



**GURU KASHI
UNIVERSITY**
PUNJAB - INDIA

Program Syllabus Booklet

Doctor of Philosophy In Civil Engineering (PhD CE-184)



Session: 2022-23

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Program Name: Doctor of Philosophy in Civil Engineering

Program Code: 184

The Program Outcomes (Pos) for the Program Doctor of Philosophy in Civil Engineering are as follows:

PO	Statement
PO1	Solve an original research problem in the field of Computer Science & Engineering
PO2	Develop the ability to solve all aspects of the problem comprehensively, analyze the results to suggest valid solutions..
PO3	Apply the theories, methodologies and knowledge to come up acceptable solutions of research problems related to real-life scenarios.
PO4	Use research-based knowledge and research methods including design of experiments analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	Apply reasoning informed by the contextual knowledge to assess societal, health, safety legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.



PO11	Design and impart solutions to meet the desired requirements of the public health and safety, and the cultural, societal, and environmental considerations.
PO12	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

The Program Specific Outcomes (PSOs) for the Program Doctor of Philosophy in Civil Engineering are as given below:

PSO	Statement
PSO1	Enhancing the employability skills by making the students capable of qualifying National level competitive examinations.
PSO2	Inculcating in students technical competencies to deal with practical aspects of civil engineering.
PSO3	Enforcement of environmental legislation and Public awareness related to civil engineering.

Annexure-2

Course Work										
Study Scheme										
Sr.	Subject Code	Subject Name	Type of Subject T/P	(Hours Per Week)			No. of Credits	Internal Marks	External Marks	Total Marks
				L	T	P				
1	180101	Research Methodology	T	4	0	0	4	50	50	100
2		Elective-I	T/P	1	0	2	2	100	NA	100
3	180104	Research and Publication Ethics	T/P	1	0	2	2	50	50	100
4	184101	Recent Advances in Civil Engineering	T	4	0	0	4	50	50	100
5	184102	Seminar	P	NA	NA	NA	2	100	NA	100
Total No. of Credits				14						

Elective-I (Select one of the following subject)

Sr.	Subject Code	Subject Name	Type of Subject T/P	(Hours Per Week)			No. of Credits	Internal Marks	External Marks	Total Marks
				L	T	P				
1	180102	Computer Applications in Research	T/P	1	0	2	2	100	NA	100
2	180105	Statistical Methods	T	3	0	0	3	50	50	100
3	180106	Technical Writing, Communication Skills and Library and Information Services	T	3	0	0	3	50	50	100

Course Name: Research Methodology
Course Code: 180101

Credit: 4

L T P
4 0 0

Course Outcomes: On successful completion of this course, the students will able to:

CO	Statement
CO1	To develop understanding of the basic framework of research process.
CO2	To develop an understanding of various research designs and techniques.
CO3	To identify various sources of information for literature review and data collection.
CO4	To develop an understanding of the ethical dimensions of conducting applied research
CO5	Appreciate the components of scholarly writing and evaluate its quality

Course Content

1) Research

Objectives of Research, Research Types, Research Methodology, Research Process – Flow chart, description of various steps, Selection of research problem.

2) Research Design

Meaning, Objectives and Strategies of research, different research designs, important experimental designs, Completely randomized, Randomized block, Latin Square, Factorial Experimental Design.

3) Methods of Data Collection

Types of data collection and classification, Observation method, Interview Method, Collection of data through Questionnaires, Schedules.

4) Processing and Analysis of Data:

Editing, Coding, Classification of data

Statistical measures and their significance: Central tendencies, Variation, Skewness, Kurtosis. Correlation and Regression , Multiple Regression, Time Series Analysis,

Parametric tests (t, z and F) , Chi Square test.

Analysis of Variance, One - way ANOVA

Factor Analysis, Centroid Method .

