



Estd : 1989

SNMV College of Arts And Science Institute of Management (SHRI NEHRU MAHA VIDYALAYA)

Re-accredited with 'A' Grade by NAAC, An ISO 9001 : 2008 Certified Institution,
(Approved by Govt. Tamil Nadu, AICTE New Delhi & Affiliated to Bharathiar University,
Coimbatore)



Estd.: 1964

2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

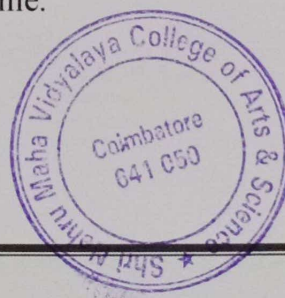
Measuring attainment of POs, PSOs and Cos and the level of attainment of POs, PSOs and COs

Course outcomes identify the unique knowledge and skills expected to be gained from a given course. Programme outcomes are one step broader statements that describe what students are expected to know and be able to do upon the completion of a specific program. These relate to the skills, knowledge and behavior that students acquire. Programme specific outcomes are what the students of a specific programme should be able to do at the time of studying in the programme. Programme outcomes and programme specific outcomes are attained through the attainment of course outcomes.

Measurement of attainment of POs, PSOs and COs is done through formative and summative methods. Continuous and comprehensive evaluation, is done regularly to know the attainment. Class tests are scheduled by the teachers and after the valuation the analysis is done after which the strategy for improvement is made. Group discussions and seminars are organized and each student is made to participate compulsorily in these.

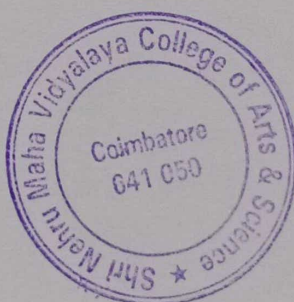
Through the seminars and group discussions, the thinking process of the students is also assessed and the skills and knowledge is tested. Home assignments and classroom assignments are given to the students in Education and all P.G. classes. Some of the undergraduate classes also have the assignments; it helps to measure the attainment programme specific outcomes. Some activities like quiz competition are also held which makes the institution know about the knowledge and information of the students. Via Co-curricular activities also behavioral outcome of the students are assessed. Semester exams for the courses having semester pattern and annual exam for the courses having annual pattern are conducted.

Analysis of students' performance in internal tests is done. Maximum 15 marks are allotted on internal examination and 5 marks on overall performance of the students which is added to their result. Analysis of terminal exam results is also done. After the analysis, strategy for improvement is made and implemented. All the assessments are analyzed regularly. The analysis of students' performance in semester/annual examination is done to know the levels of attainment of POs, PSOs and COs. Each department analyses the result of the students in their subject. The analysis of post graduate courses for each department is also done for the same.



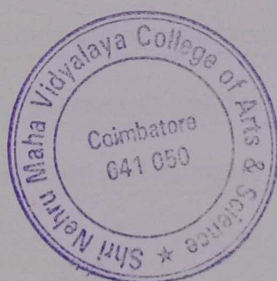
Define Program Outcomes (PO's)

PO	Statement
PO1	Basic And Core Knowledge: Apply the knowledge of Life Science, Physical and Chemical Science, Mathematics, statistics, Computer science and humanities for the attainment of solutions to the problems that come across in our day-to-day life/activities.
PO2	Analysis and Problem Solving : Identify and analyze the problem and formulate solutions for real time problems using the principles of mathematics, natural sciences with appropriate consideration for the public health, safety and environmental considerations.,
PO3	Communication by information Technology: Communicate the fundamental and advanced concepts of their discipline in written and oral form. Able to make appropriate and effective use of information and information technology relevant to their discipline.
PO4	Life-Long Learning: Ability to engage in independent and life-long learning in the broadest context of technological change.
PO5	Ethical, Social and Professional Understanding: Acquire the responsibility to contribute for the personal development and for the development of the community. Respect the ethical values, social responsibilities and diversity.
PO6	Innovative, Leadership and Entrepreneur Skill Development: Able to function as an individual or leader in diverse teams and in multidisciplinary field. Adequate professional skills to become as an entrepreneur by acquiring technical, communicative, problem solving, intellectual skills.



