

CRITERION 6 – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.5 Internal Quality Assurance System





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6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and process.

**OBE-** Implementation

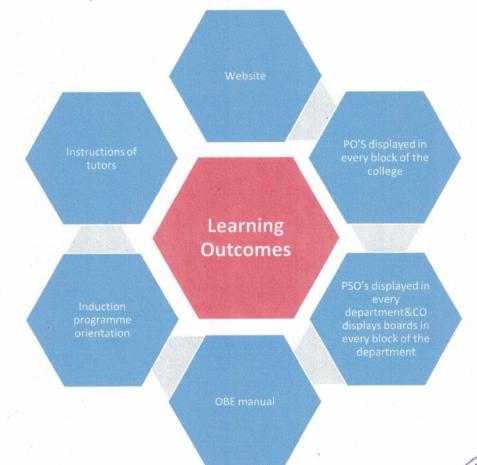
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# **Diverse Pathways for Communicating Learning Outcomes to Student**

The learning outcomes are communicated to students through various channels as follows:

- Induction Programme orientation sessions .
- Website
- Obe manual
- Instructions of tutors in class
- PO display boards in every block of the college
- PSO display boards in every department
- CO displays in each department notice board



Diverse Pathways for Communicating Learning Outcomes to Student OMBANAD

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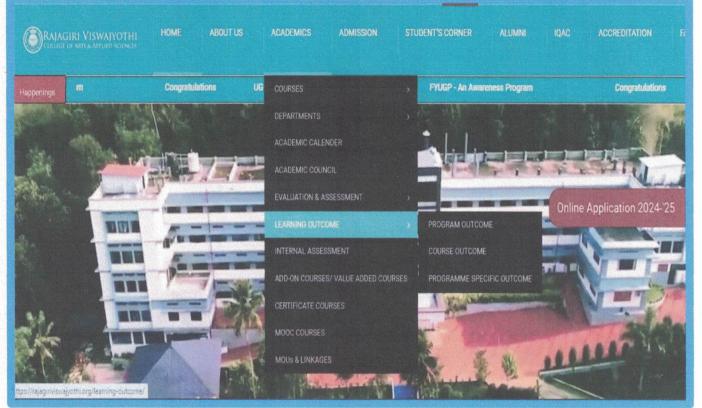
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# POs, PSOs, COs published in college website



POs, PSOs, COs published in RVCAS website





RAJAGIRI VISWAJYOTHI College of Arts & Applied Sciences

Vengoor, Perumbavoor, Kerala - 683546



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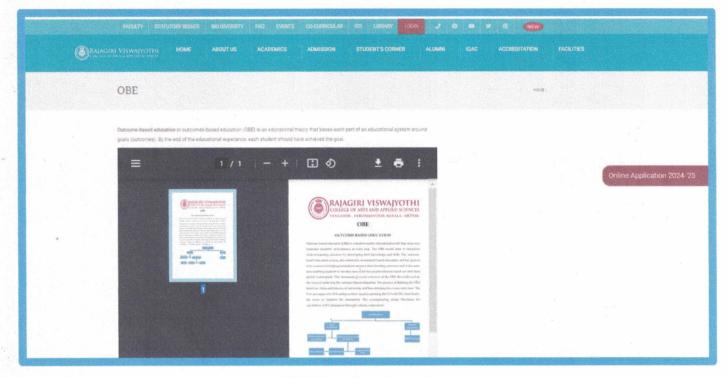




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OBE in college website







# PO display board in every block of the College - Specimen copy



#### PO display board

THE OF ARD KOMBANA VENGOOR PERUMBAYQOR 683 546 RAJAG





# PSO display board in every department - Specimen copy

RAJAGIRI VISWAJYOTHI COLLEGE OF ARTS AND APPLIED SCIENCES VENGOOR : PERUMBAVOOR KERALA - 683546
PROGRAMME SPECIFIC OUTCOMES DEPARTMENT OF BUSINESS ADMINISTRATION At the completion of BBA programme ,the student will be able to
PSO 1
Develop and exhibit analytical skills across multiple domains.
PSO 2
Develop problem-solving skill that enables students to effectively navigate and resolve complex challenges within diverse business and academic contexts.
PSO 3
Apply the different research procedures to solve challenging business problems.
PSO 4
Communicate in a business context in a clear, concise, coherent and professional manner.
GPS Map Camera
Vengoor, Kerala, India 5G4R+68P, Thungali Kaippilly Rd, Vengoor, Kerala 683544, India Lat 10.155039° Long 76.540787°
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### **PSO** display board









**PSO** display board



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# COs displayed on department notice board - Specimen



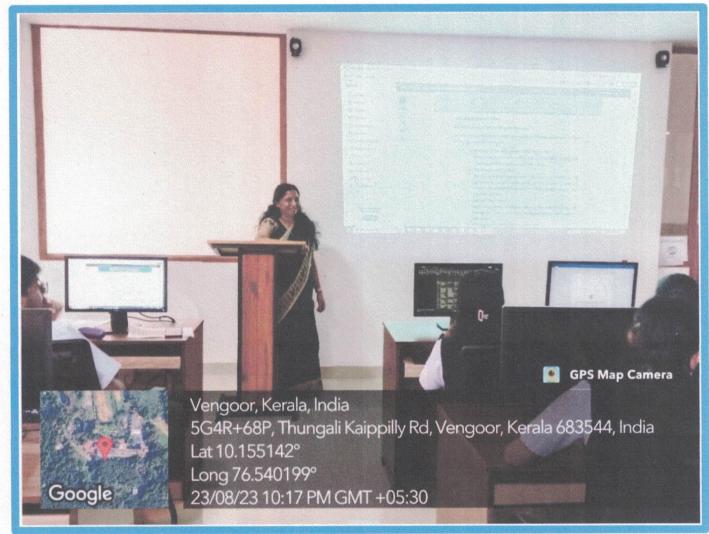
COs displayed on notice board







# Familiarization of PO, PSO, COs to students



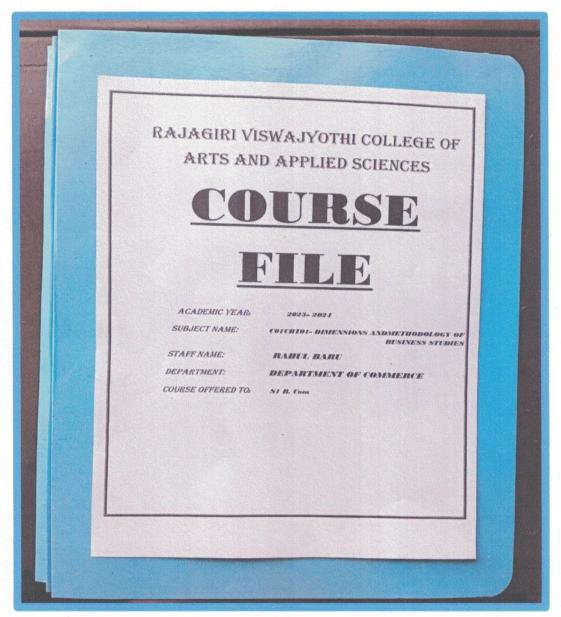
Familiarization of PO, PSO, COs to students







### **Course file- Specimen copy**



Course file specimen copy-

Dimensions and methodology of business studies







#### **RAJAGIRI COLLEGE OF ARTS AND APPLIED SCIENCES**

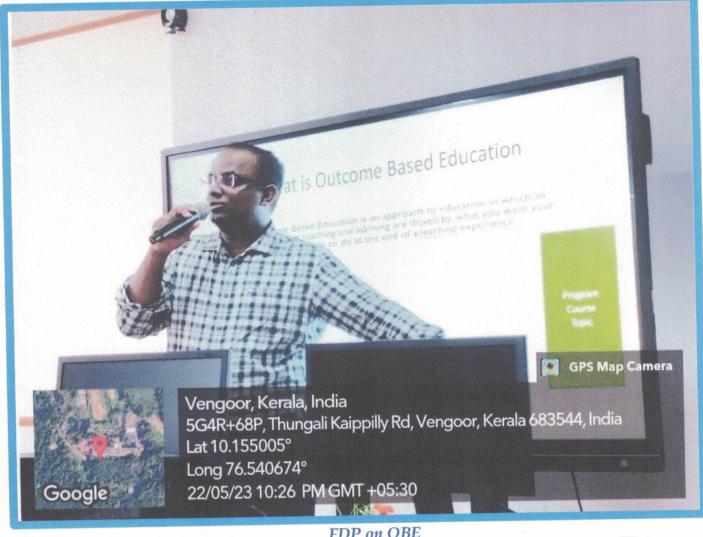
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# Workshops and training on OBE conducted for Teachers



