. Meaning and Definition.
b. Evolution of State.
c. Nature of State.
d. Elements of the State.

Unit III – Sovereignty 08
a. Meaning and Definition.

b. Evolution of Sovereignty.
c. Characteristics of Sovereignty.
d. Types of Sovereignty.

Reference Books/Text

1) An introduction to Political Theory Author: Rajiv Bhargava Publication: Pearson.
2) Bryce, Modern Democracies.
3) E.Asirvatham, political Theory.
4) लेखक : ना य. डोळे राजकीय विचाराचा इतिहास, कॉन्टिनेन्टल प्रकाशन पुणे.
5) प्रा. प्रमोद तांबे, राज्यशास्त्र परिचय, निराली प्रकाशन पुणे.
6) डॉक्टर विजय देव, आधुनिक राजकीय विश्लेषण कोश डायमंड प्रकाशन पुणे,
7) भार्गव राजीव, राजकीय सिद्धांत परिचय अनुवाद हेमंत खानझोडे पीयर्सन प्रकाशन.

Course Outcomes: At the end of syllabus student will able-

CO-1: The students will be able to understand the nature and scope of Political Science.
CO-2: The students shall understand the various traditional and modern approaches to the study of Political Science.
CO-3: The students will understand the basic concepts in Political Science and apply these concepts in making sense of social realities.

PDEA'S
Prof.Ramkrishna More Arts Commerce and Science College, Akurdi-44.
Department of Political Science
2023-24 2023 Pattern
S.Y Open Elective, Semester IV
POGEP-241 An Introduction to Political Science-II
[Practical Credit: 2, lectures-60]

Syllabus

Activities 1. Write a report on the challenges facing democracy through Newspapers (Any one) 30

1. Violation of Freedom 2. Violation of Equality
3. Violation of Sovereignty 4. Violation of Justice
5. Violation of Power of State 6. Other violation of Democracy.

Activities 2 : Write a report on the challenges facing democracy through films and Short Films. (Any one) 30

1. Challenges before Freedom 2. Challenges before Equality
3. Challenges before Sovereignty 4. Challenges before Justice
5. Challenges before Power of State 6. Other challenges before Democracy.

Process of Activity:

1. Students have to complete each activity by studying the Newspapers and Films or Short films.
2. Each student has to complete these activities under the guidance of a guide/mentor. The Department of Political Science will allot the students respective guides/mentors. The Department of Political Science may also appoint guides/mentors from other faculties or subject related industry areas.
3. Students have to choose the topic of activity in consultation with the teacher/guide/mentor.
4. After the study the student has to submit two separate reports and each report will be a minimum of one thousand words. In the report along with write-up must be included photographs, newspaper clippings, images for the support of study. Students can give graphs, tables for statistics.
5. The report should contain objectives, observations and conclusions.
6. After the approval letter from the guide/mentor, students can submit the report to the department.
7. After submission of the report, the department will conduct an interview of students or arrange a presentation in the classroom.
8. Assessment will be done on the basis of a report and interview/presentation.

9. Activity reports will be of 35 marks and the interview will be of 15 marks.

Course Outcome: At the end of course student will able -

CO-1: To enable the students to apply their understanding of basic concepts of Political Science and their application.
CO-2: To understand the various dimensions of state, equality-freedom and democracy through their practical use.

Learning Outcomes :
1. Students will know how to apply the concepts learned in class in real life.
2. The students will know how the contents of Political Science are actually used**.**

PDEA'S
Prof.Ramkrishna More Arts Commerce and Science College Akurdi-44.
Department of Political Science
2024 Pattern

F.Y Open Elective , Semester I

POGET - 111 Introduction of Indian Constitution

[Theory Credit: 2, lectures-30]

Chapter Scheme

Unit 1 Introduction of Indian Constitution [15 L]
A) Formation of Constituent Assembly & Definition.
B) Preamble and Salient features of Indian Constitution.
C) Provisions borrowed from the Constitutions of different Countries.

Unit 2: Federalism [15 L]
A) Salient features of Indian Federalism.
B) Center-State Relations
C) Issues of Conflict (River Water ,Border and Language.

Reference and Text Books
1.Bhartiya Rajyaghatna v Ghatnatmak Prakriya , Tukaram Jadhav. Publication Unique Academy Pune.
2. Introduction to the Constitution of India. Author Dr.Durga Das Basu. Publication Wadhwa and Company Law publisher Nagpur Maharashtra.

मराठी संदर्भ पाठ्यपुस्तके

१. डॉ बाळ कांबळे २०१२ भारताची राज्यघटना राजकारण व कायदा डायमंड प्रकाशन पुणे
२. पाटील बी.बी 2016 भारतीय शासन आणि राजकारण फडके प्रकाशन कोल्हापूर.
३. डॉ.ज्योती बिडलन – डॉ. देशपांडे, भारतीय संविधानाचा परिचय निराली प्रकाशन पुणे.
४. प्रा. डॉ.विमल राठोड - भारतीय शासन आणि राजकारण व राज्याचे शासन अंशुल पब्लिकेशन शक्ती माता नगर नागपूर.

Course Outcomes: At the end of syllabus student will able-
CO-1. The new Syllabus for all Faculty recognizes the need to deepen the Students understanding of the provisions & Working of the Constitution of India.

CO-2. This Course Syllabus Will Introduce you to the idea of the Constitution and the Story of the Making & Working of the Constitution.
CO-3. This Course allows you to Compare India and its Constitution to other Countries in the world having many Similar Concerns.
CO-4. To acquaint Students with the important features of the Constitution of India & with basic framework of Indian Government and Administrative Structure and Bureaucracy System.

PDEA'S
Prof.Ramkrishna More Arts Commerce and Science College Akurdi-44.
Department of Political Science
2024 Pattern 2025-2026

F.Y Open Elective , Semester II

POGET-121 Constitutional Process in India

[Theory Credit: 2, lectures-30]

Chapter Scheme

Unit 1: Legislature **[10L]**
- A) Union Legislature
  a)Formation b) Structure c) Power
- B) State Legislature
  a)Formation b)Structure c)Power

Unit 2: Executive **[10L]**
- A) President -powers, Functions & Role.
- B) Prime Minister Powers- Function & Role

Unit 3: Judiciary **[10L]**
- a) Supreme court powers & Functions.
- b) Judicial Review.

Reference and Text Books

1.Bhartiya Rajyaghatna v Ghatnatmak Prakriya , Tukaram Jadhav. Publication Unique Academy Pune.
2. Introduction to the Constitution of India. Author Dr.Durga Das Basu. Publication Wadhwa and Company Law publisher Nagpur Maharashtra.

Course Outcomes: At the end of syllabus student will able-

CO-1. The Study of the working of the Indian Constitution here is a gateway to Studying politics in India,
CO-2. The new Syllabus for political Science recognise the need to deepen the Students understanding of the provisions and the Working of the Constitution of India.
CO-3. This Syllabus will introduce you to the idea of the Constitution and the Story of the making and working of the Constitution.
CO-4 This Syllabus allows you to Compare India and its Constitution to other Countries in the world with many similar Concerns.

