OBE Manual

PREFACE

This manual is to assist the faculty, staff and stakeholders with the perception of Outcome Based Education (OBE) system implemented at Kovai Kalaimagal College of Arts and Science from the academic year 2018 onwards. It provides comprehensive representation of Outcome Based Education executed by utilizing the four stages of educational procedures such as Curriculum structure, Teaching and Learning process, Assessment & Evaluation and Continuous quality improvement. It also serves as the effective guidelines for the faculty members to improve the evaluation plan in order to quantify the outcome of the students throughout their course of study and after graduation. This manual supports in development of productive curriculum development and teaching plan.

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ABOUT THE INSTITUTION

The Kovai Kalaimagal Educational Trust established in the year 1992 with an aspiration to quench the educational thirst of the poor and the needy strata of the society particularly from rural area. It sprouted with the establishment of a school and soon extended to enhance Kovai Kalaimagal College of Arts and Science in the year 1996 – 1997, Coimbatore Institute of Management and Technology in 1996 – 1997, Coimbatore Institute of Engineering and Technology in 2001 – 2002 and CIET School of Architecture in 2013 – 2014. The trust is managed by the dedicated team of trustees Dr. T. Banumathi, Dr. T. Namradha, Dr. K. A. Chinnaraju, Tmt. P. Shanmugadevi, Thiru. S. Subramanian and Thiru. M. Thangavelu who completely dedicates their time for the development of the institutions under the trust and it is due to their tireless efforts, the colleges have engraved a name for themselves in the academic domains.

The college is situated in a serene atmosphere surrounded by attractive mountains proposing a very favorable environment for the academic perseverance. It is accredited by NAAC in both first and second cycles with 'A' grade. Committed to make quality education affordable especially to economically backward sections particularly from rural area and also to fortify the areas of research, enhance the process of sensitizing the students to personal values, spiritual growth and social responsibility. The college has taken every effort to ensure sustenance and enhancement of the quality in education.

Promoting Body

The Kovai Kalaimagal Educational Trust (KKET) was started in 1992 to establish educational institutions with the motto: 'Light the Light within'. At present, the trust established Kovai Kalaimagal College of Arts and Science, Coimbatore Institute of Engineering and Technology, CIET School of Architecture and Coimbatore Institute of Management And Technology at Vellimalaipattinam, Narasipuram Post, Thondamuthur Via, Coimbatore - 641 109.

Environment

KKCAS is located at Vellimalaipattinam, near Narasipuram, sprawling over a land area of 10.58 acres, surrounded by green hillocks. The campus has a serene and studious atmosphere with least disturbance and distraction. The students find the environment to be very encouraging for their education. Facilities in the campus meet their needs for extra / co-curricular activities.

NAAC

Our institution was accredited with "A" grade by NAAC in the year 2011 and again Re-accredited with 'A' grade from September 2016.

Recognitions

The college has been recognized for the welfare schemes implemented for the benefit of the students and has been rewarded with "Best College Award" during 2007 – 2008 by the Bharathiar University. It has also been awarded with "Third Best College Award" for overall performances during the year 2008-2009 based on ten different criteria such as Results of University Examinations, Conducting Seminars, Workshops, Symposia, State & National Level Conferences, Self-Development Programmes for Students, Number of Placements made in the Campus Interviews, Student Supporting Services, Faculty Development Programmes, Publication of Books, Research articles in Journals, Magazines, Research activities, Social Service through NSS, YRC & RRC and achievements in Sports. The institute was awarded with "A" Grade by National Assessment and Accreditation Council (NAAC) in the Re-accreditation process.

VISION, MISSION AND QUALITY POLICY

VISION

Kovai Kalaimagal College of Arts and Science shall inspire and guide students to acquire knowledge, develop skill and a positive attitude that will enhance their personality, providing self-confidence to face the competitive world.

MISSION

1. To strive for excellence in academics.
2. To inculcate a positive attitude and to develop skill in students, to meet the challenges of the competitive world.
3. To develop self-confidence through adequate interaction and relevant exposure.
4. To promote ethical and social values in the students.
5. To identify and encourage talents in academics and sports by rewarding them with scholarships.

QUALITY POLICY

KKCAS shall provide value-based education to its students for continual improvement in their academic performance, enhancing their competency for higher education and employment.