FDP on OBE







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FDP on OBE









#### FDP on OBE



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### FDP Certificate







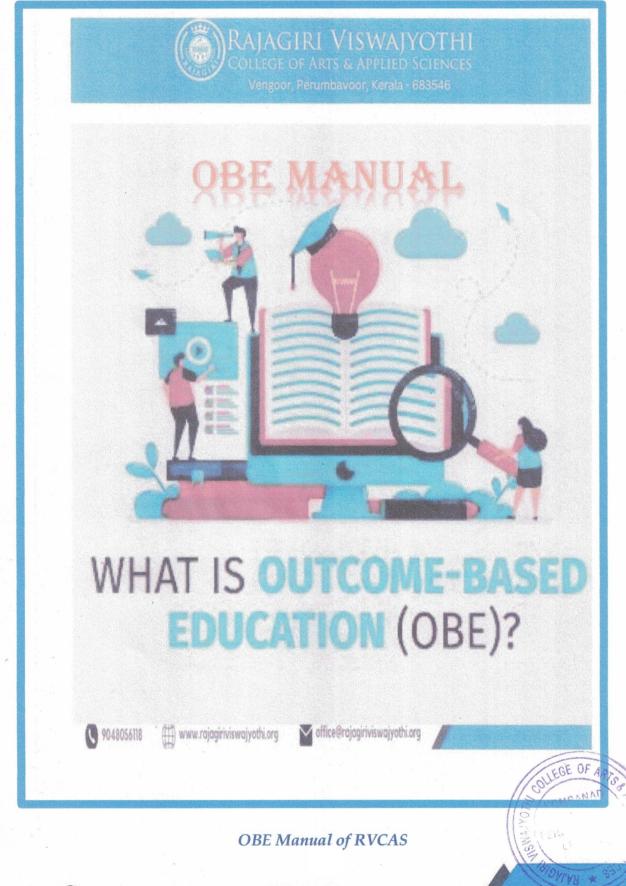








### **OBE Manual**



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#### OUTCOME-BASED EDUCATION MANUAL

#### Introduction

Outcome-Based Education (OBE) is an educational paradigm that brings clarity to the learning process by articulating specific and measurable learning outcomes, providing educators and students with a clear understanding of what is expected. Outcome-Based Education (OBE) is a student-centric teaching and learning methodology in which the course delivery, assessment are planned to achieve stated objectives and outcomes. It focuses on measuring student performance i.e. outcomes at different levels. By aligning educational objectives with real world skills and competencies. OBE ensures that students acquire practical knowledge that is relevant to their future careers.

OBE places a strong emphasis on continuous assessment and feedback, allowing for the measurement of progress towards achieving the specified learning outcomes. This ongoing assessment not only provides valuable insights into individual student performance but also allows for timely intervention and adjustments in teaching strategies. The flexibility inherent in OBE accommodates diverse learning styles and paces, acknowledging the individuality of students and promoting a more personalized learning experience.

Furthermore, OBE establishes a framework for quality assurance within educational institutions. By defining clear outcomes, institutions can assess the effectiveness of their programs and make informed decisions to enhance the overall quality of education. This accountability extends to educators who are held responsible for guiding students towards the achievement of specific learning objectives. Additionally, OBE cultivates a mindset of lifelong learning by not only 3 imparting content knowledge but also fostering critical thinking, problem-solving, and other transferable skills.



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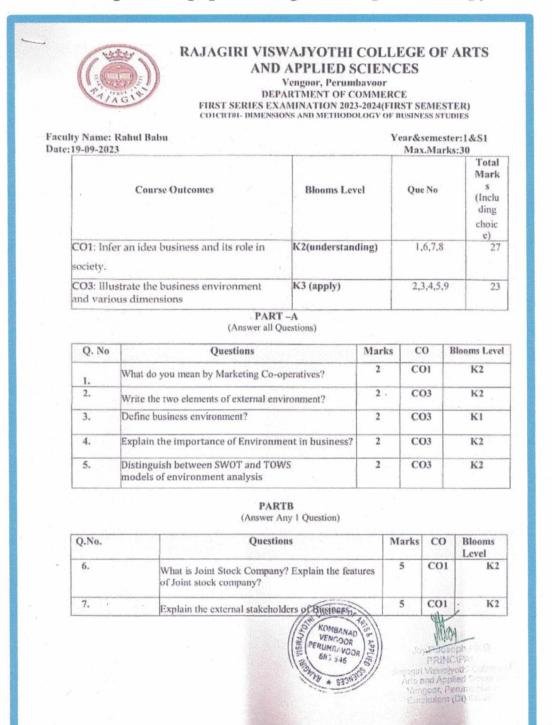


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### **OBE** question paper stating COs - Specimen copy

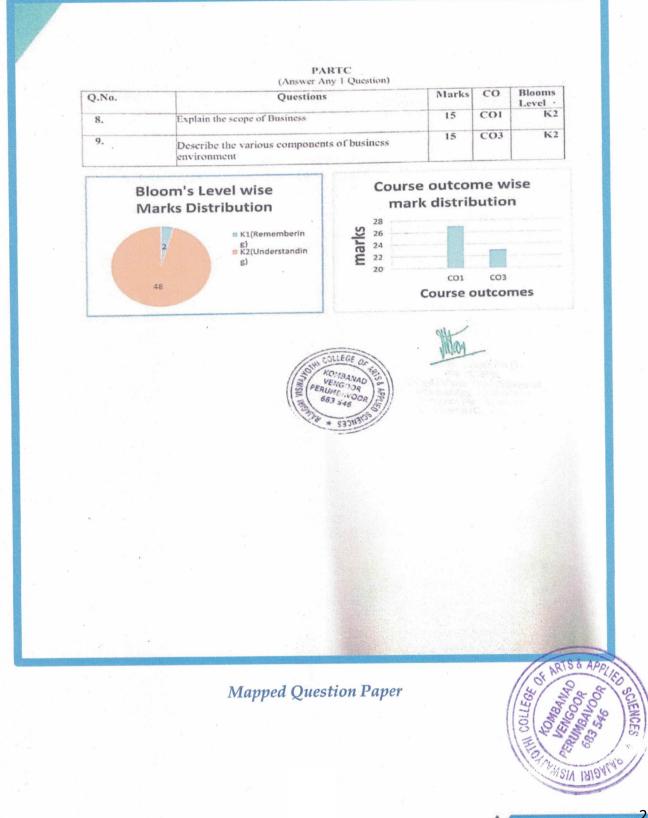


Mapped Question Paper S& AP

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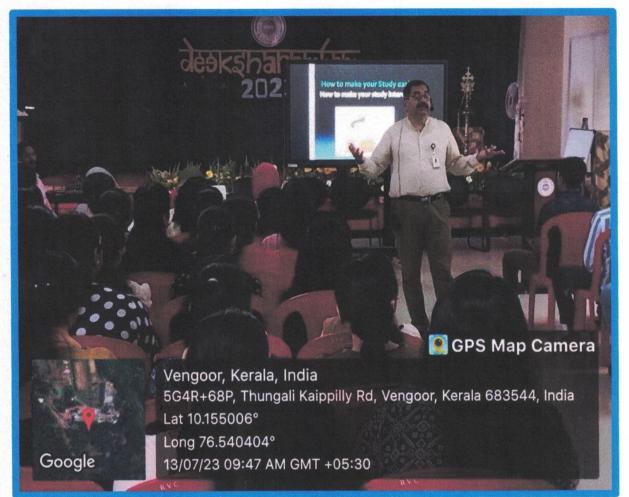
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### First year induction program on PO-PSO-CO



First year induction programme on learning outcomes

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### Attainment calculation method

Program Outcomes (POs), Program-Specific Outcomes (PSOs), and Course Outcomes (COs) are clearly defined for every course offered. Each course's COs are linked to the corresponding POs and PSOs. The evaluation of learning outcomes is conducted using both direct and indirect methods, including an Exit Survey. Direct assessment carries a weightage of 80%, while indirect assessment contributes 20% to the overall evaluation.

