



## **OUTCOME BASED EDUCATION**

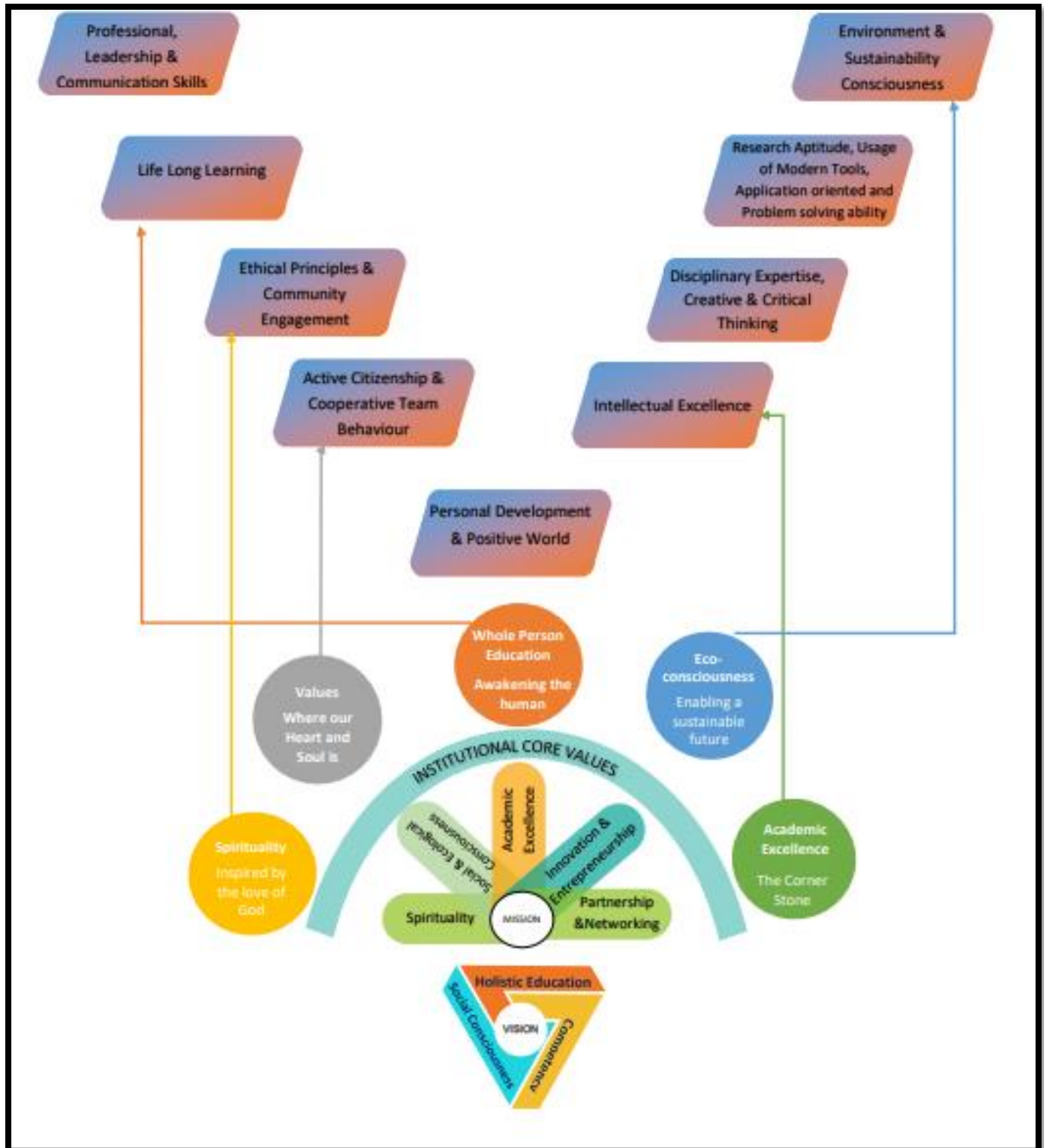
Outcome Based Education differs from traditional education, which primarily focuses on the resources that are available, which are called inputs. OBE uses methods which are learner-Centered and that focus on authentically evaluating student performance. While outcomes represent the destination of the learner's journey, the tools and methods of reaching the destination are flexible. This means teachers can customize instructional methods and learning activities in a way that cater to the unique needs of their learners. Bishop Heber College offers an Outcome Based Education which enhances the quality of teaching and learning. The OBE syllabus was implemented in line with the UGC Learning Outcomes Based Curriculum Framework in the academic year 2019. The students get exposed to a curriculum which pivots on Skill Development, Employability, Sustainable Development and Entrepreneurial Skills. The Curriculum has a framework to align teaching, learning and assessment methods.