Political Science S.Y. GE/OE 2024 Pattern

S.Y Open Elective, Semester III

POGET-231 An Introduction to Political Science-I

[Theory Credit: 2, lectures-30]

Chapter Scheme

Unit I – Introduction to Political Science 12

a. Meaning and Definition.
b. Nature of Political Science.
c. Scope of Political Science.
d. Approaches to the Study Political Science -Traditional and Modern.

Unit II – The State 10

a. Meaning and Definition.
b. Evolution of State.
c. Nature of State.
d. Elements of the State.

Unit III – Sovereignty 08

a. Meaning and Definition.
b. Evolution of Sovereignty.
c. Characteristics of Sovereignty.
d. Types of Sovereignty.

Reference Books/Text

1) An introduction to Political Theory Author: Rajiv Bhargava Publication: Pearson.
2) Bryce, Modern Democracies.
3) E.Asirvatham, political Theory.
4) लेखक : ना य. डोळे राजकीय विचाराचा इतिहास, कॉन्टिनेन्टल प्रकाशन पुणे.
5) प्रा. प्रमोद तांबे, राज्यशास्त्र परिचय, निराली प्रकाशन पुणे.
6) डॉक्टर विजय देव, आधुनिक राजकीय विश्लेषण कोश डायमंड प्रकाशन पुणे,
7) भार्गव राजीव, राजकीय सिद्धांत परिचय अनुवाद हेमंत खानझोडे पीयर्सन प्रकाशन.

Course Outcomes: At the end of syllabus student will able-

CO-1: The students will be able to understand the nature and scope of Political Science.
CO-2: The students shall understand the various traditional and modern approaches to the study of Political Science.
CO-3: The students will understand the basic concepts in Political Science and apply these concepts in making sense of social realities.

Political Science GE/OE 2024 Pattern

S.Y Open Elective, Semester IV

POGET-241 Political Theory and Concept

[Theory Credit: 2, lectures-30]

Chapter Scheme

Unit I – Power and Authority 15

a. Nature of Power
b. Relation between Power and Authority
c. Types of Authority
d. Nature of Authority

Unit II – Liberty and Equality 15

a. Meaning and Nature
b. Aspects of Liberty and Equality
c. Types of Liberty
d. Dimensions of Equality

References :

1. Bhargava Rajeev and Ashok Acharya (eds.), 2008, Political Theory, Delhi, Pearson.
2. Gupta Sachdeo and Singh S K, 1987, Political Theory and Ideology, Delhi, Ajanta Prakashan.
3. Henry D. Aiken, 1956, The Age of Ideology, New York, Mentor.
4. Heywood Andrew, 2004, Political Theory – An Introduction, Palgrave Basingstoke.
5. Gauba O. P, An Introduction to Political Theory, अनुवाद – जाधव तुकाराम, 2010, पुणे, के. सागर.
6. Mackenzie I, Political Concepts, 2005, A Reader and Guide, Edinburg, Edinburg University Press

Student will acquire the skills of –

CO-1. The students will be able to understand the nature and scope of Political Science.
CO-2. The students shall understand the various traditional and modern approaches to the study of Political Science.
CO-3. The students will understand the basic concepts in Political Science and apply these concepts in making sense of social realities.

Syllabus

First Year Graduate (F.Y.B.A) Economics

Under Autonomy and NEP-2020To Be Implemented from Academic Year 2023-2024

SEMESTER I

ECGET 111- Financial Planning -I

No. of Credit- 02 **Lecture: - 30**

Unit	Name and Contents	Number of Lectures
Unit 1	**Introduction to Financial Literacy**	10
	1.1 Meaning, importance and scope of financial literacy; Prerequisites of Financial Literacy	
	1.2 level of education, numerical and communication ability	
	1.3 Various financial institutions – Banks, Insurance companies, Post Offices; Mobile App based services	
	1.4 Need of availing of financial services from banks, insurance companies and ostal services	
	Banking	
	2.1 Types of Deposits-Saving Bank Accounts, KYC norms, Banking products and services	

Unit 2	2.2 Types of loans, taking a home loan, Definition of EMI, Calculation of EMI, Credit Cards Terminology, Credit Cards Math, Reading a Credit Card Statement	**10**
	2.3 Post office-Account and transactions, Online Banking.	
Unit 3	**Basics of Savings and Investment**	**10**
	3.1 Savings Vs Investment, Power of Compounding, Principles of Investment–Safety, Liquidity and Return, Risk and Return, Inflation effects on Investment, Securities and its types,	
	3.2 Equity, Debentures or Bonds, IPOs and FPOs, Mutual Funds, Types of Mutual Funds, Brokers, sub-brokers, Process for becoming a capital market investor, Investment plans, Hybrid plans-Ulip, SIP and VIP of mutual funds, index funds.	

➢ Course Learning Outcomes;-

At the end of the course the learner will have ability –

CO 1: Students will be able to understand the various aspects of Indian Financial System.

CO 2: The students will be able to acquire the practical knowledge of Banking Financial Regulators in India

CO 3: The students will understand the challenges before Indian Financial System.

CO 4: To help the students to prepare for varied banking competitive examinations.

➢ Course Objective:-

1. Understand the structure, functions, and components of the Indian financial system.
2. Explore the operations and roles of the Indian money and capital markets.
3. Analyse the functions and significance of various Indian postal savings schemes and accounts
4. Examine the role and impact of India Post Payments Bank (IPPB) in the financial system.

➢ Reference ;-

1. Indian Banking: Evolution and Developments" by S. K. Bhatia. **Publication:** Kanishka Publishers, 2020.
2. Banking Theory and Practice" by K. C. Shekhar and Lekshmy Shekhar **Publication:** Vikas Publishing House, 2018
3. Indian Financial System" by M. Y. Khan **Publication:** McGraw-Hill Education, 2020.
4. Principles of Banking" by G. J. B. Wright **Publication:** Pearson Education, 2019.
5. Modern Banking: Theory and Practice" by J. M. C. Goel **Publication:** Atlantic Publishers & Distributors, 2018

➢ Journal & Magazine :-

1. Journal of Banking & Finance **Publisher**: Elsevier **Website**: Journal of Banking & Finance.
2. Reserve Bank of India Bulletin **Publisher**: Reserve Bank of India **Website**: RBI Bulletin
3. Indian Journal of Economics and Business. **Publisher**: Indian Economic Association **Website**: Indian Journal of Economics and Business
4. Banking and Finance Review **Publisher**: BAFI Publications **Website**: Banking and Finance Review

Prof. Ramkrishna More Arts, Commerce & Science College Akurdi, Pune- 411044

Affiliated to

Savitribai Phule Pune University, Pune.