Define Program Specific Outcomes (PSOs')

PSO	Statement
PSO1	Effectively communicating computing concepts and solutions to bridge the gap between computing industry and to create and initiate innovation.
PSO2	Develop sustainable solutions to current and future computing problems, in emerging areas like Cloud and High performance computing, Data analytics and Cyber security.
PSO3	Exhibit their computing expertise within the computing community through corporate leadership, entrepreneurship, and/or advanced graduate study.

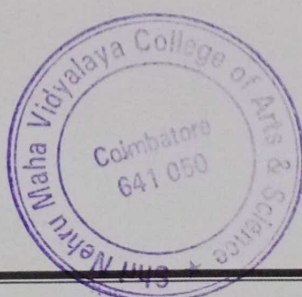


Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs)

Course outcomes

Course Outcome Statement	
SUBJECT CODE & NAME:	13A - C PROGRAMMING
CO'S	COURSE OUTCOMES
CO1	Students will able to understand basic structure of C programs and variables, tokens, operators, and arithmetic expressions
CO2	Students will able to learn if else statements and reading writing a character.
CO3	students can implement the knowledge about the arrays and string concepts
CO4	Students will able to know about user defined functions, structure and union .
CO5	Students will be able to expose the concepts pointers error handling during I/O operations.

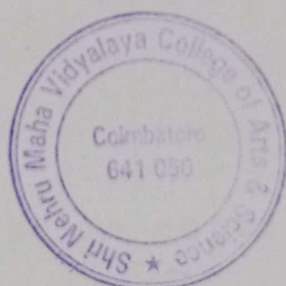
SUBJECT CODE & NAME:	33B-JAVA PROGRAMMING
CO'S	COURSE OUTCOMES
CO1	To indicate knowledge in java programming concepts.
CO2	To provide knowledge in package and applet concepts.
CO3	To enrich the knowledge in multi read and graphics concepts.
CO4	students will able to develop graphics programming
CO5	Students analyze errors and exceptions handling methods.



SUBJECT CODE & NAME:	33A DATA STRUCTURE
CO'S	COURSE OUTCOMES
CO1	Students will able to analyze the basic concepts of data structures and algorithms
CO2	To understand concepts about searching and sorting techniques
CO3	To understand basic concepts about stacks, queues, lists, trees and graphs
CO4	To understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures
CO5	Students will have Ability to summarize searching and sorting techniques

COURSE CODE & NAME:	53A-RELATIONAL DATABASE MANAGEMENT SYSTEM -LAB
COS	COURSE OUTCOMES
CO1	To be educated about data information and information processing.
CO2	To become skilful at SQL queries.
CO3	To understand the concept of Entity Relationship model and Relational Data Base Management System.
CO4	To gain knowledge of PL/SQL.
CO5	To understand the sql queries ,constraints& triggers.

Table 1



CO-PO matrices of courses selected in table 1

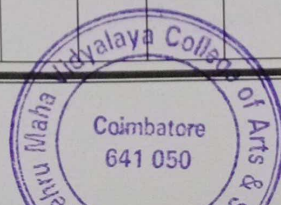
Correlation levels

- “1” – Slight (Low)
- “2” – Moderate (Medium)
- “3” – Substantial (High)
- “-” indicates there is no correlation.