Computer simulations using MATLAB/SPSS

5) Probability Distributions

Binomial , Poisson , Exponential , Normal distributions, Frequency distribution, Cumulative Frequency distribution, Relative Frequency distribution.

6) Sampling Methods:

Different methods of Sampling : Probability Sampling methods , Random Sampling, Systematic Sampling, Stratified Sampling, Cluster Sampling and Multistage Sampling.

Non Probability Sampling methods, Sample size.

7) Testing of Hypotheses:

Testing of Hypotheses concerning Mean(s), Testing of Hypotheses concerning Proportion (s),

Testing of Hypotheses concerning Variance(s)

8) Report Writing and Presentation:

Types of reports, Report Format – Cover page, Introductory page, Text, Bibliography, Appendices, Typing instructions, Oral Presentation.

References:

1. Montgomery, Douglas C. (2007), ‘Design and Analysis of Experiments’, (Wiley India)
2. Montgomery, Douglas C. & Runger, George C. , ‘Applied Statistics & Probability for Engineers’ (Wiley India)
3. Kothari C.K. (2004), ‘Research Methodology- Methods and Techniques’ (New Age International, New Delhi)
4. Krishnaswamy, K.N., Sivakumar, Appa Iyer and Mathiranjana M. , ‘Management Research Methodology; Integration of Principles, Methods and Techniques’ (Pearson Education, New Delhi)
5. Chawla ,Deepak ,Sondhi ,Neena, ‘Research Methodology Concepts and Cases’, Vikas Publishing House Pvt Ltd ,New Delhi.

The mapping of PO/PSO/CO attainment is as follows:

PO/PSO/CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	1	2	2	2	2	-	2	2	2	2	2	2	2	2	1
CO2	2	2	2	2	1	2	2	2	2	2	1	2	2	2	2
CO3	2	2	2	2	2	2	2	2	-	2	2	-	2	1	1
CO4	2	2	2	2	2	2	-	1	2	2	1	2	1	2	2
CO5	1	2	2	1	2	-	2	2	2	2	2	2	2	2	2
Average	1.6	2	2	1.8	1.8	2	2	1.8	2	2	1.6	2	1.8	1.8	1.6

The correlation levels are: “1” – Low Correlation, “2” – Medium Correlation, “3” – High Correlation and “-” indicates there is no correlation.

Elective -1

Computer Applications in Research (180102)

Credit: 3

**L T P
1 0 2**

Course Outcomes: On successful completion of this course, the students will able to :

CO	Statement
CO1	Work efficiently with a variety of contemporary, industry-standard Office Productivity software products that are commonly used in research
CO2	Apply a variety of advanced spreadsheet, operating system and word processing functions, SPSS Tool
CO3	Use the SPSS Tool to perform a number of advanced spreadsheet, operating system, and word processing activities
CO4	Use various anti-plagiarism software to detect plagiarism
CO5	Use reference management software to keep track of standard referencing styles such as IEEE, MLA, and APA

Course Contents

Module:1 Generating Charts/Graphs in Microsoft Excel, Power Point Presentation, Web search, Use of Internet and www. Using search lie Google etc.

Module:2 SPSS concepts and its use for Statistical Analysis.

Module:3 MatLab and its use for Statistical Analysis.

Module:4 Introduction to the use of LaTeX, Mendeley, Anti-Plagiarism Softwares .

References:-

1) S. Jain (2007). *MS-Office Training Guide*, (BPB Publications).

2) Bansal , R. K. and others(2016). *MATLAB and its applications in Engg.* Second Edition, Pearson



3) Sabine handan & Brian S. Everitt(2013). *A Handbook of Statistical Analysis using SPS*, ,Chapman & Hall / CRC Publication, USA

The mapping of PO/CO attainment is as follows:

PO/PSO/CO	PO 1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	1	2	1	2	-	-	2	2	3	2	2	3	3
CO2	1	2	2	2	2	3	-	-	2	1	3	3	2	2	2
CO3	2	2	3	3	2	2	-	-	2	3	2	2	2	3	2
CO4	2	3	3	2	2	1	-	1	3	2	2	2	3	2	2
CO5	3	1	2	2	3	2	1	-	2	3	2	2	2	1	2
Average	2	2	2.2	2.2	2	2	1	1	2.2	2.2	2.4	2.2	2.2	2.2	2.2

The correlation levels are: “1” – Low Correlation, “2” – Medium Correlation, “3” – High Correlation and “-” indicates there is no correlation.