F.Y. B.A. Economics GE/OE 2023 Pattern

CBCS Semester Pattern

Under Autonomy and NEP-2020To Be Implemented from Academic Year 2023-2024

SEMESTER II

ECGET 121- Financial Planning-II

No. of Credit- 02 **Lecture: - 30**

Unit	Name and Contents	Number of Lectures
Unit 1	**Post Office Financial Services**	10
	1.1 Post office Savings Schemes: Savings Bank, Recurring Deposit, Term Deposit, Monthly Income Scheme, Kishan Vikas Patra, Senior Citizen Savings Scheme (SCSS), Sukanya Samriddhi Yojana/ Account (SSY/SSA); I	
	1.2 India Post Payments Bank (IPPB). Money Transfer: Money Order, E-Money order. Instant Money Order, collaboration with the Western Union Financial Services; MO Videsh, International Money Transfer Service, Electronic Clearance Services (ECS), Money gram International Money Transfer, Indian Postal Order (IPO).	
Unit 2	**Protection and Investment Related Financial Services**	10
	2.1 Insurance Services: Life Insurance Policies: Life Insurance, Term Life Insurance, Endowment Policies, Pension Policies, ULIP, Health Insurance and its Plans, Property Insurance: Policies offered by various general insurance companies	
	2.2 Post office life Insurance Schemes: Postal Life Insurance and Rural Postal Life Insurance (PLI/RPLI). Housing Loans: Institutions providing housing loans, Loans under Pradhan Mantri Awas Yojana – Rural and Urban.	
Unit 3	**Scams, Fraud Schemes**	10
	3.1 Insider trading, Money laundering; Consumer protection and Redressal mechanism, Rights of Consumers,	
	3.2 Filing a complaint, complain to entity concerned, Regulators, Arbitration, Consumer courts, Govt. Websites, Investor Associations.	

➢ Course Learning Outcomes;-

At the end of the course the learner will have ability –

CO 1: Students will be able to understand the various aspects of Post Office Financial Services. CO 2: The students will be able to acquire the practical knowledge of Investment Related Financial

Services

CO 3: The students will understand the challenges before Indian Financial System.

CO 4: To help the students to prepare for varied banking competitive examinations.

➢ Course Objective:-

1. Understand the structure, functions, and components of the Financial Services.
2. Explore the operations and roles of the Post Office Financial Services.
3. Analyse the functions and significance of various Indian postal savings schemes and accounts
4. Examine the role and impact of India Post Payments Bank (IPPB) in the financial system.

➢ Reference ;-

1. Indian Banking: Evolution and Developments" by S. K. Bhatia. **Publication:** Kanishka Publishers, 2020.
2. Banking Theory and Practice" by K. C. Shekhar and Lekshmy Shekhar **Publication:** Vikas Publishing House, 2018
3. Indian Financial System" by M. Y. Khan **Publication:** McGraw-Hill Education, 2020.
4. Principles of Banking" by G. J. B. Wright **Publication:** Pearson Education, 2019.
5. Modern Banking: Theory and Practice" by J. M. C. Goel **Publication:** Atlantic Publishers & Distributors, 2018

➢ Journal & Magazine :-

1. Journal of Banking & Finance **Publisher**: Elsevier **Website**: Journal of Banking & Finance.
2. Reserve Bank of India Bulletin **Publisher**: Reserve Bank of India **Website**: RBI Bulletin
3. Indian Journal of Economics and Business. **Publisher**: Indian Economic Association **Website**: Indian Journal of Economics and Business
4. Banking and Finance Review **Publisher**: BAFI Publications **Website**: Banking and Finance Review

SEMESTER I

ECGET 112- BASIC COURSE IN STOCK MARKET- I

No. of Credit- 02 **Lecture: - 30**

Unit	Name and Contents	Number of Lectures
Unit 1	**Developments in the Indian Stock Market**	10
	1.1 Domestic savings & investments Investing during these challenging times	
	1.2 Disinvestments, FDI & Foreign Portfolio Investment (FPI)	
	1.3 Role of Retail Investors Share Price & Share Price Volatility Role of SEBI	
Unit 2	**Dealings in Stock Exchanges**	10
	2.1 Indian Economy on path of 5 Trillion Economy	
	2.2 Risk Management in the stock market	
	2.3 Role of Brokers Stock Market Quotations	
	2.4 Procedure for buying & selling	
	2.5 Financial Planning	
Unit 3	**Overviews of capital market**	10
	3.1 Working of stock Market	
	3.2 Fundamental Analysis	
	3.3 Mutual Fund	

➢ Course Learning Outcomes; -

At the end of the course the learner will have ability –

CO 1: Students will be able to understand the various aspects of Indian Stock Market.

CO 2: The students will be able to acquire the practical knowledge of Indian Stock Market. CO 3: The students will understand the challenges before Indian Stock Market.

CO 4: To help the students to prepare for varied banking competitive examinations.

➢ Course Objective:-

1. Understand the structure, functions, and components of the Indian Stock market
2. Explore the operations and roles of the Indian Stock market.
3. Analyse the functions and significance of various Indian Stock market.
4. Examine the role and impact of new developments in Indian Stock market system.

➢ Reference ;-

1. Indian Stock Market: An Introduction (2019) – Dr. R. P. Rathi
2. The Indian Financial System (2020) – Dr. S. Gurusamy
3. Stock Market and Investment Management (2019) – P. K. Jain
4. Investment Management (2020) – V. A. Avadhani
5. Security Analysis and Portfolio Management (2021) – R. K. Gupta

➢ Journal & Magazine :-

1. Journal of Indian Finance
2. The Economic Times
3. Business Today
4. Money control
5. The Financial Express
6. Vikalpa - The Journal for Decision Makers
7. Capital Market Magazine

Prof. Ramkrishna More Arts, Commerce & Science College Akurdi, Pune- 411044

Affiliated to

Savitribai Phule Pune University, Pune.

F.Y. B.A. Economics Syllabus

CBCS Semester Pattern

Under Autonomy and NEP-2020To Be Implemented from Academic Year 2023-2024

SEMESTER II

ECGET 122- ADVANCE COURSE IN STOCK MARKET-II

No. of Credit- 02 **Lecture: - 30**

Unit	Name and Contents	Number of Lectures
Unit 1	**Fundamental Analysis**	10
	1.1 Meaning of Fundamentals Analysis, Types of Fundamentals – Qualitative Method	
	1.2 Quantitative Method - (Ratio Analysis), Uses of Fundamentals in any Share of Section	
	1.3 Basic Concept of Fundamentals	
Unit 2	**Technical Analysis**	10
	2.1 Meaning of Technical Analysis	
	2.2 Types of Chart, Types of Trend, Volume	
	2.3 Pivot Point – (Support and Resistance), Moving Average	
	2.4 RSI Indicator and Bollinger Brand,	
	2.5 Practical Trading - (Live Market Trading)	
Unit 3	**Mutual Fund**	10
	3.1 Meaning and Introduction of Mutual Fund,	
	3.2 Types of Mutual Fund - Equity Mutual Funds, Debt Funds, Hybrid Mutual Funds and Index Mutual Funds	
	3.3 Equity Mutual Fund – Small Cap, Mid Cap, Large Cap, Systematic Investment Plan (SIP)	

➢ Course Learning Outcomes; -

At the end of the course the learner will have ability –

CO 1: Students will be able to understand the various aspects of Indian Stock Market.