- Direct Assessment includes both end-of-semester examinations and continuous internal evaluations. Continuous internal evaluations consist of two internal examinations, assignments or seminars, and attendance, all conducted and monitored by the Higher Education Institution (HEI). The endof-semester examinations are university exams conducted by university.
- Indirect Assessment is based on exit surveys conducted at the end of each course, where students provide feedback on their learning experiences, understanding of course material, and overall satisfaction with instructional approaches.

End-semester assessment results are equally mapped to each Course Outcome (CO). For in-semester assessments, four components are defined in alignment with university rules. Internal examination questions are thoughtfully crafted to align with Bloom's Taxonomy and appropriately map to the COs. Student marks are diligently recorded and entered. Additionally, assignments, seminars, attendance, and other activities are carefully designed to align with the intended learning outcomes through meticulous mapping.

To determine the examination attainment levels of the courses, RVCAS has established a threshold value system.

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The students are categorized into three groups: those scoring between 40 to 49 percent (weighted as 1), 50 to 59 percent (weighted as 2), and 60 percent and above (weighted as 3) for both Continuous Internal Assessments and Summative Examinations. Both Continuous Internal Assessments and Summative Examinations carry equal weight, each valued at 0.5. The examination attainment of Course Outcomes is then calculated as the sum of the Continuous Internal Assessment weightage multiplied by the CIA threshold value and the Summative weightage multiplied by the Summative Examinations' threshold value (0.5 x CIA threshold value + 0.5 x Summative Examinations' threshold value).

In the third stage, the college evaluates the direct attainment of each Course Outcome (CO) concerning Programme Outcomes (PO) and Programme Specific Outcomes (PSOs) using the following formula:

# Direct attainment = Course Attainment Level \* Mean value of the Concerned PO or **PSO**

In the indirect method, the alignment of Course Outcomes is validated with Programme Outcomes and Programme Specific Outcomes through Course Exit survey.

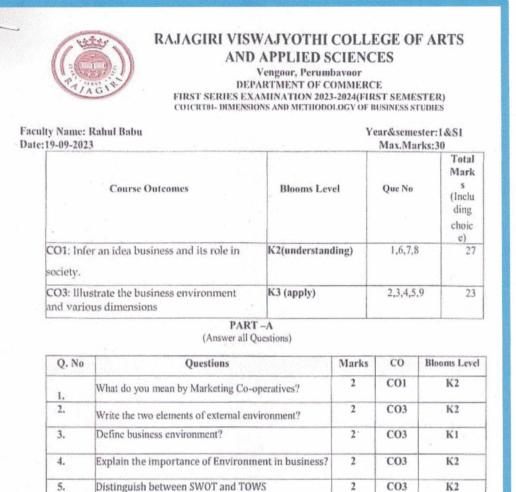
Finally, the overall attainment is calculated using the following formula:

Overall attainment = [(Assumed Test Weightage \* Direct Attainment Value) + (Assumed Feedback Weightage \* Feedback Value)].









PARTB	
(Answer Any I	Question)

models of environment analysis

Q.No.	Questions	Marks	CO	Blooms Level
6.	What is Joint Stock Company? Explain the features of Joint stock company?	5	C01	K2
7. ,	Explain the external stakeholders of Business	5	CO1	; K2



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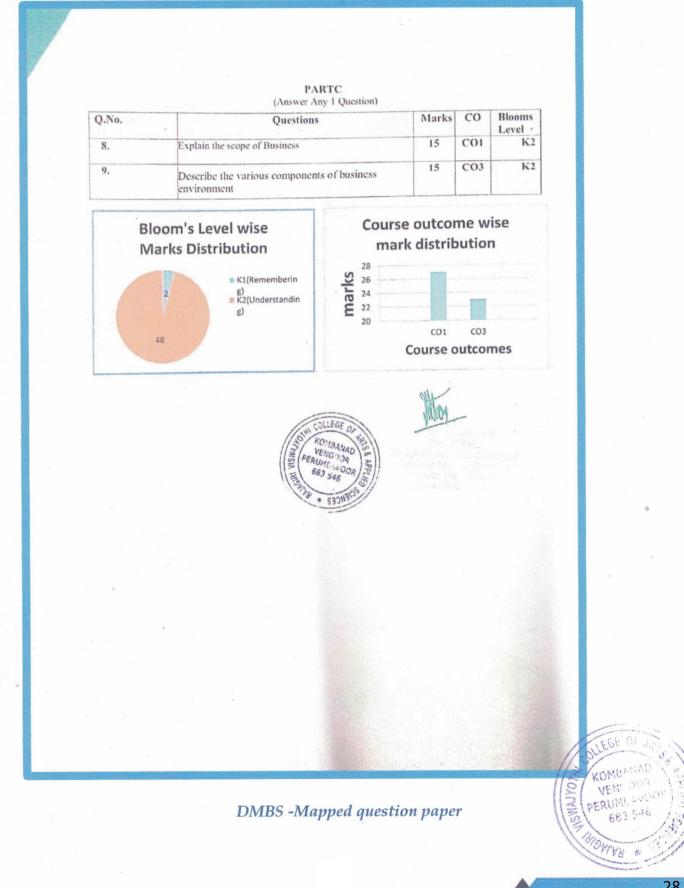
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#### RAJAGIRI VISWAJYOTHI COLLEGE OF ARTS AND APPLIED SCIENCES Vengoor, Perumbavoor DEPARTMENT OF BCA FIRST SERIES EXAMINATION 2023-2024(FIRST SEMESTER)

#### MM1CMT03 DISCRETE MATHEMATICS (1)

Faculty Name: SARITHA P N

Year & Semester: 1&S1

15-09-2023		Max. Marks	:30
Course Outcomes	Blooms Level	Que No	Total Marks (Includin choice)
CO1: Understand and apply propositional logic, including propositional equivalence predicates, quantifiers, and rules of inference	,K3(Apply)	1,2,6,8	24
CO2: Define and manipulate sets, perform set operations, and analyze functions, sequences, and summations	K2 (Understand) K3 (Apply ) K4 (Analyze)	3,4,5,7,9	26

#### PART –A (Answer all Questions)

Q. No	Questions	Marks	СО	Blooms Level
1.	Explain proposition with example	2	-C01	K2
2.	Explain Tautology and contradiction	2	CO1	K2
3.	Describe cartesian product of two sets and also find the cartesian product of $A=\{1,2\}$ and $B=\{a, b, c\}$	2	CO2	K2
4.	Explain One- to- One and Onto function.	2	CO2	K2
5.	Describe ordered n-tuple.	2	CO2	K2

#### PARTB

(Answer Any 1 Question)

Questions	Marks	СО	Blooms Leve
Show that $p \lor (q \land r)$ and $(p \lor q) \land (p \lor r)$ are logically equivalent	5	COI	K3
Show that set of all integers is a commence of the set of all integers is a commence of the set of	5	CO2	K3
	Show that $p \lor (q \land r)$ and $(p \lor q) \land (p \lor r)$ are logically equivalent Show that set of all integers is a command theo $p \lor F_{FRUM} OR = p$	Show that $p \lor (q \land r)$ and $(p \lor q) \land (p \lor r)$ are logically equivalent Show that set of all integers in recommander we for $p \lor p$ 5 $p \lor p \lor p \lor p$ 5	Show that $p \lor (q \land r)$ and $(p \lor q) \land (p \lor r)$ are logically equivalent Show that set of all integers in a countrable weak $f \land countrable weak of a limit of a lim$