**Elective-I
Statistical Methods (180105)**

Credits: 02

L T P

1 0 2

Course Outcomes: On successful completion of this course, the students will able to :

CO	Statement
CO1	Work efficiently with a variety of contemporary, industry-standard Office Productivity software products that are commonly used in research
CO2	To identify various sources of information for literature review and data collection.
CO3	Develop a professional work habits, including those necessary for effective collaboration and cooperation with other students, instructors and Service Learning contact representatives.
CO4	Use various anti-plagiarism software to detect plagiarism
CO5	To develop an understanding of the ethical dimensions of conducting applied research

Probability distribution: uniform, binomial, Poisson, geometric, hyper geometric, negative binomial, multinomial, normal, exponential, Cauchy, Gamma, Beta, Weibull, log normal, logistic and Pareto. Compound and truncated distributions: Central and non-central z, t and F. Bivariate normal. Distribution of quadratic forms and r-the order statistic.

Practical: Random experiments. Moments, Correlation and regression, Fitting of binomial, Poisson, normal, hyper geometric and negative binomial, Truncated binomial and Poisson. Log normal.

The mapping of PO/CO attainment is as follows:

PO/PSO/CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	2	1	2	-	-	2	2	3	2	2	3	3
CO2	2	3	2	2	2	3		-	2	1	3	3	2	-	2
CO3	2	3	3	3	2	2	-	-	3	3	2	2	3	3	2
CO4	2	3	3	2	2	2	-	1	3	2	2	-	3	2	2
CO5	3	1	1	2	3	2	1	-	2	2	2	2	2	1	3
Average	2.2	2.4	2.2	2.2	2	2.5	1	1	2.4	2	2.4	2.3	2.4	2.3	2.4

The correlation levels are: “1” – Low Correlation, “2” – Medium Correlation, “3” – High Correlation and “-” indicates there is no correlation.

Elective-I

Technical Writing, Communication Skills and Library and Information Services

(180106)

Credits: 03

L T P

3 0 0

Course Outcomes: On successful completion of this course, the students will be able to:

CO	Statement
CO1	Understand the professional writing by studying management communication contexts and genres, researching contemporary business topics, analyzing quantifiable data discovered by researching, and constructing finished professional workplace documents.
CO2	Recognize, explain, and use the formal elements of specific genres of organizational communication: white papers, recommendation and analytical reports, proposals, memorandums, web pages, wikis, blogs, business letters, and promotional documents.
CO3	Understand the ethical, international, social, and professional constraints of audience, style, and content for writing situations a) Among managers or co-workers and colleagues of an organization, and b) between organizations, or between an organization and the public.



CO4	Learn how to apply technical information and knowledge in practical documents for a variety of a) Professional audiences (including peers and colleagues or management) and b) public audiences.
CO5	Develop a professional work habits, including those necessary for effective collaboration and cooperation with other students, instructors and Service Learning contact representatives.

Course Contents

Theory: Technical Writing-Various forms of technical writing-theses, technical papers, reviews, electronic communication etc; qualities of technical writing; parts of research communications- title page, content page, authorship, preface, introduction, review of literature, materials and methods, experimental results, documentation; photographs and drawings with suitable captions; pagination; citations; writing of abstracts; précis; synopsis; editing and proof reading.