CO 2: The students will be able to acquire the practical knowledge of Indian Stock Market. CO 3: The students will understand the challenges before Indian Stock Market.

CO 4: To help the students to prepare for varied banking competitive examinations.

➢ Course Objective:-

5. Understand the structure, functions, and components of the Indian Stock market
6. Explore the operations and roles of the Indian Stock market.
7. Analyse the functions and significance of various Indian Stock market.
8. Examine the role and impact of new developments in Indian Stock market system.

➢ Reference ;-

1. Indian Stock Market: An Introduction (2019) – Dr. R. P. Rathi
2. The Indian Financial System (2020) – Dr. S. Gurusamy
3. Stock Market and Investment Management (2019) – P. K. Jain
4. Investment Management (2020) – V. A. Avadhani
5. Security Analysis and Portfolio Management (2021) – R. K. Gupta

➢ Journal & Magazine :-

1. Journal of Indian Finance
2. The Economic Times
3. Business Today
4. Money control
5. The Financial Express
6. Vikalpa - The Journal for Decision Makers
7. Capital Market Magazine

-

Syllabus
Second Year Graduate (S.Y.B.A)
Economics

Board of Studies Economics
Prof. Ramkrishna More Arts, Commerce & Science College Akurdi, Pune-411044

Affiliated to

Savitribai Phule Pune University, Pune.

S. Y. B. A. Economics Syllabus

2023 CBCS Semester Pattern

2023 Pattern

Under Autonomy and NEP-2020 To Be Implemented from Academic Year 2024 – 2025

OPEN ELECTIVE

ECGET- 231- DIGITAL BANKING-I
SEMESTER -III

Note: Each lecture is of 1 hour

Credit-02: **No. of Lectures-30 L**

Unit	Name and Contents	Number of Lectures
Unit 1	**DIGITAL BANKING**	10
	1.1 Introduction, Definition and meaning, of Digital Banking,	
	1.2 Imports Nature and Objective of Digital Banking,	
	1.3 Scope and Futures of Digital Banking	
Unit 2	**PAYMENT SYSTEMS of DIGITAL BANKING**	10
	2.1 Overview of global payment systems, Overview of domestic payment systems	
	2.2 RuPay and Repays Secure Immediate Payment Service (IMPS),National Unified USSD Platform (NUUP)	
	2.3 Aadhaar Enabled Payment System (AEPS) e-KYC National Unified USSD Platform (NUUP)	
	INTERNET BANKING	
	3.1 Overview and Brief History Product Features	

Unit 3	3.2 Corporate and Individual Internet Banking Integration with e-Commerce Merchant sites Back End Operations and Technology	**10**
	3.3 Profitability of Internet Banking, Back End Operations and Technology	

➢ Course Learning Outcomes: -

At the end of the course the learner will have ability-

CO-1 Understand the concept, nature, and objectives of digital banking.

CO-2 Explore the scope and future trends of digital banking in the global financial landscape. CO-3 Familiarize with global and domestic payment systems in digital banking, including

Repay, IMPS, and AEPS.

CO-4 Gain insights into internet banking, its historical background, product features, and

➢ Objective: -

1. To define digital banking, analyze its nature, and outline its objectives in modern banking.
2. To evaluate the scope of digital banking and predict future trends to adapt to evolving customer needs and technological advancements.
3. To compare and contrast global and domestic payment systems, and comprehend the functionalities of RUPAY, IMPS, AEPS, and NUUP.
4. To examine the history, features, and profitability of internet banking, and explore its integration with e- commerce platforms and backend operations.
5. To analyze the integration of digital banking with e-commerce platforms, merchant sites, and backend operations, focusing on technological advancements and operational efficiency.

➢ Reference Books:

1. "Digital Banking: Transforming India" by V. Srinivasan and Radhika Pandey
2. "Digital Banking and Payments: The Revolution" by Jai Raj Nair
3. "Digital Banking: Evolution, Challenges and Opportunities" by M. S. Sahoo
4. "Digital Banking in India: Trends, Challenges and Opportunities" by Arindam Banerjee and Partha Chatterjee
5. "The Digital Bank: Strategies to Launch or Become a Digital Bank" by Vishnu Sharma

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S. Y. B. A. Economics
Syllabus CBCS Semester Pattern
Under Autonomy and NEP-2020 To Be Implemented from Academic Year 2024 – 2025
OPEN ELECTIVE
ECGET- 241- DIGITAL BANKING-II
SEMESTER - IV

Note :- Each Lecture is of 1 hour

Credit :- 02 **No. Lecture :- 30L**

Unit	Name and Contents	Number of Lectures
Unit 1	**BRANCHLESS BANKING**	10
	1.1 Introduction ,Objectives	
	1.2 Financial Inclusion – Logic and logistics, Vehicles for Financial Inclusion	
	1.3 Business Correspondents/ Business facilitators f. Digital Banking Products for Financial Inclusion	
Unit 2	**MOBILE BANKING**	10
	2.1 Overview and brief history of Mobile Banking,	
	2.2 Product features & diversity of Mobile Banking	
	2.3 RTGS, NEFT , Innovative Banking & Payment Systems	
Unit 3	**NEW DEVELOPMENTS IN DIGITAL BANKING**	10
	3.1 Fintechs, Business ecosystems Block chain, Crypto Currencies	
	3.2 Cloud , Virtualization, Analytics	
	3.3 Artificial Intelligence, Machine Learning Internet of things (IoT)	

➢ Course Learning Outcomes: -

At the end of the course the learner will have ability-

CO-1 Understand the concept and objectives of branchless banking and its role in financial inclusion.

CO-2 Explore the evolution, features, and diversity of mobile banking, including real-time gross settlement (RTGS), national electronic funds transfer (NEFT), and innovate banking/payment systems.

CO-3 Familiarize with new developments in digital banking, including fintechs, block chain, cloud computing, artificial intelligence (AI), and internet of things (IOT).

➢ Objective: -

1. Define branchless banking, analyze its objectives, and evaluate its contribution to financial inclusion through business correspondents and digital banking products.
2. To evaluate the scope of digital banking and predict future trends to adapt to evolving customer needs and technological advancements.
3. Analyze the impact of fintech innovations, block chain technology, and AI-driven solutions on the digital banking landscape, and explore the potential of cloud computing and IoT in enhancing banking services.
4. Examine the rationale behind financial inclusion efforts, analyze the logistical challenges, and identify effective digital banking solutions for reaching unbanked populations.
5. Understand the interconnected nature of fintech ecosystems, explore the benefits of virtualization in banking operations, and analyze the role of analytics in optimizing digital banking services.