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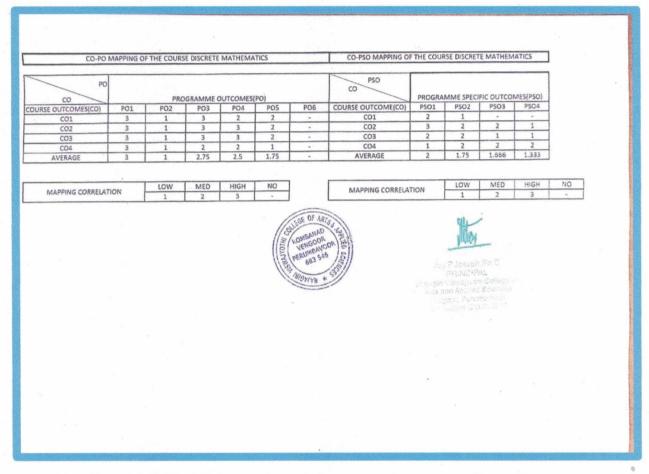
Vengoor, Perumbavoor, Kerala - 683546

Q.No.	(Answer Any 1 C Questio	and the second se	Marks	CO	Blooms Level
8.	<ul> <li>(a)Define simple and compositions</li> <li>(b)Construct the truth table conjunct of two propositions</li> <li>(b)Construct the truth table for contrapositive of p → q</li> <li>(c)Let p and q be the propositions the New Jersey shore is allow been spotted near the shore".</li> </ul>	and propositions and anction and disjunction or inverse ,converse and tions p:" Swimming at ved". q:" Sharks have Construct the	15	CO1	К3
9.	sentence $p \rightarrow \neg q$ Explain sequences and summ special integer sequences wit	nation. Also explain h examples.	15	CO2	К3
	coi co2 Course outcomes	40	and the second sec	·	-
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# CO-PO&CO-PSO Mapping

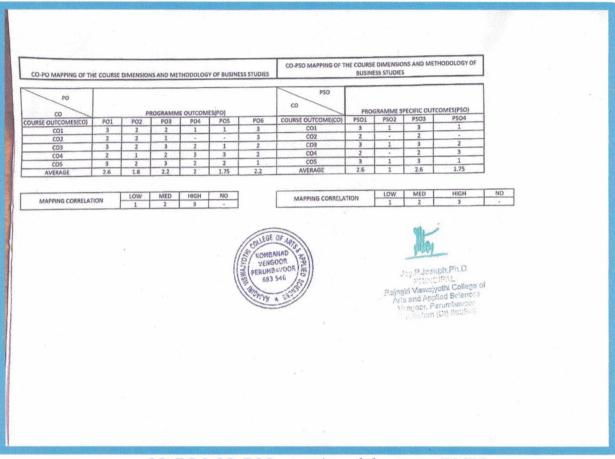


**CO-PO&CO-PSO** mapping of the course discrete mathematics



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**CO-PO&CO-PSO** mapping of the course DMBS





## Sample of Internal exam answer sheet after implementing OBE

Date:	
RAJAGIRI VISWAJYOTHI COLLEGE OF ARTS AND APPLIED SCIENCES VENGOOR . PERUMBAVOOR KERALA- 683546 FIRST/SECOND INTERNAL EXAMINATION	
NAME: <u>K. A. Akhila</u> CLASS: BIOM MT FST CLASS NO: PROGRAMME: BICOM COURSECODE: COICETOL COURSE PAPER: DMBS	
CO-Hnfex an idea CO:3 Illustrate the CO: burness and its burness envixormit role in Society and Various dimensiony 1578 2345	
25015 222	
TOTAL MARK: 30	
NAME OF EXAMINER: Rahul Fabu	
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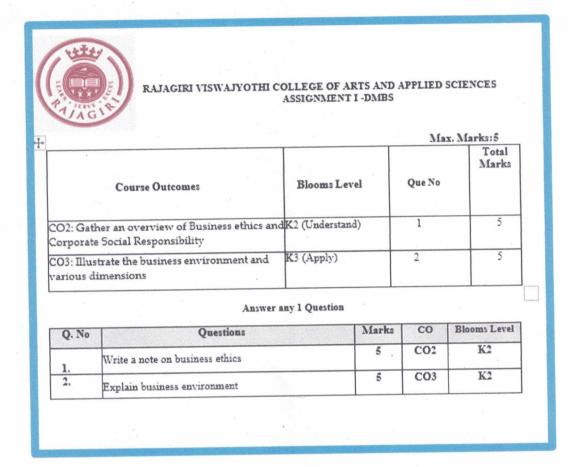
Internal exam answer sheet -Specimen copy







# Sample of Assignment question paper mapped with course outcomes



# Assignment question paper-Specimen copy





Sample of Assignment after implementing OBE

Assignment on Oramentions and Methodology of Brusmuss Studius Topic: Major elements of e-cash Payment System Submitted By KA AKhila Biommodel1 Semister 1 Submitted to Rahul Bahn Dept of Commune EGE OF AL Submitted on:11/2/2024 OMBANAD VENGOOR ERUMBAVOO 683 546

#### Assignment-specimen copy



# Sample of course exit survey

an a	
9/21/24, 11:09 AM COURSE EXIT SURVEY	8/21/24, 11.09 AM . COURSE EXIT SURVEY
inter sales, in our ment	6. Please rate each of the following attributes in terms of how will the course helps you
	attain the following attributes
COURSE EXIT SURVEY	
RAJAGIRI VISWAJYOTHI COLLEGE OF ARTS AND APPLIED SCIENCES	with the photometer of photometer during the second photometer and photometer and a photometer of the photometer and the photometer of t
DEPARTMENT OF COMMERCE COURSE NAME:COTCRT01 Dimensions and Methodology of Business Studies	<ol><li>CO1:Infer an idea business idea and its role in society.*</li></ol>
	Mark only one oval.
	Strongly agree
	Agree
	Neutral
* Inductive required question	Disagree
1. Student Name *	
	8. CO2:Gather an overview of Business ethics and Corporate Social Responsibility.
and the second	Mark only one oval
	Strongly agrée
2. Roll No *	C) Agree
	C Neutral
	Disagree
3. Year of study *	
3. Teal of sludy	
	<ol> <li>CO3: Illustrate the business environment and various dimensions *</li> </ol>
	Mark only one ovál.
4. Semester *	Strongly Agree
	Agree
(1) A set of the K conservation of the free set of the free	Neutral
	Disagree
5. Department *	
den post representation de activitation de la construction de	
	https://docs.google.com/formark/102.0K/dom/Cvg5b296L/Cc6U-EDHXCyburVVK/s88pm/batt 224
Mapeliface.google.condomedr/12UECBKounChqSEPMGLOCBU-EBMC/actumVPrvBSVvMsvdE	

### Course Exit Survey-Google Form







RAJAGIRI VISWAJYOTHI COLLEGE OF ARTS & APPLIED SCIENCES Vengoor, Perumbavoor, Kerala - 683546

Student Name	Roll No	Year of study	Semester	CO1:Infer an Idea business and its role in society.	CO2:Gather an overview of Business ethics and Corporate Social Responsibility.	CO3:Illustrate the business environment and various dimensions	CO4:Extend the Technology integration in business.	COS:Review the importance and fundamentals of business research.	Effectively the course is delivered?	Satisfied with the course evaluation
Auhammed k salin	1341	2	1	3	3	3	3	2	3	2
Sonam Bhaskar	1152	2023	1	4	4	4	3	3	3	3
Joel joy	1145	2023	1	3	3	3	4	4	4	4
Jeevan S	1143	2023	1	3	4	3	. 3	3	3	3
Adith Paul Ashwar	1132	2023-2026	. 1	4	4	4	3	3	3	4
Basil Sabu	1137	2023-26	1	3	3	3	4	3	4	4
Vinayak.h	1344	2023	. 1	4	4	4	4	4	4	4
Beyon Laljo	1138	2023	1st	4	4	4	4	4	4	4
Nikhil Biju	1151	2023-26	1	2	3.	2	2	2	2	2
Abhinav Babu	1154	2023-2026	1	2	2	2	2	3	2	2
Amjad N S		2023-2026	3	3	3	3	2	2	3	2
Daiz Shijo	1139	2023-26	1	4	4 '	4	3	3	4	3
Akhil	1345	2023-2026	1	3	3	2	3	2	3	3
Athul M Sajeev	1156	2023-2026	1	3	3	2	2	3	3	3
Sreechandra N. C.	1153	2023	1	3	. 4	4	4	3	4	4
HAIRUNNISA KS	1141	2023-2026	1	3	3	3	3	3	3	3
Fiza Fathima T F	1140	2023-2026	1	4	4	4	4	4	4	4
Alen M Joseph	1133	2023-2026	1	3	3	2	3	2 .	2	2
Lima Sharaf	1148	2023 - 2026	2	3	3	3	3	3	3	3
Hridhya binu		2023-2026	1	3	3	3	3	3	3	3
SANKAR SREEDHA	1151	2023	1	3	3	3	3	3	3	4
K A Akhila		2023-2026	1	3	3	3	3	4	4	4
lable Susan Georg	1149	2023-26	1	2	3	. 3	3	2	2	2
Jens George	1342	2023-2026	1	4	4	4	4	4	4	4
AVERAGE				3.136363636	3.3333333333	3.125	3.125	3	3.208333333	3.166666667