Communication Skills-defining communication; types of communication- verbal and non- verbal; assertive communication; assertive 445 communication; using language for effective communication; techniques of dyadic communication- message pacing and message chunking, self disclosure, mirroring, expressing conversational intent; paraphrasing; vocabulary building- word roots, prefixes, Greek and Latin roots.

Practical:Editing and Proof reading technical articles; using language tools for effective writing; listening to audio-video conversations aimed at testing the comprehension of the students; oral presentations on a given topic related to agriculture; evaluation of body language and communication skills based on group discussions and interviews; role plays and pronunciation exercises; using eye contact and visual clues for effective listening skills; word stress application and voice modulation; soft skills; rhetoric skills; self-assessment exercises.

Introduction to Library and its services; Five laws of library science; type of documents; classification and cataloguing; organization of documents; sources of information-primary, secondary and tertiary; current awareness and SDI services; tracing information from reference sources; library survey; preparation of bibliography; use of Online Public Access Catalogue; use of CD-ROM databases and other computerized library services, CeRA, J- Gate; use of Internet including search engines and its resources; e-resources and access methods.

The mapping of PO/CO attainment is as follows:

PO/PSO/CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	2	1	2	-	-	2	2	3	2	2	3	3
CO2	2	3	2	2	2	3	-	-	2	1	3	3	2	-	2
CO3	2	3	3	3	2	2	-	-	3	3	2	2	3	3	2
CO4	2	3	3	2	2	2	-	1	3	2	2	-	3	2	2
CO5	3	1	1	2	3	2	1	-	2	2	2	2	2	1	3
Average	2.2	2.4	2.2	2.2	2	2.5	1	1	2.4	2	2.4	2.3	2.4	2.3	2.4



The correlation levels are: “1” – Low Correlation, “2” – Medium Correlation, “3” – High Correlation and “-” indicates there is no correlation.

Research and Publication Ethics (180104)

Credit: 2

L T P

1 0 2

Course Outcomes: On successful completion of this course, the students will able to :

CO	Statement
CO1	Apply knowledge of ethics in Computer Science and Engineering
CO2	Implement ethics with respect to science and research
CO3	Write publication ethics for research publications.
CO4	Analyze database records and research metrics for future implementation.
CO5	Construct ethical aspects of research and development work.

Course Contents

Unit- I

Philosophy And Ethics

1. Introduction to philosophy: definition, nature and scope, concept, branches
2. Ethics: definition, moral philosophy, nature of moral judgements and reactions

Unit- II

Scientific conduct

1. Ethics with respect to science and research
2. Intellectual honesty and research integrity
3. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
4. Redundant publications: duplicate and overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data



Unit- III

Publication Ethics

1. Publication ethics: definition, introduction and importance
2. Best practices / standards setting initiatives and guidelines: COPE, WAME, etc.
3. Conflicts of interest
4. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types
5. Violation of publication ethics, authorship and contributorship
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and journals

Unit- IV

: Open Access Publishing

1. Open access publications and initiatives
2. SHERPA/ROMEO online resource to check publisher copyright & self-archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

Unit- V

Publication Misconduct

- A. Group Discussions (2 hrs.)
1. Subject specific ethical issues, FFP, authorship
 2. Conflicts of interest
 3. Complaints and appeals: examples and fraud from India and abroad
- B. Software tools (2 hrs.)
- Use of plagiarism software like Turnitin, Urkund and other open source software tools

Unit- VI

Databases And Research Metrics

- A. Databases (4 hrs.)
1. Indexing databases
 2. Citation databases: Web of Science, Scopus, etc.
- B. Research Metrics (3 hrs.)
1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
 2. Metrics: h-index, g-index, i10 index, altmetrics

The mapping of PO/CO attainment is as follows:

PO/PSO/CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	2	2	1	2	-	-	2	2	3	2	2	3	3
CO2	1	3	2	2	2	3		-	2	1	3	3	2	-	2



CO3	2	3	1	3	2	2	-	-	3	3	2	2	2	3	2
CO4	2	3	3	2	1	2	-	1	3	2	2	-	2	2	2
CO5	2	1	1	2	3	2	1	-	2	2	2	2	2	1	1
Average	2.0	2.2	2.0	2.1	2	2.2	1	1	2.2	2	2.0	2.1	2.4	2.3	2.2

The correlation levels are: “1” – Low Correlation, “2” – Medium Correlation, “3” – High Correlation and “-” indicates there is no correlation.