The college curriculum and assessment focus on different levels of learning grounded on Bloom's Taxonomy like Level 1: Remembering -Remember: recognizing, recalling, describing, listing, Level 2: Understanding-Understand: interpreting, exemplifying, classifying, summarizing, inferring, comparing, explaining, Level 2: Understanding-Understand: interpreting, exemplifying, classifying, summarizing, inferring, comparing, explaining, Level 4: Analysing-Analyze: differentiating, organizing, attributing, comparing, outlining, Level 5: Evaluating-Evaluate: checking, critiquing, assessing, concluding, Level 6: Creating-Creat: generating, planning, producing, composing. Our graduate attributes incorporate the values embedded in the vision, mission statement of our institution. The core values are reflected in attributes such as comprehensive knowledge, global competency and in exhibiting independent and critical thinking. In line with our vision and mission the graduates show interest in updating knowledge and demonstrate ethical and moral values that transform the society.

The attributes enable the graduands to perceive the world in a positive light and to fulfil their civic responsibilities as loyal citizens. Furthermore, the graduate attributes of our institution unveil Ecological Stewardship through imbibing all-encompassing knowledge on environmental issues and the need to conserve natural resources. To warrant inclusivity according to our vision the graduate attributes empower our students to appreciate social, political, cultural and linguistic diversity. Thus, the vision, mission and core values emphasize and indoctrinate whole person education that are realized through sustainable graduate attributes.



**INSTITUTIONAL VISSION MISSION & GRADUATE ATTRIBUTES**





The institution has 26 major disciplines. Each of the department have exclusive Vision and Mission statement. Every Programme has unique Programme Outcomes and Programme specific Outcomes. Program outcomes describe what students are expected to know and would be able to do by the time of graduation. These relate to the skills, knowledge, and behaviours that students acquire as they progress through the program. Program Specific Outcomes are statements that describe what the graduates of a specific Humanities or Sciences program would be able to do. The Course Outcome statements are defined by considering the course content covered in each module of a course. For every course there are 6 Cos. The keywords used to define COs are based on Bloom's Taxonomy. Additionally Specific Learning Outcomes are charted out for each topic of the course. All the courses together must include all the POs and PSOs. For a course we map the COs to POs through the CO-PO matrix and to PSOs through the CO-PSO matrix through various correlation levels are Slight (Low) Correlation, Moderate (Medium) Correlation, Substantial (High) Correlation and “-” indicates there is no correlation. A set of performance evaluation criteria is used for quantitative assessment of COs.

Thus, the attainment of COs provides evidence of attainment of POs and PSOs. The attainment is calculated through an assessment process The students are continuously assessed through periodical tests, assignments, seminars and quiz. 25:75 pattern for theory and 40:60 for practical is followed by the college. The attainment is calculated based on the learning outcomes of both CIA and ESE. Each course coordinator calculates the attainment in a programmed sheet with a fixed threshold value. The formula used to calculate attainment is  $CO1- CO3 = T1 + ASS / 65$   
 $CO4- CO6 = T2 + SEM / 65$  added with ESE marks. Attainment 3: 60% Stud scoring  $\geq 70\%$  of max marks allocated to CO Attainment 2: 50% Stud scoring  $\geq 70\%$  of max marks allocated to CO Attainment 1: 40% Stud scoring  $\geq 70\%$  of max marks allocated to CO Attainment 0: Less than 40% Stud scoring  $\geq 70\%$  of max marks allocated to CO.

The Curriculum offered by the college addresses the following Global, National, Regional and Local needs. Some of the areas which are of paramount importance to the development of the Nation and to the world at large are identified under the areas of : Socio- Economic development, Human Capital Development, Scaling new Heights in Science & Technology, Mental Health & Medicine and Climate Action.