OUTCOME-BASED EDUCATION (OBE)

Outcome Based Education (OBE), a graduate focused teaching model is implemented in the year 2018 for the students to attain excellence in their Higher Education. The learners achieve the objectives of outcome Based Education at each level and gain progress in their learning. The Graduate Attributes of the programmes are framed on the basis of the Vision and Mission of the Institution. The Programme Educational Objectives (PEO), Programme Outcome(PO) and Course Outcomes (CO) are framed in such a way to reach the goal of the graduate attributes.

It provides suitable guidelines for the faculty members to develop the course plan, assessment plan etc., in the process to measure the outcome of the students during their course of study and also after their graduation.

GRADUATE ATTRIBUTES

Graduate Attributes of the College

At the successful completion of three years for UG programme / two years for PG programmes the graduates of the Institution will be able to attain the following Graduate Attributes.

Our Graduates to posses
- Communication skills
- In-depth domain knowledge
- Technical skills
- Knowledge Interdisciplinary in nature
- Positive attitude
- Critical thinking and problem solving skills
- Dynamism and team building skills
- Professional ethics and social values
- Self-awareness and emotional intelligence
- Entrepreneurship qualities
- Responsibility towards Society and environment
- Thirst for knowledge through lifelong learning

Graduate Attributes are the high level qualities and skill sets to be attained by the students of KKCAS at the end of their UG/PG programme. Programme Educational Objectives describe the objectives of the specific Programme. Programme Outcomes are the details related to Skills and Knowledge that are acquired in that particular Programme. The guidelines formulated by the Internal Quality Assurance Cell (IQAC) are followed in preparing the Programme Outcomes. Course Outcomes are designed in co-ordination with PO's and PEO's. Course Outcomes consist of the expected knowledge to be gained by the students at the end of their Course. Course Outcomes are mapped with Programme Outcomes. The Curriculum of each department is framed so as to attain the above outcomes.

Graduate Attributes, PEO's, PO's and CO's are approved by the Curricular Development Cell, Board of Studies and Academic Council and then displayed in College website, CMS and through display boards. The details of PO's, PEO's and CO's are communicated to the Faculty in the Department meeting. The faculty for each course conveys the PO's, PEO's and CO's to the students at the beginning of each semester. The Institution organizes Guest Lectures by experts based on the Course Outcome in order to motivate the students. FDP and Orientation Programme is provided to the faculty members regarding Outcome Based Education and Programme Outcomes, Programme Educational Objectives and Course Outcomes by the experts. The implementation of OBE in the Institution establishes the Vision and Mission of the College.

PROGRAMME EDUCATIONAL OBJECTIVES

PEO1: Graduates possess technical competency, leadership qualities and etiquette to become a successful professional in the desired discipline.

PEO2: Graduates practice technical skills to recognize, examine and bring solution to the human problems.

PEO3: Graduates abide to the maximum level of professional code of ethics.

PROGRAMME OUTCOMES

PO1 : Exhibit proficiency in oral and written communication.

PO2 : Learn the principles and applications of various languages, processes involved, and acquire adequate knowledge to write programmes using the above.

PO3 : Acquire Technical skills such as developing software for various applications, testing them and providing information security.

PO4 : Acquiring adequate knowledge in interdisciplinary subjects such as Commerce, Mathematics and Statistics for enhanced applications of software developed.

PO5 : Developing positive attitude by instilling confidence in the minds of students by suitable programs.

PO6 : An ability to make the students think out of the box and solve complex problems arising in shop floor situation.

PO7 : An ability to function effectively and pro-actively and in teams ,to accomplish a common goal.

PO8 : Carrying out the task assigned by the industries with professional ethics and at the same time with the consent for well-being of the society.

PO9 : Aware of one's own weaknesses and strengths, emotions and the way to control emotions to maintain good interpersonal relationships.

PO10 : Undertake entrepreneurship as a desirable and feasible career option.

PO11 : Realizing the responsibilities towards the society and to protect the environment, use professional knowledge for providing better living condition to the people.

PO12 : Learn continuously for updating new knowledge and technologies in the field of Information Technology.