Course: Recent Advances in Civil Engineering (184101)

Credit: 4

**L T P
4 0 0**

Course Outcomes: On successful completion of this course, the students will able to:

CO	Statement
CO1	To develop understanding of Civil Engineering Construction Materials
CO2	To develop an understanding Different types of safety measures at a Construction Site
CO3	To develop an understanding of different types of Surveying Techniques.
CO4	To develop an understanding of different types of smart Materials
CO5	To develop an understanding of design of various types of Bridges

Course Contents

Unit-I

Construction Materials: Introduction of Concrete materials, Admixtures, Fly Ash, Polymers, Early Age Properties, Strength, Permeability & Durability. Types and properties of construction materials, Structure of Cement, Strength of cement concrete.

Cement Concrete: Durability of cement concrete, Mix design as per IS-10262, High performance concrete, Light weight concrete, Fiber reinforced concrete, Polymer concrete, High density concrete, Foam concrete, Concrete making materials- (both mineral and chemical). Laboratory testing of Concrete, Roller Compacted Concrete, Self Compacting Concrete and Reactive Powder Concrete.

Unit-II

Construction Quality Construction Quality, Inspection and Testing, Quality Control, Quality Assurance, Total Quality Management, , Benchmarking, concepts of quality policy, standards, manual, third party certification. Safety laws and standards. Safety Hazards and cost effectiveness.

Structural Safety: Safety Management in Construction Industry, Cause of deterioration of concrete structures, Diagnostic methods & analysis, preliminary investigations, experimental investigations using NDT, load testing, and other instrumental methods, Influence on Serviceability and Durability, Maintenance and Repair Strategies, Materials for Repair, Techniques for Repair,- case studies, Concepts of structural safety.

Unit-III



Smart Materials: Review of design philosophy, Concrete as construction material, mix design of light weight concrete, Introduction to Composite and smart materials, classifications and applications, Anisotropic elasticity, thermo–mechanical properties, micro –mechanical analysis, characterization tests. Classical composite lamination theory. Lamina failure theories, Ferrocement, cracking moment and design of Ferrocement elements under tension, Fibre reinforced concrete, polymers in concrete, RPC, SCC, FRSCC and whisper concrete.

Designs: High density and high strength concrete. Repair and Seismic Strengthening of Buildings as per I.S. 13935-1993. Design and Ductile Detailing of R.C.C. Structures as per I.S. 13920-1993. Properties and technique of construction for concrete. Finite Element/ Analytical Modeling.

Bridges: Investigation for Bridges, Standard Specifications for Road Bridges, Reinforced Concrete Bridges, Steel Bridges, Construction and Maintenance of Bridges.

Unit-IV

Surveying: Remote sensing and geographic information system, modern theodolite, total station, auto level, principle of remote sensing, various remote sensors, storing of information as theme layers.

Environment: Environment & Ecology, Type of Pollutants and Protection of Environment, Current issues in Environmental Engineering, Acts/Legislation Provisions, Environmental Impact Assessment, Application of Biotechnology for Environmental Management.

Pavement Design: Introduction, Design of Flexible Pavements, Design of Rigid Pavements, Highway Construction, Highway Maintenance.