Course Exit survey analysis



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## CO, PO, PSO ATTAINMENT

	Maximum marks	27	24	23	7	24	80
	Course Outcome	C01_	C02	CO3	CO4(Series Exam+Assignme nt)	CO5	Extenal Assessment test
Roll No	Student	iat					
1	ADITH PAUL ASWAN	7	14	23	7	12	62
2	AKSHAY ABLE	5	12	22	7	10	50
3	ALEN M JOSEPH	7	16	17	7	8	47
4 ·	AMJAD N.S	22	7	8	7	9	24
5	ASHLY SUSAN BENNY	14	7	8	7	10	34
6	BASIL SABU	7	12	20	7	12	49
7	BEYON LALIO	18	9	3	7	11	28
8	DAIZ SHUO	7	18	11	7	10	42
9	FIZA FATHIMA TF	16	. 14	13	7	14	50
10	HAIRUNNISA K.S	7	9	23	7	13	52
11	HRIDHYA BINU	22	19	8	7	18	58
12	JEEVAN S	4	11	13	7	5	17
13	JENS GEORGE BIJU	6	3	23	7	17	46
14	JOEL JOY	6	8	16	7	9	40
15	K.A. AKHILA	20	17	8	7	11	64
16	LIMA SHARAF	7	10	23	7	14	58
17	MABLE SUSAN GEORGE	20	14	. 8	7	9	51
18	NEVIN MICHAEL	15	7	6	7.	8	15
19	NIKHIL BIJU	12	7	7	7	6	35
20	SIVASANKER SREEDHARAN	22	8	8	7	10	48
21	SONAM	19	14	8	7	10	46
22	SREECHANDRA NC	13	12	10	7	11	31
23	ABHINAV BABU	14	. 7	13	7	5	28
24	ATHUL M SAJEEV	6	5	12	5	6	12
25	SAVIYO SIBI	9	4	9	5	5	12

Attainment Calculation





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Vengoor, Perumbavoor, Kerala - 683546

Tools	Internal Assessment test,Assignment,External Evaluation,Course Exit Survey	C01	C02	C03	CO4(Series+A ssignment)	C05	External Assessment Test
Roll No	Student	0	0	0	0	0	0
1	ADITH PAUL ASWAN		6	10	10	5	8
2	AKSHAY ABLE		5	10	10	4	6
3 ALEN M JOSEPH		3	- 7	7	10	3	6
4 AMJAD N.S		8	3	3	10 .	4	3
5	ASHLY SUSAN BENNY	5	3	3	10	4	4
6	BASIL SABU	3	5	9	10	5	6
7	BEYON LALJO	7	4	1	10	5	4
8	DAIZ SHIJO	3	8	5	10	4	5
9	FIZA FATHIMA TF	6	6	. 6	10	6	6
10	HAIRUNNISA K.S	3	4	10	10	5	7
11	HRIDHYA BINU	8	8	3	10	8	7
12	JEEVAN S	1	.5	6	10	2	2
13	JENS GEORGE BIJU	2	1	10	10	7	6
14	JOEL JOY	2	3	. 7	10	4	5
15	K.A. AKHILA	7	7	3	10	5	8
16	LIMA SHARAF	3	4	10	10	. 6	7
17 .	MABLE SUSAN GEORGE	7	6	3	10	4	6
18	NEVIN MICHAEL	6	3	3	10	3	2
19	NIKHIL BIJU	4	3	3	10	3	4
20	SIVASANKER SREEDHARAN	8	3	. 3	10	4	6
21	SONAM	. 7	6	3	10	4	6
22	SREECHANDRA NC	5	5	4	10	5	4
23	ABHINAV BABU	5	3	6	. 10	2	4
24	ATHUL M SAJEEV	2	2	5	1	3	2
25	SAVIYO SIBI	3	2	4	7	2	2

Attainment Calculation

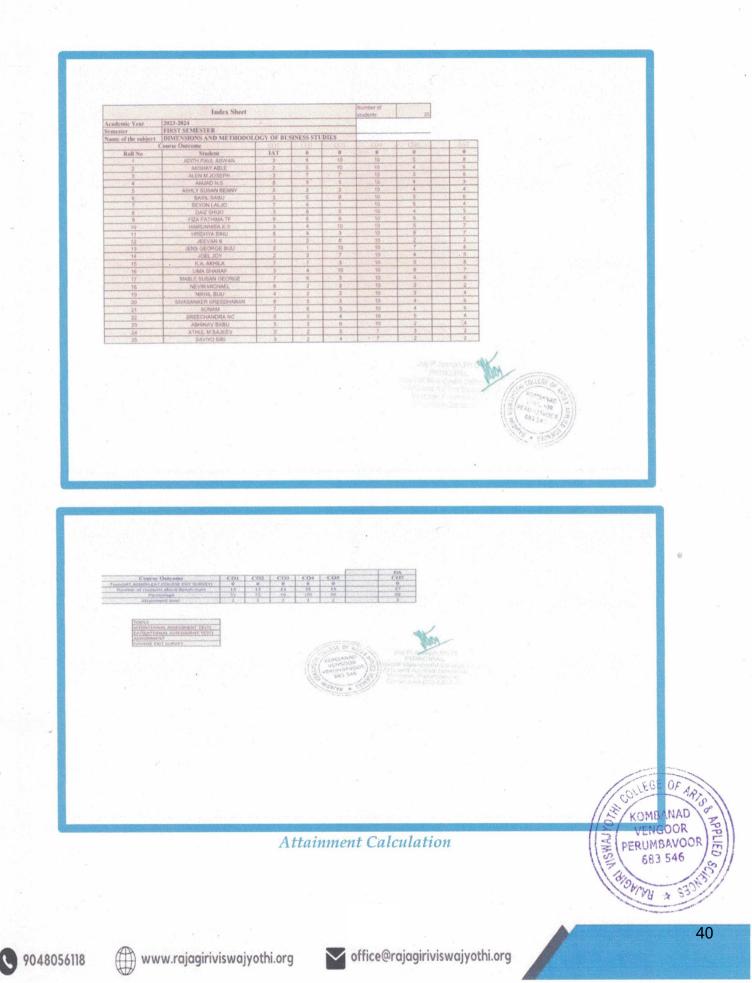


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RAJAGIRI VISWAJYOTHI COLLEGE OF ARTS & APPLIED SCIENCES Vengoor, Perumbavoor, Kerala - 683546