➢ Reference Books:

1. "Digital Banking: Transforming India" by V. Srinivasan and Radhika Pandey
2. "Digital Banking and Payments: The Revolution" by Jai Raj Nair
3. "Digital Banking: Evolution, Challenges and Opportunities" by M. S. Sahoo
4. "Digital Banking in India: Trends, Challenges and Opportunities" by Arindam Banerjee and Partha Chatterjee
5. "The Digital Bank: Strategies to Launch or Become a Digital Bank" by Vishnu Sharma

Course Code - GGGET-111 **Course Type-Theory**
No. of Credits: 02 **No. of Periods: 30**

Course Outcome:

After the completion of course, the students will have ability to:

1. Understand various components and principles of GIS
2. Construct the thematic maps using different digital layers
3. Understand the Principles and Uses of Global Positioning System (GPS).
4. Describe GIS Data Structures and apply the Knowledge of GIS Data Analysis.
5. Construct the thematic maps using different digital layers
6. Apply GIS in various geographical studies

Module	Topic	Subtopics	No of Periods
Module-1	Geographical Information System (GIS)	Geographical Information System (GIS): Definition and Components.	**6**
	Global Positioning System (GPS)	Global Positioning System (GPS): Principles and Uses.	**6**
Module-2	GIS Data Structures	GIS Data Structures: Types (spatial and non-spatial), Raster and Vector Data Structure.	**6**
	GIS Data Analysis	GIS Data Analysis: Input; Geo-Referencing	**6**
	Application of GIS	Application of GIS: Land Use Mapping, Forests Monitoring and Natural disasters.	**6**

References:

1. Bhatta, B., (2010): Analysis of Urban Growth and Sprawl from Remote Sensing, Springer, Berlin Heidelberg.41
2. Burrough, P.A., and McDonnell, R.A. (2000): Principles of Geographical Information System-Spatial Information System and Geo-statistics. Oxford University Press
3. Chauniyal, D.D. (2010): Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda Pustak Bhawan, Allahabad
4. Gomarasca, M. A. (2009) Basics of Geomatics, Springer Science, New York
5. Heywoods, I., Cornelius, S and Carver, S., (2006): An Introduction to Geographical
6. Information system. Prentice Hall.
7. Jha, M.M. and Singh, R.B., (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept.
8. Kumar, Dilip, Singh, R.B. and Kaur, Ranjeet (2019): Spatial Information Technology for Sustainable Development Goals, Springer.
9. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.
10. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
11. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.

NEP-2020 First Year UG Introduction to Geographical Information System (Practical)

Course Code - GGGEP -112 **Course Type-Practical**

No. of Credits: 02 **No. of Practical: 15**

Course Outcomes:

After the completion of course, the students will have ability to:

1. Understand various components and principles of GIS
2. Construct the thematic maps using different digital layers
3. Understand the Principles and Uses of Global Positioning System (GPS).
4. Describe GIS Data Structures and apply the Knowledge of GIS Data Analysis.
5. Construct the thematic maps using different digital layers
6. Apply GIS in various geographical studies

Module	Topic	Subtopics	Practicals
Module- 1	Geographical Information System (GIS)	Geographical Information System (GIS): Definition and Components.	**3**
	Global Positioning System (GPS)	Global Positioning System (GPS): Principles and Uses.	**3**
Module- 2	GIS Data Structures	GIS Data Structures: Types (spatial and non-spatial), Raster and Vector Data Structure.	**3**
	GIS Data Analysis	GIS Data Analysis: Input; Geo-Referencing	**3**
	Application of GIS	Application of GIS: Land Use Mapping, Forests Monitoring and Natural disasters.	**3**

References:

1. Bhatta, B., (2010): Analysis of Urban Growth and Sprawl from Remote Sensing, Springer, Berlin Heidelberg.41
2. Burrough, P.A., and McDonnell, R.A. (2000): Principles of Geographical Information System- Spatial Information System and Geo-statistics. Oxford University Press
3. Chauniyal, D.D. (2010): Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda Pustak Bhawan, Allahabad
4. Gomarasca, M. A. (2009) Basics of Geomatics, Springer Science, New York
5. Heywoods, I., Cornelius, S and Carver, S., (2006): An Introduction to Geographical Information system. Prentice Hall.
6. Jha, M.M. and Singh, R.B., (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept.
7. Kumar, Dilip, Singh, R.B. and Kaur, Ranjeet (2019): Spatial Information Technology for Sustainable Development Goals, Springer.
8. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.
9. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
10. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.

NEP-2020 First Year UG Introduction to Remote Sensing

Course Code - GGGEP-121 **Course Type-Theory**

No. of Credits: 02 **No. of Periods: 30**

Course Outcomes:

After the completion of course, the students will have ability to:

1. Understand the basic concept of Remote Sensing.
2. Explain Digital and manual Image Processing.
3. Develop the skill so as to use digital satellite data using software.
4. Prepare the maps based with satellite data to compare with the ground realities.
5. Classify digital data for the land use/land cover and urban studies.
6. Apply the Knowledge of Remote Sensing in Various field.

Module	Topic	Subtopics	No of Periods
Module-1	Image Processing (Digital and Manual)	Pre-processing (Radiometric and Geometric Correction); Enhancement (Filtering); Classification (Supervised and Un-supervised)	**15**
Module-2	Application of Digital Remote Sensing	Application of Digital Remote Sensing- Land Use /Land Cover	**6**
		Application of Digital Remote Sensing in Urban Studies.	**4**
		Application of Remote Sensing in weather (cyclones) studies and natural hazards (e.g. floods)	**5**

References:

1. Bhatta , B., (2008): Remote Sensing and GIS, Oxford University Press, New Delhi.
2. Campbell, J. B., (2007): Introduction to Remote Sensing, Guildford Press
3. Hord R.M.,(1989): Digital Image Processing of Remotely Sensed Data, Academic, New York.
4. Jensen, J. R., (2005): Introductory Digital Image Processing: A Remote Sensing Perspective, Pearson Prentice-Hall.
5. Jensen, J. R.,(2007): Remote Sensing of the Environment: An Earth Resource Perspective, Prentice-Hall Inc, New Jersey.
6. Joseph, G.,(2005): Fundamentals of Remote Sensing, United Press India.
7. Kumar, Dilip, Singh, R.B. and Kaur, Ranjeet.,(2019): "Spatial Information Technology for Sustainable Development Goals", Springer.
8. Li, Z., Chen, J. and Batsavias, E., (2008): Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences, CRC Press, Taylor and Francis, London
9. Lillesand, T. M., Kiefer R. W. and Chipman, J. W., (2004): Remote Sensing and Image Interpretation, Wiley. (Wiley Student Edition).
10. Mukherjee, S. (2004): Textbook of Environmental Remote Sensing, Macmillan, Delhi.
11. Nag, P. and Kudra, M., (1998): Digital Remote Sensing, Concept, New Delhi.
12. Richards, J. A. and JiaXiuping., (2005): Remote Sensing Digital Image Analysis: An Introduction, 4th Edition, Springer, Verlag, Berlin.