MAPPING OF GRADUATE ATTRIBUTES WITH PROGRAMME OUTCOMES

S.No.	GRADUATES ATTRIBUTES	PROGRAM OUTCOME
1	Communication skills	Exhibit proficiency in oral and written communication.
2	In-depth domain knowledge	Learn the principles and applications of various languages, processes involved, and acquire adequate
3	Technical skills	Acquire Technical skills such as developing software for various applications, testing them and providing
4	Knowledge Inter-disciplinary in nature	Acquiring adequate knowledge in interdisciplinary subjects such as Commerce, Mathematics and Statistics
5	Positive attitude	Developing positive attitude by instilling confidence in the minds of students by suitable programs.
6	Critical thinking and problem solving skills	An ability to make the students think out of the box and solve complex problems arising in shop floor situation.
7	Dynamism and team building skills	An ability to function effectively and pro-actively and in teams, to accomplish a common goal.
8	Professional ethics and social values	Carrying out the task assigned by the industries with professional ethics and at the same time with the
9	Self-awareness and emotional intelligence	Aware of one's own weaknesses and strengths, emotions and the way to control emotions to maintain
10	Entrepreneurship qualities	Undertake entrepreneurship as a desirable and feasible
11	Responsibility towards Society and environment	Realizing the responsibilities towards the society and to protect the environment, use professional knowledge for providing better living condition to the people.
12	Thirst for knowledge through lifelong learning	Learn continuously for updating new knowledge and technologies in the field of Information Technology.

EVALUATION PROCESS (EP)

All Question Papers should follow the given levels

• Base Level (Remembering and Understanding)

• Application Level (Applying)

• Advance Thinking Level (Analyzing, Evaluating and Creating)

  • K1 - Remember

  • K2 - Understanding

  • K3 - Apply

  • K4 - Analyze

  • K5 - Evaluate

  • K6 – Create

Base Level

K1 - Remembering

  • The remembering level assist the students to recollect the data based on the course content.

  • This level of statement guides the students to recognize information essentially in the similar format it was presented.

  • Keywords for Question types: Choose, Define, Find, How, Label, List, Match, Name, Omit, Recall, Relate, Select, Show, Spell, Tell, What, When, Where, Which, Who, Why

K2 – Understanding

  • The understanding level provides assistance to focus on the real facts and notions by knowing, forming, comparing, interpreting, and interpolating in their own words.

  • The questions framed direct the students to remember and associate data together.

  • Keywords for Question types: Classify, Compare, Contrast, Demonstrate, Explain, Extend, Illustrate, Infer, Interpret, Outline, Relate, Rephrase, Show, Summarize, Translate

Application Level

K3 - Applying

  • The applying level aid the students to deliver solution to the problems based on the concept taught by the facilitator.

  • Students apply their knowledge to choose the correct response

  • Keywords for Question types: Apply, Build, Choose, Construct, Develop, Experiment with, Identify, Interview, Make use of, Model, Organize, Plan, Select, Solve, Utilize

Advanced Thinking Level

K4 – Analyzing

- In the analyzing level, the students must be able to articulate the association among the ideas and break down learning into other elements.
- Students must have the ability to classify reasons, origins or motives and deliver conclusions.
- Keywords for Question types: Analyze, Assume, Categorize, Classify, Compare, Conclusion, Contrast, Discover, Dissect, Distinguish, Divide, Examine, Function, Inference, Inspect, List, Motive, Relationships, Simplify, Survey, Take part in, Test for, Theme

K5 - Evaluating

- In the evaluation level, students are anticipated to make judgment on the questions.
- Problem-solving and decision-making processes are evaluated at this level.
- Keywords for Question types: Agree, Appraise, Assess, Award, Choose, Compare, Conclude, Criteria, Criticize, Decide, Deduct, Defend, Determine, Disprove, Estimate, Evaluate, Explain, Importance, Influence, Interpret, Judge, Justify, Mark, Measure, Opinion, Perceive, Prioritize, Prove, Rate, Recommend, Rule on, Select, Support, Value

K6 – Creating

- In the creating level, the questions are framed in the format of challenging the students based on critical and creative thinking.
- This is the highest level in the blooms taxonomy where questioning the students to generate conceptual level.
- Keywords for Question types: Adapt, Build, Change, Choose, Combine, Compile, Compose, Construct, Create, Delete, Design, Develop, Discuss, Elaborate, Estimate, Formulate, Happen, Imagine, Improve, Invent, Make up, Maximize, Minimize, Modify, Original, Originate, Plan, Predict, Propose, Solution, Solve, Suppose, Test, Theory

Note: Keywords are given to gain a better understanding. Sticking on to the keywords is not mandatory.

PEDAGOGY FOR THEORY AND PRACTICAL COURSE

Before the commencement of the Semester

- In the Subject Log Book, the subject in-charge should design the Course content and syllabus predictable to be delivered throughout the course.