Assessment Year         2#23-24         RAHUL BABU           COATTAINSHENT VALUUX         COATTAINSHENT COUNT MATRIX           Assessment Tools         COATTAINSHENT COUNT MATRIX           OSATTAINSHENT VALUUX         COATTAINSHENT COUNT MATRIX           Assessment Tools         COATTAINSHENT COUNT MATRIX           Jatrix Matrix Tools         COATTAINSHENT COUNT MATRIX
CO ATFADMENT MALTRIX           CO ATFADMENT MALTRIX           Assessment Tools         COS         CO ATFADMENT COLORY MATRIX           Assessment Tools         CO3         CO4         CO8         Assessment Tools         CO2         CO3         CO4         CO5           Introduction         2         2         2         3         2         Introduction         Interval assessment (rest         13(25)         13(25)         14(25)         25(25)           CO Direct Attainment         60%(2)         62%(3)         84%(3)         64%(3)         64%(3)         75%(4)          75%(4)         75%(4) </th
Assessment Tools         CO1         CO2         CO3         CO4         CO3         Assessment Tools         CO1         CO2         CO3         CO4         CO5           Internal assessment tost         2         2         3         2         Internal assessment test         13(25)         13(25)         14(25)         15(25)           CO Direct Attainment         60%(2)         60%(2)         62%(3)         84%(3)         64%(3)           CO Indirect Attainment         78.40%(3)         88.25%(4)         78.12%(4)         78.12%(4)         78.12%(4)
Assessment Tools         CO1         CO2         CO3         CO4         CO5         Assessment Tools         CO1         CO2         CO3         CO4         CO5           Internal assessment test         2         2         3         2         Internal assessment test         13(25)         13(25)         14(25)         15(25)           CO Direct Attainment         60%(2)         60%(2)         62%(3)         84%(5)         64%(3)           CO Indirect Attainment         78.40%(3)         48.25%(3)         78.12%(3)         78.12%(3)         78.12%(3)
CO Direct Attainanett 60%(2) 60%(2) 62%(3) 84%(3) 64%(3) CO Indirect Attainanett 78:40%(3) 83.22%(63) 78:12%(3) 78%(3)
CO Dirvet Attainment         60%(2)         60%(2)         62%(3)         84%(3)         64%(3)           CO Indirvet Attainment         78.40%(3)         483.25%(3)         78.12%(3)         78.12%(3)         78.12%(3)
CO Indirect Atlainment 78.40%(3) 48.25%(3) 78.12%(3) 78.12%(3) 785(2)
COURSE PO MATRIX
PO1 PO2 PO3 PO4 PO5 PO6
Course Mapped 2.6 1.8 2.2 2 1.75 2.3
Course Attained 62:1856(3) 6656(2) 6456(3) 7256(3) 75.4256(3) 62:1856(3)
COURSE PSD ANATHON
Course Mapped 2.6 1 2.6 1,75
Course attained 62.15%(3) 56%(2) 62.15%(3) 74.85%(3)

Final attainment

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# Attainment of Pos and Cos are evaluated

# Outcome Based Education Manual



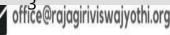




# WHAT IS OUTCOME-BASED EDUCATION (OBE)?

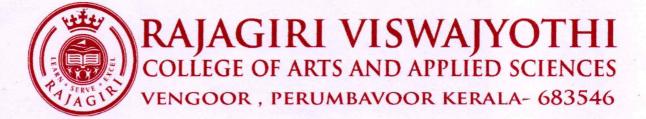






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### **OUTCOME-BASED EDUCATION MANUAL**

#### Introduction

Outcome-Based Education (OBE) is an educational paradigm that brings clarity to the learning process by articulating specific and measurable learning outcomes, providing educators and students with a clear understanding of what is expected. Outcome-Based Education (OBE) is a student-centric teaching and learning methodology in which the course delivery, assessment are planned to achieve stated objectives and outcomes. It focuses on measuring student performance i.e. outcomes at different levels. By aligning educational objectives with real world skills and competencies, OBE ensures that students acquire practical knowledge that is relevant to their future careers.

OBE places a strong emphasis on continuous assessment and feedback, allowing for the measurement of progress towards achieving the specified learning outcomes. This ongoing assessment not only provides valuable insights into individual student performance but also allows for timely intervention and adjustments in teaching strategies. The flexibility inherent in OBE accommodates diverse learning styles and paces, acknowledging the individuality of students and promoting a more personalized learning experience.

Furthermore, OBE establishes a framework for quality assurance within educational institutions. By defining clear outcomes, institutions can assess the effectiveness of their programs and make informed decisions to enhance the overall quality of education. This accountability extends to educators who are held responsible for guiding students towards the achievement of specific learning objectives. Additionally, OBE cultivates a mindset of lifelong learning by not only 3 imparting content knowledge but also fostering critical thinking, problem-solving, and other transferable skills.



PRINCIPAL Rajagiri Viswajyothi College of Arts and Applied Sciences Vengoor, Perumbavoor Ernakulam (Dt) 683546 On a global scale, OBE facilitates the recognition of qualifications by providing a standardized framework for assessing educational achievements. This, in turn, promotes the mobility of students and professionals across borders, contributing to a more interconnected and globally aware workforce. Lastly, OBE encourages efficient resource allocation within educational institutions, as it allows for the optimization of curriculum and teaching methods to better meet the defined learning goals. Overall, Outcome-Based Education stands as a comprehensive and effective approach that not only prepares students for success in their chosen fields but also contributes to the continuous improvement of the educational process.

#### **Benefits of Outcome-Based Education (OBE)**

Outcome-Based Education (OBE) offers numerous benefits that contribute to a more effective and student-centered learning environment. One primary advantage is the clarity it brings to the educational process. By defining specific and measurable learning outcomes, OBE provides clear expectations for both educators and students, ensuring everyone is on the same page regarding the goals of the educational experience. Another key benefit is the shift toward a student-centered approach. OBE focuses on what students are expected to learn, promoting active participation and engagement in the learning process. This shift emphasizes the development of practical skills and competencies that are directly applicable to real-world scenarios, aligning education with the needs of the workforce. Continuous assessment and feedback are integral components of OBE, allowing for the regular measurement of student progress. This ongoing evaluation not only provides insights into individual performance but also enables timely intervention and adjustments in teaching strategies to better meet the needs of students.

Flexibility is inherent in OBE, accommodating diverse learning styles and paces. This adaptability ensures that students can progress through material at their own rate, promoting a more personalized learning experience. Additionally, OBE establishes a framework for quality assurance, enabling institutions to assess the effectiveness of their programs and continuously improve educational offerings.



Joy. PRINCIPAL PRINCIPAL Rajagiri Viswajyothi College of Arts and Applied Sciences Vengoor, Perumbavoor Ernakulam (Dt) 683546 OBE fosters a culture of accountability, as educators are held responsible for guiding students toward the achievement of specific learning objectives. Beyond content knowledge, OBE encourages the development of critical thinking, problem-solving, and other transferable skills, cultivating a mindset of lifelong learning.

On a global scale, OBE facilitates the recognition of qualifications, making it easier to assess and compare educational achievements worldwide. This recognition promotes the mobility of students and professionals across borders, contributing to a more interconnected and globally aware society

Efficient resource allocation is also a notable benefit of OBE. By focusing on defined learning outcomes, institutions can optimize their curriculum, teaching methods, and assessment strategies to better meet the identified goals.

In summary, Outcome-Based Education provides a comprehensive framework that enhances educational clarity, fosters a student-centered approach, promotes continuous assessment, ensures flexibility, establishes quality assurance, encourages accountability, cultivates lifelong learning, facilitates global recognition, and optimizes resource allocation.

#### **Key features of OBE**

Outcome-Based Education (OBE) is characterized by several key features that distinguish it from traditional education models. One fundamental aspect involves the articulation of clearly defined and measurable learning outcomes or competencies. These outcomes serve as the cornerstone of OBE, specifying the knowledge and skills students should possess by the completion of a course or program. This emphasis on explicit outcomes enables a more focused and purposeful educational experience.

A central tenet of OBE is its commitment to a student-centered approach. Unlike traditional teaching-focused models, OBE places students at the core of the educational process. This shift encourages active engagement, self-directed learning, and the cultivation of critical thinking skills. By prioritizing the learner,

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iri Viswajyothi College of s and Applied Sciences OBE aims to empower students to take ownership of their education and development.

Furthermore, OBE aligns learning outcomes with real-world skills and competencies. This ensures that the education provided is directly relevant to the demands of the workforce. By integrating practical applications, OBE prepares students to apply their knowledge in authentic settings, enhancing their readiness for professional environments.

Continuous assessment and feedback represent another hallmark of OBE. Throughout the learning journey, OBE emphasizes ongoing evaluation to monitor student progress, identify areas for improvement, and make timely adjustments to teaching strategies. This iterative process of assessment and feedback contributes to a dynamic and responsive educational environment.