(a) CO-PO matrices of selected courses in table 1

Course	CO-PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3
13A C PROGRAMMING	C01	3	2	-	3	2	2	-	1	2
	C02	3	2	1	-	1	1	2	1	2
	C03	-	3	1	2	-	2	1	2	1
	C04	2	2	2	2	1	1	1	1	-
	C05	1	3	3	2	2	1	1	2	1
	Course level mapping	2.3	2.4	2.0	2.0	2.0	1.0	1.0	1.0	1.0

Course	CO-PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3
33B- JAVA PROGRAMMING	C01	3	3	2	2	1	2	2	2	1
	C02	2	3	2	2	1	3	3	2	1
	C03	2	2	2	1	1	1	1	2	1
	C04	3	3	2	3	1	3	1	2	2
	C05	2	3	1	1	1	2	1	2	1
	Course level mapping	2.4	3.0	2.0	2.0	0.2	2.2	2.0	2.0	2.0



Course	CO-PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3
33A - DATA STRUCTURE	C01	3	2	2	2	1	2	2	2	1
	C02	3	3	2	2	1	2	2	1	1
	C03	2	2	3	2	2	2	1	2	1
	C04	3	2	3	3	2	3	1	1	2
	C05	2	2	1	2	1	2	2	1	3
	Course level mapping	3.0	2.2	2.2	2.2	1.4	2.2	2.0	1.4	2.0

Course	CO-PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO
		1	2	3	4	5	6	1	2	3
53P RELATIONAL DATABASE MANAGEMENT SYSTEM LAB	C01	2	2	3	3	1	2	1	2	1
	C02	2	2	3	2	2	3	1	1	2
	C03	2	2	3	3	2	3	1	2	2
	C04	2	3	3	3	2	3	2	1	3
	C05	2	1	2	2	1	2	2	1	2
	Course level mapping	2.0	2.0	3.0	3.0	2.0	3.0	1.4	1.4	1.6



Program level course-PO matrix

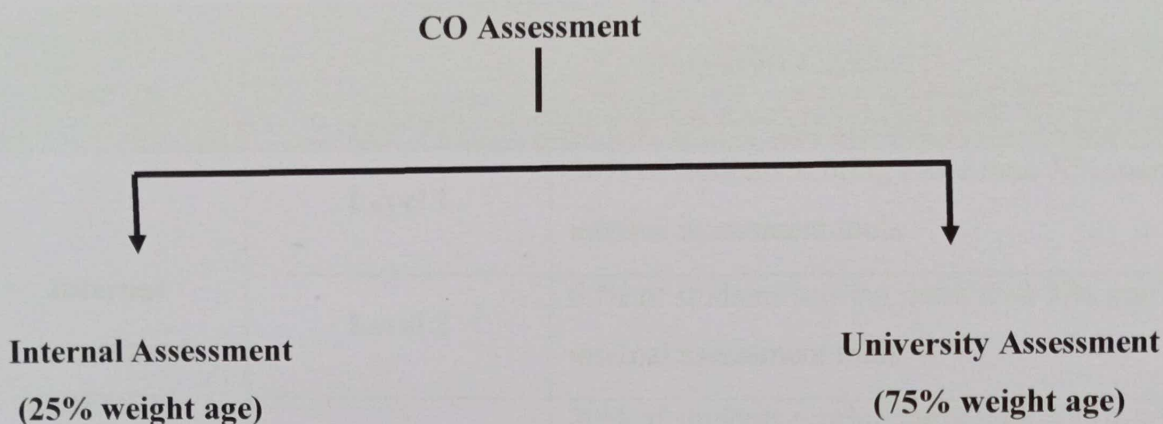
Code	Course	PO 1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
13A	C PROGRAMMING	2.3	2.4	2.0	2.0	2.0	1.0	1.0	1.0	2.0
33B	JAVA PROGRAMMING	2.4	3.0	2.0	2.0	0.2	2.2	2.0	2.0	1.2
33A	DATA STRUCTURE	3.0	2.2	2.2	2.2	1.4	2.2	2.0	1.4	2.0
53P	RELATIONAL DATA BASE MANAGEMENT LAB	2.0	2.0	3.0	3.0	2.0	3.0	1.4	1.4	1.6



Attainment of Course Outcomes

Describe the assessment processes used to gather the data upon which the evaluation of course outcome is based

CO assessment rubrics



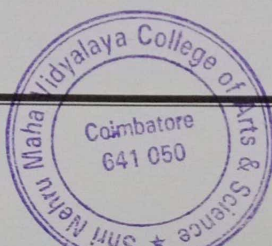
Record the attainment of course outcomes of all courses with respect to set attainment levels
Considering average performance levels in the university examination, attainment level is set as X% for both Internal and University assessments, where X is 40% marks for both University and Internal assessments.