- Topics to be handled apart from the Course Syllabus should also be structured.

S. No	Title	Description
1	Lecturer Classes	Teacher gives a lecture using chalk and talk method. Important points to be remembered are stressed and interaction encouraged.
2	Assignments	A minimum of two assignments shall be assigned for each subject in a semester, which should be submitted within the stipulated time frame.
3	Students Seminar	Students have to give a seminar on a topic, relating to the syllabus of the concerned paper, assigned to the students under the guidance of the teacher handling that subject.
4	Group Discussions	Students are formed into a number of groups consisting of five to six students each and a topic is assigned to each group about which they have to speak either defending or opposing it.
5	Case Analysis	Structured cases may be discussed and debated Cases may be prepared and detailed simulated cases.
6	Exercises – Problem Solving	Using the concepts and procedure students have to solve the problems in the class.
7	Library References	Students are asked to refer to certain books or journals in the library, prepare materials relevant to a particular topic of the subject under the supervision of the staff.
8	Role Play	Students are assigned specific roles and are asked to defend it in interactive sessions.
9	Quiz	This is an arrangement where in participant's brig to guess answers for specific questions.
10	Carry Home Exercises	Exercises are given to the students which would require application of what they have studied, lot of thinking and discussion among others.
11	Simulation games	The course instructor will relate the concept with a game by means of simulations. This can be computer oriented.
12	Project work	Students are assigned specific projects in their eighth semester and this enables them to implement the theory and they have to submit their project reports with in specified time limit.
13	Practical	Students are given practical problems which require the application of the theoretical concepts.
14	Industrial Visit	To gain knowledge on the application of the theoretical concepts in the industries, an industrial visit is arranged to the students.
15	Net Based Exercise	Students should be assigned a topic about which he should be asked to collect information from net and submit

Teaching Learning methods adopted by the College

- Lecturing Method
- Assignments
- Students Seminar
- Group Discussion
- Case Analysis / Case Study
- Exercises-Problem Solving
- Library References
- Role Play
- Quiz
- Carry home exercise
- Group Learning
- Simulation games
- Practical
- Field Visit
- Internship
- Project Work
- Net Based Exercise
- Online Quiz using Kahoot / Hotpotato / Flickers/Moodle
- Google Classroom
- ICT enabled Teaching and Learning
- Online Courses through SWAYAM / NPTEL

During the Semester

The performance statement must be maintained after the completion of CIA I, II, Model Examinations and End Assessment Examinations in the Subject Log Book. The topic discussion along with the attendance of students is also maintained. In the case of students having the attendance < 75% is recorded in the Student's Profile.

End of Semester

The Subject Log Book is evaluated by HoD & Dean to examine the efficiency of the teaching and learning process. The concerned authorities compare the content delivery methods and assessment modes with teaching plan prepared at the beginning of semester.

TEACHING METHODOLOGY

The Faculty can conduct their classes using student-centered learning methods.

Lecturing Methods

Theory: The Faculty delivers the course in lecture hall for a maximum of 5 hours per week for 90 days.

Laboratory: The Faculty delivers the entire course or few topics in one course through laboratory session or by conducting demonstration experiments, for the case where entire syllabus in a course is delivered through laboratory or experimental demo works.

Project: The Faculty guides the students to solve a problem or design a new thinking. The Projects can be completed in an individual or in group within the duration given.

Case Studies

Case study approach is an approach where the students are given a problem to discuss and analyze.

In this approach, the knowledge acquirers are the students who are the one initiate and participate actively in the acquisition process while faculty facilitates and acts as a guide.

ICT tools

ICTs are web-based platforms that bring together tools and materials to support learning, including: content files and multi-media resources relevant to the course of study; assessment tools that may permit students to complete online quizzes or submit assignments: communication tools such as mail, chat and asynchronous discussion forums; course administration tools that allow instructors to record and store grades, make announcements and display course deadlines and learning management tools that allow students to review grades and track their progress like Google Classroom, Moodle, Kahoot, Plickers, etc.

Google Classroom

Google Classroom is incorporated into the curriculum to connect and facilitate communications between the instructors and students about the course. It is easy to create a class and invite learners, help instructors to distribute assignments, allows teacher to create, review and mark assignments. It also helps the students to see their progress about the submission of assignments, seminars, discussions and class materials in one place.