Flexibility and adaptability are key principles embedded in OBE. Recognizing the diversity in learning styles, paces, and individual needs, OBE allows for flexibility in how students achieve the defined learning outcomes. This adaptability promotes a more personalized learning experience tailored to the unique characteristics of each student.

Quality assurance is integral to OBE, as it establishes a framework for evaluating the effectiveness of educational programs. By setting clear expectations for learning outcomes, institutions can systematically assess and enhance the quality of education they provide, ensuring that it meets the intended objectives.

Furthermore, OBE instils a sense of accountability among both educators and students. Educators are accountable for guiding students toward the achievement of specific learning outcomes, while students are accountable for their own learning. This shared responsibility creates a collaborative and committed educational community.

In addition to content knowledge, OBE places a strong emphasis on the development of transferable skills. This emphasis aligns with the goal of fostering a mindset of lifelong learning, equipping students with the skills necessary for continuous personal and professional development



PRINCIPAL Rajagiri Viswajyothi College of Arts and Applied Sciences Vengoor, Perumbavoor Ernakulam (Dt) 68354248 Global recognition is facilitated by OBE through its emphasis on clear and measurable outcomes. This makes it easier to assess and compare educational achievements on a global scale, contributing to increased mobility of students and professionals across borders.

Finally, OBE encourages efficient resource allocation within educational institutions. By focusing on essential learning outcomes, institutions can optimize 7 their curriculum, teaching methods, and assessment strategies, ensuring that resources are aligned with the identified goals. Collectively, these key features position Outcome-Based Education as a student centered, outcomes-driven, and adaptable approach to education that prepares learners for success in the dynamic landscape of the 21st century

#### **Outline of the Key steps of OBE**

Outcome-Based Education (OBE) involves a systematic series of steps in curriculum design, implementation, and assessment. The initial phase begins with the explicit definition of learning outcomes. These outcomes serve as the foundation of OBE, delineating the specific knowledge, skills, and attitudes that students are expected to acquire by the conclusion of a course or program. This step requires collaboration among educators to establish clear and measurable objectives.

Following the definition of learning outcomes, the alignment process ensues, where these outcomes are harmonized with broader educational goals and standards. This alignment ensures that the curriculum is not only internally coherent but also consistent with institutional objectives and external benchmarks, contributing to the overall quality and relevance of the education provided.

Subsequently, the development of assessments takes center stage. Various assessment methods, including exams, projects, presentations, and practical demonstrations, are designed to align closely with the defined learning outcomes. The aim is to create assessment instruments that effectively measure the extent to which students have achieved the desired educational goals.

With the assessments in place, the focus shifts to the creation of instructional strategies. These strategies are crafted to support and enhance the attainment of

PERUMBAVOOR 683 546

Vengoor, Perumbayoor Ernakulam (Dt) 683549 learning outcomes. The emphasis here is on developing diverse and effective teaching methods that cater to different learning styles, fostering an environment conducive to active engagement and critical thinking among students.

Upon the completion of these preparatory steps, the curriculum is ready for implementation. Educators execute the curriculum based on the defined outcomes, assessments, and instructional strategies. Importantly, this phase involves continuous monitoring, allowing educators to adapt their teaching methods dynamically to ensure that students are progressing effectively toward the specified learning goals.

An integral aspect of OBE is the incorporation of continuous assessment and feedback mechanisms throughout the learning process. Regular assessments provide ongoing insights into student progress, and timely feedback allows for necessary adjustments in instructional strategies. This iterative approach contributes to a dynamic and responsive educational environment, promoting the ongoing improvement of teaching and learning practices.

In essence, the key steps of OBE encompass the articulation of clear learning outcomes, alignment with broader educational goals, development of effective assessments and instructional strategies, curriculum implementation with ongoing monitoring, and the incorporation of continuous assessment and feedback to enhance the overall educational experience.

#### **Strategies for Articulate Learning Outcomes**

Articulating effective learning outcomes within Outcome-Based Education (OBE) involves strategic considerations. Start by incorporating strong action verbs such as "analyze" or "synthesize" to precisely define the cognitive actions expected of students. Ensure that outcomes are both specific and measurable, aligning them with the levels of Bloom's Taxonomy for a structured approach to cognitive complexity. Establish a connection between learning outcomes and real-world applications, emphasizing the practical relevance of acquired knowledge and skills. Collaboration with diverse stakeholders, including students and industry professionals, ensures that outcomes remain meaningful and aligned with broader expectations. Additionally, focus on fostering transferable skills, such as critical thinking and collaboration, maintaining a balance between content is nowledge and process skills.

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Arts and Applied Sciences Vengoor, Perumbavoor Ernakulam (Dt) 683546 Regularly reviewing and revising learning outcomes is crucial to adapting them to evolving educational needs and contexts. These strategies collectively contribute to the development of clear, relevant, and effective learning outcomes in the OBE framework.

#### **Program Outcomes (PO)**

Program Outcomes (PO) refer to the specific knowledge, skills, and attributes that students are expected to acquire upon completing an entire academic program or course of study. These outcomes are typically defined by educational institutions to reflect the overarching goals and objectives of a particular program. Program Outcomes are crucial components of Outcome-Based Education (OBE) and play a significant role in shaping the curriculum, assessment methods, and overall educational experience. They provide a clear roadmap for what students should achieve by the end of their academic journey, ensuring that the education provided is comprehensive and aligned with the intended learning objectives. Program Outcomes are often formulated in consultation with industry experts, accrediting bodies, and other stakeholders to ensure that graduates are well prepared for the demands of their chosen field or profession. Regular assessment and evaluation of Program Outcomes contribute to continuous improvement in educational offerings and help maintain the relevance and quality of academic programs.

#### **Program Specific Outcome (PSO)**

Program Specific Outcomes (PSOs) serve as targeted benchmarks within Outcome-Based Education (OBE), concentrating on the specialized knowledge and skills relevant to a specific branch or specialization within an academic program. Unlike broader Program Outcomes (PO), PSOs provide a more detailed and focused perspective on what students are expected to achieve in a particular area of study. These outcomes are integral to shaping the curriculum, assessment strategies, and educational experience within that specialization.

Regular assessment and evaluation of PSOs contribute to the continuous improvement of educational programs. This ongoing process helps educators refine and adapt the curriculum to stay abreast of industry developments, technological advancements, and other changes that may impact the skills and it knowledge required in the NPPLIED ENGOOR

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Rajagiri Viswajyoth: College of Arts and Applied Sciences Vengoor, Perumbavoor Ernakulam (Dt) 683546

specialized field. By incorporating PSOs, academic institutions can offer tailored and relevant educational experiences that better prepare students for success in their chosen specialization within the broader academic program.

#### **Course Outcomes (CO)**

Course Outcomes (CO) are specific, measurable statements that articulate the expected knowledge, skills, and abilities a student should acquire by the end of a particular course. In Outcome-Based Education (OBE), COs serve as a critical component in designing, implementing, and assessing individual courses within a program. These outcomes are essential for providing clarity about the educational objectives of a course and guiding both instructors and students throughout the learning process.

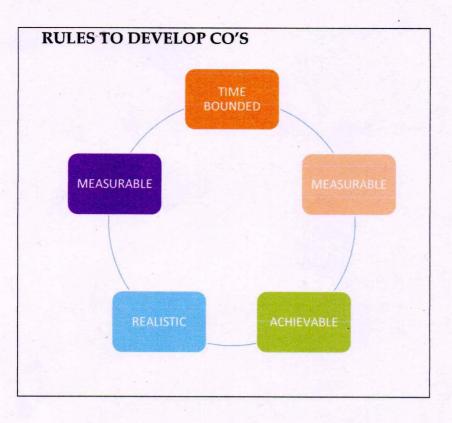
Key features of Course Outcomes include the use of action verbs to describe observable behaviours or performances, making outcomes specific and measurable. COs are typically aligned with Program Outcomes (PO) and may contribute to achieving broader educational goals at the program level.