NEP-2020 First Year UG Introduction to Remote Sensing

Course Code - GGGEP-121 **Course Type-Practical**
No. of Credits: 02 **No. of Periods: 15**

Course Outcomes:

After the completion of the course, the students will have the ability to:

1. Understand the basic concept of Remote Sensing.

2. Differentiate different types of colour composite images.
3. Identify ground features and develop the skill of image interpretation.
4. Create maps based on satellite data to compare with the ground realities.
5. Classify digital data for the land use/land cover and urban studies.
6. familiarize students with different methods of determining aerial photograph scale, determination of object height and satellite data formats.
7. Handle/ Evaluate satellite data with Image Processing Software
8. Apply the Knowledge of Remote Sensing and Aerial Photography in Various fields.

Module	Topic	Subtopics	Practicals
Module-1	Aerial Photograph	Geometry of Aerial Photograph, Determination of Scale of Aerial Photograph – Different Methods Interpretation of Aerial Photograph: Stereo pair and Single Image, Estimation of Object Height from Single Vertical Aerial Photograph and Stereo-pair	**4**
	Interpretation of Satellite Image	Interpretation of Satellite Image, Identification of Ground Features, Deriving Land Use and Land Cover Map	**5**
Module-2	Satellite Data	Procurement of Satellite Data, Satellite Data Products and Formats	**3**
	Onscreen Demonstration of Handling Satellite Data	Onscreen Demonstration of Handling Satellite Data with Image Processing Software	**3**

References:

1. Bhatta , B., (2008): Remote Sensing and GIS, Oxford University Press, New Delhi.
2. Campbell, J. B., (2007): Introduction to Remote Sensing, Guildford Press
3. Hord R.M.,(1989): Digital Image Processing of Remotely Sensed Data, Academic, New York.
4. Jensen, J. R., (2005): Introductory Digital Image Processing: A Remote Sensing Perspective, Pearson Prentice-Hall.
5. Jensen, J. R.,(2007): Remote Sensing of the Environment: An Earth Resource Perspective, Prentice-Hall Inc, New Jersey.
6. Joseph, G.,(2005): Fundamentals of Remote Sensing, United Press India.
7. Kumar, Dilip, Singh, R.B. and Kaur, Ranjeet.,(2019): "Spatial Information Technology for Sustainable Development Goals", Springer.
8. Li, Z., Chen, J. and Batsavias, E., (2008): Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences, CRC Press, Taylor and Francis, London
9. Lillesand, T. M., Kiefer R. W. and Chipman, J. W., (2004): Remote Sensing and Image Interpretation, Wiley. (Wiley Student Edition).
10. Mukherjee, S. (2004): Textbook of Environmental Remote Sensing, Macmillan, Delhi.
11. Nag, P. and Kudra, M., (1998): Digital Remote Sensing, Concept, New Delhi.
12. Richards, J. A. and JiaXiuping., (2005): Remote Sensing Digital Image Analysis: An Introduction, 4th Edition, Springer, Verlag, Berlin.

Geography S.Y.GE/OE 2023 Pattern

GGGET-231 Course: Introduction to Disaster Management

No. of Credits: 02 **No. of Periods: 30**

Course Outcomes:

1. Describe concepts of Disaster and its relations with Geography.
2. Explain terminology and concepts of Disaster Management.
3. Implement concepts of hazards in different areas and its Management.
4. Explain important local level disasters i.e., cyclone, flood, landslide and flood.

5. To make the students aware of the need of protection & disaster management.
6. Demonstrate Disaster Management at local level.
7. Suggest methods of protection from disaster and will be able to do disaster management.

Modules	Topic	Subtopics	Periods
1	Hazards, Risk, Vulnerability and Disasters: Definition and Concepts.	i. Meaning and definition of Hazards and Disasters ii. Geographical conditions and disasters iii. Classification of Disasters. iv. Disasters in India: (a) Causes, Distribution, Impact, Mapping: Flood, Landslide, Drought Earthquake, Tsunami and Cyclone. v. Human induced disasters: Causes, Impact, Distribution and Mapping.	10
2	Concepts in disaster management	Concepts in disaster management i. Concept of disaster management ii. Aims and objectives. iii. Pre-disaster management and Post – disaster management.	06
3	Response and Mitigation to Disasters	Mitigation and Preparedness, NDMA and NIDM; Indigenous Knowledge and Community-Based Disaster Management; Do's and Don'ts During Disasters. Structure of disaster management - Preparedness, Response, Recovery, Mitigation, Rehabilitation. Role of media	08
4	Case Studies of disaster management in India with example of Maharashtra.	Case Studies of Disaster Management i. Cyclone ii. Floods iii. Droughts iv. Landslide	06

Reference Books:

1. Disaster Management Guidelines, GOI-UND Disaster Risk Program (2009-2012).
2. Damon, P. Copola, (2006) Introduction to International Disaster Management, Butterworth Heineman.
3. Gupta A.K., Niar S.S and Chatterjee S. (2013) Disaster management and Risk Reduction, Role of Environmental Knowledge, Narosa Publishing House, Delhi.
4. Murthy D.B.N. (2012) Disaster Management, Deep and Deep Publication PVT. Ltd. New Delhi.
5. Modh S. (2010) Managing Natural Disasters, Mac Millan publishers India LTD.
6. Mrinalini Pandey (2017) Disaster Management, Wiley India Pvt. Ltd.
7. Tushar Bhattacharya (2018) Disaster Science and Management, McGraw Hill Education (India) Pvt. Ltd.

GGGEP -241 Practicals in Disaster Management

No. of Credits: 02 **No. of Practicals: 15**

Course Outcomes:

After the completion of the course, the students will have the ability to:

1. Understand processes and impact of disaster
2. Understand both natural and man-made disaster and human negligence in the context of the environment
3. Write a fieldwork-based report on Disaster Management to minimize the disaster risk/ Risk from Disaster.

Modules	Topic	Subtopics	Practicals
1	The Project Report based on any two fields-based case studies among following disasters and one disaster preparedness plan of respective college/locality and district:	1. Flood 2. Drought 3. Cyclone and Hailstorms 4. Earthquake and Volcanoes 5. Landslides 6. Human Induced Disasters: Fire Hazards, Chemical, Industrial accidents	**15**

References:
1. Carter, N., (1991): Disaster Management: A Disaster Manager's Handbook. Asian Development Bank, Manila.
2. Government of India (2011): Disaster Management in India. Ministry of Home Affairs, New Delhi.
3. Government of India (2008): Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India
4. Kapur, A., (2010): Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
5. Modh, S., (2010): Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.