(i) Measuring course outcomes attained through university examinations

Attainment levels of CO's through University examinations

Assessment Methods	Attainment Levels	
University Assessment (THEORY)	Level 1	50% of students scoring more than X% marks in university examination.
	Level 2	60% of students scoring more than X% marks in university examination.
	Level 3	70% of students scoring more than X% marks in university examination.

X is 36% marks for university examination.



(ii) **Measuring CO attainment through internal assessments:**

Attainment levels of CO's through internal assessments (internal tests and assignments)

Assessment Methods	Attainment Levels	
Internal Assessment (THEORY)	Level 1	50% of students scoring more than X% marks in internal assessment tools
	Level 2	60% of students scoring more than X% marks in internal assessment tools
	Level 3	70% of students scoring more than X% marks in internal assessment tools

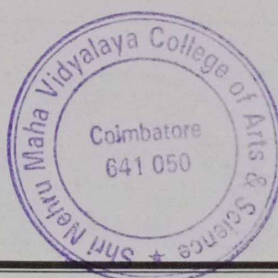
X is 52%marks both for internal tests and assignments.

(iii) **Measuring course outcomes attained through university examinations**

Attainment levels of CO's through University examinations

Assessment Methods	Attainment Levels	
University Assessment (PRACTICAL)	Level 1	50% of students scoring more than X% marks in university examination.
	Level 2	60% of students scoring more than X% marks in university examination.
	Level 3	70% of students scoring more than X% marks in university examination.

X is 50% marks for university examination.



(iv) **Measuring CO attainment through internal assessments:**

Attainment levels of CO's through internal assessments (internal tests and assignments)

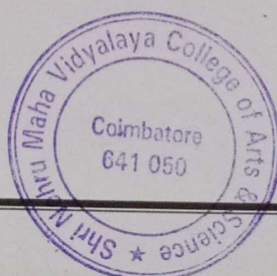
Assessment Methods	Attainment Levels	
Internal Assessment (PRACTICAL)	Level 1	50% of students scoring more than X% marks in internal assessment tools
	Level 2	60% of students scoring more than X% marks in internal assessment tools
	Level 3	70% of students scoring more than X% marks in internal assessment tools

X is 50%marks both for internal tests and assignments.

(v) **CO attainment calculation :**

(i) THEORY: 13A C PROGRAMMING I-SEMESTER / I-YEAR

EXAM PATTERN	ATTAINMENT LEVEL	PERCENTAGE CALCULATION	NO .OF STUDENT PASSED
EXTERNAL	3	70% of students getting 36% of mark	20 students out of 26 students
INTERNAL	3	70% of students getting 52% of mark	26 students out of 26 students



(ii) **PRACTICAL: 53P-RELATIONAL DATABASE MANAGEMENT SYSTEM**
V-SEMESTER / III-YEAR

EXAM PATTERN	ATTAINMENT LEVEL	PERCENTAGE CALCULATION	NO .OF STUDENT PASSED
EXTERNAL	3	70% of students getting 50% of mark	20 students out of 26 students
INTERNAL	3	70% of students getting 50% of mark	26 students out of 26 students

CO-ATTAINMENT VALUE

EXAM PATTERN	COURSE	COURSE CODE	INTERNAL ATTAINMENT	25%	EXTERNAL ATTAINMENT	75%	CO ATTAINMENT
THEORY	C PROGRAMMING	13A	3	0.8	3	2.3	3.1
EXAM PATTERN	COURSE	COURSE CODE	INTERNAL ATTAINMENT	40%	EXTERNAL ATTAINMENT	60%	CO ATTAINMENT
PRACTICAL	RDBMS& ORACLE-LAB	53P	3	1.2	3	1.8	3.0