References:

1. “Concrete Technology” - Theory and Practice, M.S.Shetty, S.Chand and Company, New Delhi
2. “Properties of Concrete”-Neville, A.M. : , ELBS, London
3. “Reinforced concrete Design”-by Pallai and Menon, TMH Education Private Limited
4. “Reinforced Concrete Structures”, Volume 1, Dr. B. C. Punmia, Ashok Kr. Jain, Arun Kr. Jain,
5. Advanced Mechanics of Solids- Srinath.L.S. : Tata McGraw Hill Publications Co.Ltd., New Delhi.
6. “Finite Element Analysis for Engineering and Technology”- Chadrupatla, Tirupathi R., University Press, India
7. “The Finite Element Method”- Zienkeiwicz. O.C. - Tata McGraw Hill Co. Ltd., New Delhi.
8. P. Kumar Mehta – Concrete – Structure, Properties and Materials, PH, New Jersey, USA 1983.
9. A.M. Neville - “Properties of Concrete” - Longmans, 4th Edition, 1995.
10. IS 10262 “Code of Practice for Concrete Mix Design
11. Sidney, M. Johnson “Deterioration, Maintenance and Repair of Structures”.
12. R.T.Allen and S.C. Edwards, “Repair of Concrete Structures”-Blakie and Sons.
13. 12. Mechanics of Composite Materials and Structures by M. Mukhopadhyaya- Universities Press 2009.
14. Bhagwan D Agarvalm, and Lawrence J Brutman, “Analysis and Performance of Fiber Composites”- John Willy and Sons.
15. Highway Engineering by Khanna and Justo
- 16.Principles, Practice and Design of Highway Engineering by S.K. Sharma
- 17.Handbook of Road Technology by M.G. Lay
- 18.Pavement Analysis and Design by Yang and Huang
- 19.The Design and Performance of Road Pavements by D. Croney and P. Croney
- 20.Peavy, Rowe, Techobanoglous, Environmental Engg. MacGrawHill.



21. Mackenzie L Davis, Environmental Engg. Tata MacGrawHill.
22. Baljeet Kapors Environmental Engg. An overview, Publishers.
23. Essentials of Bridge Engineering by Johnson Victor.
24. A text book of bridge Construction by Khadilkar.
25. Bridge Engg. by Rangwala.

The mapping of PO/PSO/CO attainment is as follows:

PO/PSO/CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	1	2	2	2	2	-	2	2	2	2	2	2	2	2	1
CO2	2	2	2	2	1	2	2	2	2	2	1	2	2	2	2
CO3	2	2	2	2	2	2	2	2	-	2	2	-	2	1	1
CO4	2	2	2	2	2	2	-	1	2	2	1	2	1	2	2
CO5	1	2	2	1	2	-	2	2	2	2	2	2	2	2	2
Average	1.6	2	2	1.8	1.8	2	2	1.8	2	2	1.6	2	1.8	1.8	1.6

The correlation levels are: “1” – Low Correlation, “2” – Medium Correlation, “3” – High Correlation and “-” indicates there is no correlation.

Total Number of Courses	05
Number of Theory Courses	02
Number of Practical Courses	03
Total Number of Credits	14

ACADEMIC INSTURCTIONS

Attendance Requirements

A student shall have to attend 75% of the scheduled periods in each course in a semester; otherwise he / she shall not be allowed to appear in that course in the University examination and shall be detained in the course(s). The University may condone attendance shortage in special circumstances (as specified by the Guru Kashi University authorities). A student detained in the course(s) would be allowed to appear in the subsequent university examination(s) only on having completed the attendance in the program, when the program is offered in a regular semester(s) or otherwise as per the rules.

Assessment of a course

Each course shall be assessed out of 100 marks. The distribution of these 100 marks is given in subsequent sub sections (as applicable).

	Internal (50)					External (50)	Total	
Components	Attendance	Assignment			MST1	MST2	ETE	
		A1	A2	A3				
Weightage	10	10	10	10	30	30	50	
Average Weightage	10	10			30		50	100

Passing Criteria

The students have to pass both in internal and external examinations. The minimum passing marks to clear in examination is 40% of the total marks.