Geography OE/GE F.Y 2024 Pattern

NEP-2020 First Year UG Introduction to Geographical Information System (Theory)

Course Code - GGGET-111 **Course Type-Theory**
No. of Credits: 02 **No. of Periods: 30**

Course Outcome:

After the completion of course, the students will have ability to:

7. Understand various components and principles of GIS
8. Construct the thematic maps using different digital layers
9. Understand the Principles and Uses of Global Positioning System (GPS).
10. Describe GIS Data Structures and apply the Knowledge of GIS Data Analysis.
11. Construct the thematic maps using different digital layers
12. Apply GIS in various geographical studies

Module	Topic	Subtopics	No of Periods
Module-1	Geographical Information System (GIS)	Geographical Information System (GIS): Definition and Components.	**6**
	Global Positioning System (GPS)	Global Positioning System (GPS): Principles and Uses.	**6**
Module-2	GIS Data Structures	GIS Data Structures: Types (spatial and non-spatial), Raster and Vector Data Structure.	**6**
	GIS Data Analysis	GIS Data Analysis: Input; Geo-Referencing	**6**
	Application of GIS	Application of GIS: Land Use Mapping, Forests Monitoring and Natural disasters.	**6**

References:

12. Bhatta, B., (2010): Analysis of Urban Growth and Sprawl from Remote Sensing, Springer, Berlin Heidelberg.41
13. Burrough, P.A., and McDonnell, R.A. (2000): Principles of Geographical Information System-Spatial Information System and Geo-statistics. Oxford University Press
14. Chauniyal, D.D. (2010): Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda Pustak Bhawan, Allahabad
15. Gomarasca, M. A. (2009) Basics of Geomatics, Springer Science, New York
16. Heywoods, I., Cornelius, S and Carver, S., (2006): An Introduction to Geographical
17. Information system. Prentice Hall.
18. Jha, M.M. and Singh, R.B., (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept.
19. Kumar, Dilip, Singh, R.B. and Kaur, Ranjeet (2019): Spatial Information Technology for Sustainable Development Goals, Springer.
20. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.
21. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
22. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.

NEP-2020 First Year UG Introduction to Remote Sensing

Course Code - GGGEP-121 **Course Type-Practical**
No. of Credits: 02 **No. of Periods: 15**

Course Outcomes:

After the completion of the course, the students will have the ability to:

9. Understand the basic concept of Remote Sensing.
10. Differentiate different types of colour composite images.
11. Identify ground features and develop the skill of image interpretation.
12. Create maps based on satellite data to compare with the ground realities.
13. Classify digital data for the land use/land cover and urban studies.
14. familiarize students with different methods of determining aerial photograph scale, determination of object height and satellite data formats.
15. Handle/ Evaluate satellite data with Image Processing Software
16. Apply the Knowledge of Remote Sensing and Aerial Photography in Various fields.

Module	Topic	Subtopics	Practicals
Module-1	Aerial Photograph	Geometry of Aerial Photograph, Determination of Scale of Aerial Photograph – Different Methods Interpretation of Aerial Photograph: Stereo pair and Single Image, Estimation of Object Height from Single Vertical Aerial Photograph and Stereo-pair	**4**
	Interpretation of Satellite Image	Interpretation of Satellite Image, Identification of Ground Features, Deriving Land Use and Land Cover Map	**5**
Module-2	Satellite Data	Procurement of Satellite Data, Satellite Data Products and Formats	**3**
	Onscreen Demonstration of Handling Satellite Data	Onscreen Demonstration of Handling Satellite Data with Image Processing Software	**3**

References:

13. Bhatta , B., (2008): Remote Sensing and GIS, Oxford University Press, New Delhi.
14. Campbell, J. B., (2007): Introduction to Remote Sensing, Guildford Press
15. Hord R.M.,(1989): Digital Image Processing of Remotely Sensed Data, Academic, New York.
16. Jensen, J. R., (2005): Introductory Digital Image Processing: A Remote Sensing Perspective, Pearson Prentice-Hall.

17. Jensen, J. R.,(2007): Remote Sensing of the Environment: An Earth Resource Perspective, Prentice-Hall Inc, New Jersey.
18. Joseph, G.,(2005): Fundamentals of Remote Sensing, United Press India.
19. Kumar, Dilip, Singh, R.B. and Kaur, Ranjeet.,(2019): "Spatial Information Technology for Sustainable Development Goals", Springer.
20. Li, Z., Chen, J. and Batsavias, E., (2008): Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences, CRC Press, Taylor and Francis, London
21. Lillesand, T. M., Kiefer R. W. and Chipman, J. W., (2004): Remote Sensing and Image Interpretation, Wiley. (Wiley Student Edition).
22. Mukherjee, S. (2004): Textbook of Environmental Remote Sensing, Macmillan, Delhi.
23. Nag, P. and Kudra, M., (1998): Digital Remote Sensing, Concept, New Delhi.
24. Richards, J. A. and JiaXiuping., (2005): Remote Sensing Digital Image Analysis: An Introduction, 4th Edition, Springer, Verlag, Berlin.

Geography S.Y.GE/OE 2024 Pattern

GGGET-231 Course: Introduction to Disaster Management

No. of Credits: 02 **No. of Periods: 30**

Course Outcomes:

8. Describe concepts of Disaster and its relations with Geography.
9. Explain terminology and concepts of Disaster Management.
10. Implement concepts of hazards in different areas and its Management.
11. Explain important local level disasters i.e., cyclone, flood, landslide and flood.
12. To make the students aware of the need of protection & disaster management.
13. Demonstrate Disaster Management at local level.
14. Suggest methods of protection from disaster and will be able to do disaster management.

Modules	Topic	Subtopics	Periods
1	Hazards, Risk, Vulnerability and Disasters: Definition and Concepts.	vi. Meaning and definition of Hazards and Disasters vii. Geographical conditions and disasters viii. Classification of Disasters. ix. Disasters in India: (a) Causes, Distribution, Impact, Mapping: Flood, Landslide, Drought Earthquake, Tsunami and Cyclone. x. Human induced disasters: Causes, Impact, Distribution and Mapping.	10
2	Concepts in disaster management	Concepts in disaster management iv. Concept of disaster management v. Aims and objectives. vi. Pre-disaster management and Post – disaster management.	06
3	Response and Mitigation to Disasters	Mitigation and Preparedness, NDMA and NIDM; Indigenous Knowledge and Community-Based Disaster Management; Do's and Don'ts During Disasters. Structure of disaster management - Preparedness, Response, Recovery, Mitigation, Rehabilitation. Role of media	08
4	Case Studies of disaster management in India with example	Case Studies of Disaster Management v. Cyclone vi. Floods vii. Droughts	06

	of Maharashtra.	viii. Landslide	

Reference Books:

8. Disaster Management Guidelines, GOI-UND Disaster Risk Program (2009-2012).
9. Damon, P. Copola, (2006) Introduction to International Disaster Management, Butterworth Heineman.
10. Gupta A.K., Niar S.S and Chatterjee S. (2013) Disaster management and Risk Reduction, Role of Environmental Knowledge, Narosa Publishing House, Delhi.
11. Murthy D.B.N. (2012) Disaster Management, Deep and Deep Publication PVT. Ltd. New Delhi.
12. Modh S. (2010) Managing Natural Disasters, Mac Millan publishers India LTD.
13. Mrinalini Pandey (2017) Disaster Management, Wiley India Pvt. Ltd.
14. Tushar Bhattacharya (2018) Disaster Science and Management, McGraw Hill Education (India) Pvt. Ltd.