The process of defining Course Outcomes involves careful consideration of the course content, instructional methods, and assessment strategies. COs provide a framework for instructors to structure their teaching, ensuring that students are progressing toward achieving the intended learning objectives. Assessment methods, such as exams, projects, or presentations, are designed to evaluate students based on these specific outcomes.

Regular assessment and feedback on Course Outcomes contribute to the continuous improvement of instructional methods and the overall effectiveness of the course. As students achieve the specified outcomes, instructors can make 12 informed decisions about adjusting teaching strategies, refining content delivery, and enhancing the learning experience for future cohorts.



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### **OUTCOME BASED EDUCATION**

We have promised, the student should be able to KNOW and DO at the:



Joy Joseph, Ph.D. PRINCIPAL Rajagiri Viswajyothi College of Arts and Applied Sciences Vengoor, Perumbavoor Ernakulam (Dt) 683546

#### **Bloom's Taxonomy**

Bloom's Taxonomy, developed by Benjamin Bloom and a team of educational psychologists in the 1950s, is a widely used framework for classifying educational objectives and cognitive skills. The taxonomy consists of six hierarchical levels, each representing a different order of thinking that learners can engage in.

The first level is "Remembering," which focuses on basic recall and recognition of information. This involves the ability to memorize facts, terms, and fundamental concepts. Learners at this stage demonstrate their capacity to retrieve previously learned material.

Moving up the hierarchy, the second level is "Understanding." Here, learners are required to comprehend the meaning of information. This level goes beyond mere recall and emphasizes the ability to explain ideas or concepts in one's own words, indicating a deeper understanding of the material.

The third level is "Applying," which involves using knowledge and understanding to solve problems or apply concepts in new situations. This level emphasizes the practical application of learned information, testing the ability to transfer knowledge to different contexts.

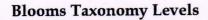
The fourth level is "Analysing," where learners are required to break down information into its components to understand relationships and organizational structures. This level encourages the examination and interpretation of information rather than mere application.

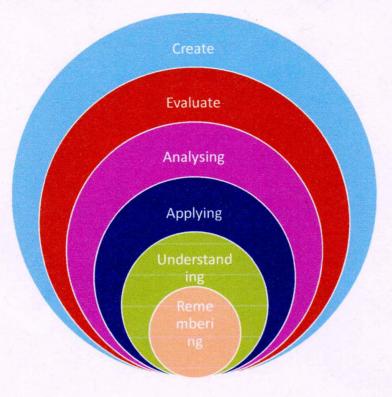
"Evaluating" is the fifth level, focusing on critical thinking and judgment. Learners at this stage assess the value or significance of information, ideas, or theories. It involves making informed judgments and choices based on evidence and criteria.

Finally, the sixth level is "Creating." This highest order of thinking involves the ability to synthesize information and generate new ideas or products. Learners at this level demonstrate creativity, originality, and the synthesis of previously acquired knowledge.

Bloom's Taxonomy is a valuable tool for 'Educators as it provides a structured framework for designing learning objectives, assessments, and activities that target

Vengoor, Perumbavoor Ernakulam (Dt) 683546 different levels of cognitive complexity, promoting a comprehensive and progressive approach to education.





The sample list of action words that can be used when creating the expected student learning outcomes related to critical thinking skills in a course

Lower Order	r of Thinking (l	LOT)	Higher Order of Thinking (HOT)				
Remember	Understand	Apply	Analyze	Evaluate	Create		
Define	Explain	Solve	Analyse	Reframe	Design		
Describe	Describe	Apply	Compare	Criticize	Create		
List Interpret		Illustrate	Classify	Judge	Plan		
State Summarise		Calculate	Distinguish	Recommend	Formulate		
Match Compare		Sketch	Explain	Grade	Invent		
Tabulate Discuss		Prepare	Differentiate	Measure	Develop		



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#### **METHODOLOGY OF CO MAPPING**

RVCAS places great importance on the evaluation of attainment of POs and PSOs, which is rigorously done through distinct mechanisms. Two distinct strategies are employed to validate Outcome Based Education, utilizing both direct and indirect methods.

In the initial stage, the Course Outcomes (COs) are mapped meticulously with their corresponding Programme Outcomes (POs) and Programme Specific Outcomes (PSOs). This mapping process provides a mean value, which offers insight into the alignment between COs, POs, and PSOs.

CO-PO Mapping Guidelines Most of the time, the appropriate keyword of PO and CO is sufficient for mapping. The various mapping levels for the COs and POs mapping is assigned on a four-point scale: '-' is No Correlation, '1' is Slight Correlation (Low level), '2' is Moderate Correlation (Medium level) and '3' is Substantial Correlation (High level). In order to complete the CO-PO articulation matrix, the first step is to identify the keywords of POs/PSOs to each CO and then make a corresponding mapping table assigning correlation levels at the corresponding cell. These correlation level to CO-PO matrix can be assigned as given in Table below:

Action verb/ Keywords Used in Writing	Mapping Level
COs	
Keywords/action verb of the Course	·
Outcome is not related to the action verb	
of Program Outcomes	
Part of PO is reflected through	'1'(LOW)
keywords/action verbs of CO	
Major part of PO is reflected through	'2'(MEDIUM)
keywords/action verbs and moderate	
level performance is expected from	
student to achieve CO	
Exact action verb of PO and critical	'3'(HIGH)
performance expected from student to-	
achieve CO	OF 4 PS Joy. PJoseph, Ph.D
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#### Attainment of POs and COs are evaluated

The second stage involves the validation of Course Outcomes against Programme Outcomes and Programme Specific Outcomes through the examination system. The cognitive levels of each course is gauged based on Revised Bloom's Taxonomy. Students' ability to remember and understand is assessed using methods such as Multiple-Choice Questions, Short Answer Questions, Quizzes, Snap Tests, and Oral Examinations. Furthermore, we evaluate their ability to apply, analyse, evaluate, and create through Essay Type Questions, Assignments, Practical Examinations, Field Reports, Internships, and Project Work.

To determine the examination attainment levels of the courses, RVCAS has established a threshold value system. The students are categorized into three groups: those scoring between 40 to 49 percent (weighted as 1), 50 to 59 percent (weighted as 2), and 60 percent and above (weighted as 3) for both Continuous Internal Assessments and Summative Examinations. Both Continuous Internal Assessments and Summative Examinations carry equal weight, each valued at 0.5. The examination attainment of Course Outcomes is then calculated as the sum of the Continuous Internal Assessment weightage multiplied by the CIA threshold value and the Summative weightage multiplied by the Summative Examinations' threshold value ( $0.5 \times CIA$  threshold value +  $0.5 \times Summative Examinations'$  threshold value).

In the third stage, the college evaluates the direct attainment of each Course Outcome (CO) concerning Programme Outcomes (PO) and Programme Specific Outcomes (PSOs) using the following formula:

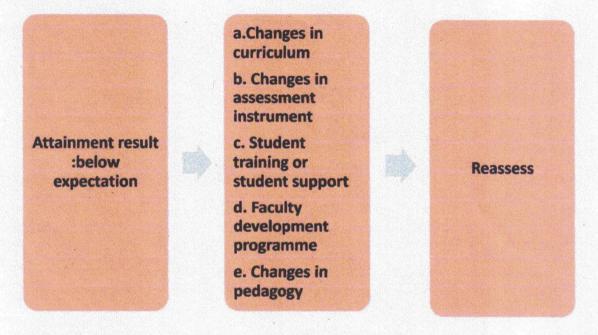
Direct attainment = Course Attainment Level \* Mean value of the Concerned PO or PSO. In the indirect method, the alignment of Course Outcomes is validated with Programme Outcomes and Programme Specific Outcomes through a feedback mechanism. The feedback is collected at the exit level using 4-point scale



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Finally, the overall attainment is calculated using the following formula:

Overall attainment = [(Assumed Test Weightage \* Direct Attainment Value) + (Assumed Feedback Weightage \* Feedback Value)]



In summary, RVCAS College employs a thorough approach to evaluate and validate Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) through direct and indirect methods. With a clear framework for assessing student performance and a commitment to transparency through shared results, the institution epsures continuous improvement in its educational programs. The proactive efforts of the Internal Quality Assurance Cell (IQAC) further strengthen the college's dedication to excellence in education.





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