Moodle

Moodle is included into the curriculum as a type of quiz module that creates all familiar forms of assessment like true or false, fill ups, multiple choice, matching, etc... This module is used as an online examination evaluation pattern in the Continuous Internal Assessment (CIA) as well as End Assessment Examinations (EAE).

Online Course

Students have to register for under going online courses in NPTEL /SWAYAM / MOOC / COURSERA / EDX etc… and can appear for the examination in the same web portal or through the End Assessment Examinations conducted in our College.

Continuous Internal Assessment

The Continuous Internal Assessment are made either in the entry in Google classroom or Continuous Internal Assessment (CIA) with the course plan. The following methods can be used to assess the students:

Assignment

Assignment questions must be within the designed course outcomes. The assignment can be either individual or group. The Students need to post their assignment in the Google classroom.

Project

The Projects may be planned based on the specialization and the field of interest in the concern streams within the designed course outcomes. The distribution of marks depends on the student viva ability. The report submitted will be evaluated by the external member.

CIA Test

CIA I & II Test questions must be within the designed course outcomes. The distribution of marks depends on objective type or descriptive type examination.

Model Exam

The model exams are conducted in descriptive manner. This is usually implemented in order to get the students attention as Pre End Assessment Examination.

End Assessment Examination

The Final exam questions must be within the designed course outcomes. The designed questions need to utilize Bloom's taxonomy to ensure the questions are measureable. All the levels are used in accordance with type of course.

Certificate Courses

Certificate Courses are conducted to enrich the knowledge of the students in various fields of specialization and to promote employment and to develop the skills.

Job Oriented Courses

Every student should complete one job oriented course of minimum 20 hrs duration. The student may register in PMKVY (supported by the central government) or other external agency. They should submit a certificate for the successful completion of the training programme from the agency concerned at the end of the third semester.

Internship

        The students have the option to select any organisation – Government / Private like industry, bank, Research & Development organisations, Scientific Companies; IT related service providers etc., in consultation with the staff Co-ordinator & Head of the Department. The students should undergo training for a period of two weeks. The students must maintain a work diary and prepare a report of the training undergone and submit the same to the HoD on a stipulated date, there will be a viva voce with internal Examiners at the end of the semester V and the completion certificate must be issued by Head of the Department and the same may be submitted to the Controller of Examinations at the end of semester V.

COs and POs MAPPING

The various correlation levels for the measurement of COs and POs mapping is measured in four scale:

"-" is No Correlation, L is Low Correlation, M is Medium Correlation and H is High Correlation.

The format for CO and PO mapping as follows:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	H	-	-	-	-	-	-	L	-	-	-	-
CO2	-	L	-	-	-	M	-	-	-	-	M	-
CO3	-	-	H	-	-	-	-	-	L	-	-	-
CO4	-	-	-	M	-	-	-	-	-	H	-	H
CO5	-	-	-	-	L	-	M	-	-	-	-	-

Mapping analysis of each course should be maintained in the department. The questions are framed in such a way that it should satisfy Bloom's Taxonomy, wherein each question is mapped to the appropriate course outcome of the respective course, which is evaluated based on the set attainment levels by the department.

ATTAINMENT OF COURSE OUTCOME

KKCAS has formulated PEOs, POs and COs for all courses and programmes offered. The attainments of Outcomes are measured with the help of two different methods.

- Direct Method
- Indirect Method

Method of Measuring Attainment of COs

Direct Methods

The Continuous Internal Assessment and End Assessment Examinations assess the knowledge and skills defined by the course outcomes, directly from performance. The attainment of course outcomes are measured through direct method for the batch admitted from 2021 onwards.

Indirect Methods

- Course attainment is evaluated by taking a survey after the completion of each course at the end of semester.
- A Questionnaire is framed with course outcomes of the particular course and ratings are made by the students.
- The average of the ratings given by the students for each course outcome is calculated to assess the attainment of CO's.
- CO attainment is calculated using the indirect method from the batch 2019 onwards.

Method of Measuring Attainment of POs

Direct Methods

The attainment of programme outcome is calculated using the direct method for the batch admitted from 2021 onwards.

Indirect Methods

- PO attainment is calculated using the attainment of the Course Outcomes contributing to that particular PO.
- The following parameters are used to measure the performance of students after completion of the programmes.
  - ✓ Entrepreneurship
  - ✓ Placement
  - ✓ Higher Education and Research
- PO attainment is calculated using the indirect method from the batch 2019 onwards.