GGGEP -241 Practicals in Disaster Management

No. of Credits: 02 **No. of Practicals: 15**

Course Outcomes:

After the completion of the course, the students will have the ability to:

1. Understand processes and impact of disaster
2. Understand both natural and man-made disaster and human negligence in the context of the environment
3. Write a fieldwork-based report on Disaster Management to minimize the disaster risk/ Risk from Disaster.

Modules	Topic	Subtopics	Practicals
1	The Project Report based on any two fields-based case studies among following disasters and one disaster preparedness plan of respective college/locality and district:	1. Flood 2. Drought 3. Cyclone and Hailstorms 4. Earthquake and Volcanoes 5. Landslides 6. Human Induced Disasters: Fire Hazards, Chemical, Industrial accidents	**15**

References:

1. Carter, N., (1991): Disaster Management: A Disaster Manager's Handbook. Asian Development Bank, Manila.
2. Government of India (2011): Disaster Management in India. Ministry of Home Affairs, New Delhi.
3. Government of India (2008): Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India
4. Kapur, A., (2010): Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
5. Modh, S., (2010): Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.

GE/OE

ENTREPRENEURIAL SKILLS DEVELOPMENT-I

Course Code –COGET-111 **Course Type –**

Theory Course Name – ENTREPRENEURIAL SKILLS DEVELOPMENT-I

Credit allotted - 2 Credits **Lectures allotted – 30 Lectures**

- **MODULE 1**

UNIT	TITLE	CONTENTS
1	**Recent Trends in Business Communication**	Internet: Email, Websites, Social Media Network (Twitter, Face book, LinkedIn, You tube, WhatsApp) , Google Doc, Google Form, Google Sheet, Google Slide, Google Class Room, Online Conference, Video conferencing, Meeting through Zoom App, Google meet App ,Cisco Webex meetings App.
2	**Writing Formal Mails and Blog writing**	Essential elements of mail, Format of mail. Introduction and meaning of Blog, Writing a blog

➢ MODULE 2

UNIT	TITLE	CONTENTS
3	**Project Formulation -I**	Need for project report Elements of project report Determining project size Selection of place and machineries Determining labour and raw materials Estimation of project cost

REFERENCES:

1. Business Communication, K. K.Sinha, Galgotia Publishing Company, New Delhi.
2. Business Communication, Asha Kaul, Prentice Hall of India, New Delhi.
3. Business Communication, Vasishth Neeru& Rajput Namita, Kitab Mahal, Allahabad
4. Business Organization & Management – C.B. Gupta.

5. Entrepreneurial Development – S.S. Khanna. 8. Organizing and Financing of Small scale Industry – Dr. V. Desai

COURSE OUTCOMES:

- **CO1:** Knowledge of various media of communication
- **CO2:** Develop awareness regarding new trends in business communication
- **CO3:** Aware about writing of project proposal
- **CO4:** Understand structure of Project Report.

EVALUATION PATTERN:

INTERNAL EVALUATION	**15 Marks**
EXTERNAL EVALUATION	**35 Marks**

Students should secure 40% marks in each type of evaluation

PAPER PATTERN:

INTERNAL EVALUATION		**15 Marks**
PAPER PATTERN F.Y. B. Com **ENTREPRENEURIAL SKILLS DEVELOPMENT-I**		Marks: - 20 Marks Time: - 1 hr
Q 1	Fill in the blank with the most appropriate alternative (any 5 out of 7)	[5]
Q 2	Write a short note (any 1 out of 2)	[5]
Q 3	Practical Problem (any 1 out of 2)	[10]
	TOTAL	**20**
	20 marks converted in to - 10 Marks (Assignment, Open book test, Group Discussion) 05 Marks	**Total Internal Evaluation 15 Marks**

EXTERNAL EVALUATION		**35 Marks**
PAPER PATTERN F.Y. B. Com **ENTREPRENEURIAL SKILLS DEVELOPMENT-I**		Marks: - 35 Marks Time :- 2 hrs
Q 1	Answer in ONE sentence (any 5 out of 7)	[5]
Q 2	Write a short notes (any 2 out of 3)	[10]
Q 3	Practical Problem (any 2 out of 3)	[10]
Q 4	Practical Problem (any 1 out of 2)	[10]
	TOTAL	**[35]**

GE/OE

ENTREPRENEURIAL SKILLS DEVELOPMENT-II

Course Code –COGET-121 **Course Type –**

Theory Course Name – ENTREPRENEURIAL SKILLS DEVELOPMENT-II

Credit allotted - 2 Credits **Lectures allotted – 30 Lectures**

- **MODULE 1**

UNIT	TITLE	CONTENTS
1	**Initiation of Project**	Procedure for setting of an enterprise as per local requirement Registration and legal formalities of firm, Investment procedure Identification of Financial Agencies and bank
2	**Project Formulation- II**	Break Even Analysis and Profitability. Time schedule, project monitoring and review techniques. (Network Analysis) Requirements of banks and financial institutions , Project Appraisal

- **MODULE 2**

UNIT	TITLE	CONTENTS
3	**Project Report Proposal**	General information, Executive summary, Organisational summary, Project description, Capital structure and operating cost, Management plan, Financial aspects

REFERENCES:

1. Business Organization and system – Dr.M.V.Gite, Dr.R.D.Darekar, Prof.S.N.Nanaware, Dr.V.D. Barve- Success Publication,Pune
2. Business Environment - F. Cherunilam
3. Business Organization & Management – C.B. Gupta.
4. Entrepreneurial Development – S.S. Khanna. 8. Organizing and Financing of Small scale Industry – Dr. V. Desai

COURSE OUTCOMES:

CO1: Knowledge of various media of communication
CO2: Develop awareness regarding new trends in business communication
CO3: Gain the fundamental knowledge about project proposal
CO4: Understand financial aspects of project report.

EVALUATION PATTERN:

INTERNAL EVALUATION	**15 Marks**
EXTERNAL EVALUATION	**35 Marks**

Students should secure 40% marks in each type of evaluation

PAPER PATTERN:

EXTERNAL EVALUATION **PAPER PATTERN** F.Y. B. Com **ENTREPRENEURIAL SKILLS DEVELOPMENT-II**		**35 Marks** Marks: - 35 Marks Time :- 2 hrs
Q 1	Answer in ONE sentence (any 5 out of 7)	[5]
Q 2	Write a short notes (any 2 out of 3)	[10]
Q 3	Practical Problem (any 2 out of 3)	[10]
Q 4	Practical Problem (any 1 out of 2)	[10]
	TOTAL	**[35]**

INTERNAL EVALUATION **PAPER PATTERN** F.Y. B. Com **ENTREPRENEURIAL SKILLS DEVELOPMENT-II**		**15 Marks** Marks: - 20 Marks Time: - 1 hr
Q 1	Fill in the blank with the most appropriate alternative (any 5 out of 7)	[5]
Q 2	Write a short note (any 1 out of 2)	[5]
Q 3	Explain in Brief (any 1 out of 2)	[10]
	TOTAL	**20**
	20 marks converted in to - 10 Marks (Assignment, Open book test, Group Discussion) 05 Marks	**Total Internal Evaluation 15 Marks**