**CURRICULUM RELEVANCE TO GLOBAL NATIONAL AND LOCAL  
 DEVELOPMENTAL NEEDS**

	Socio- Economic Development	Human Capital Development	Scaling new Heights in Science & Technology	Climate Action	Mental Health & Medicine
<b>GLOBAL</b>	<ul style="list-style-type: none"> <li>Academic Excellence &amp; core Competency</li> <li>Rational Thinking &amp; Scientific Acumen.</li> </ul>	<ul style="list-style-type: none"> <li>Ability to be Creative and Collaborative in Relevant fields</li> <li>Portray entrepreneurship spirit</li> </ul>	<ul style="list-style-type: none"> <li>Ability to Learn independently to acquire new knowledge</li> <li>Adaptive to new technology and Digital-cozy.</li> </ul>	<ul style="list-style-type: none"> <li>Appreciating environmental &amp; sustainability issues.</li> <li>Exhibit Ability to engage with community for Environmental Action.</li> </ul>	<ul style="list-style-type: none"> <li>Apply the knowledge of advanced concepts to solve problems related to Health and Medicine</li> </ul>
<b>NATIONAL</b>	<ul style="list-style-type: none"> <li>Post-pandemic Economic slowdown</li> <li>Human Rights Violations and Racial Conflicts</li> <li>Food Security and Sustainable Agriculture</li> </ul>	<ul style="list-style-type: none"> <li>Human Security in Digital &amp; Cyber space</li> <li>Management due to Crypto Market and AI influence.</li> <li>Child Labour, Women Safety and Drug trafficking</li> </ul>	<ul style="list-style-type: none"> <li>Nuclear War and Space Governance.</li> <li>Adoption of innovative technologies and Smart gadgets.</li> </ul>	<ul style="list-style-type: none"> <li>Climate Change Action and Disaster Management</li> </ul>	<ul style="list-style-type: none"> <li>Viral Surge and Multiple Microbial Resistance</li> </ul>
<b>REGIONAL</b>	<ul style="list-style-type: none"> <li>Innovation and Self Reliance in Energy, Economy and Technology</li> <li>Proliferation of Slums, Housing Crisis in Urban areas and Infrastructure improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Illiteracy, Unemployment due to skill gaps</li> <li>Promotion of Organic Farming &amp; Ethnic Varieties to Global markets</li> <li>Automation in Decentralized domains, digitalization &amp; Cyber Security issues.</li> </ul>	<ul style="list-style-type: none"> <li>Need to develop Promising growth in Pharma and Biotech products</li> <li>India Innovation Index, Self-Employment and Talent Utilisation</li> </ul>	<ul style="list-style-type: none"> <li>Emissive Vehicle containment &amp; Transformation to Green Energy technology</li> <li>Access to Potable Drinking Water &amp; containment of Pollution in Water bodies</li> </ul>	<ul style="list-style-type: none"> <li>Sanitation, Hygiene and use of Big Data to improve Health Care System</li> </ul>
<b>LOCAL</b>	<ul style="list-style-type: none"> <li>Promotion of Millet food varieties ethnic to Tamilnadu.</li> <li>Eradication of Poverty and Sanitation, Health and Hygiene</li> </ul>	<ul style="list-style-type: none"> <li>Skill enhancement and Mental Health of Youth.</li> <li>*Naan Mudhalvan Scheme of Government of Tamil Nadu, 2019.</li> </ul>	<ul style="list-style-type: none"> <li>Development of Indigenous technologies and need for improvements in Exports and Block-chain Management, Adoption of AI imbibed Technologies and IoT</li> </ul>	<ul style="list-style-type: none"> <li>Self-reliance in Energy and Solar Power harvesting.</li> <li>Land Erosion and Disappearing Islands of coastal Tamilnadu and need for Conservation Biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>Malnourishment and Hygiene issues in villages</li> </ul>
	<ul style="list-style-type: none"> <li>Increasing Slum dwellers, Urban Sprawl, Land Ceiling and Land Pollution</li> </ul>	<ul style="list-style-type: none"> <li>Microcredit, Micro-insurance and supportive systems for MSMEs</li> </ul>	<ul style="list-style-type: none"> <li>Organic Farming and Agriculture block chain</li> </ul>	<ul style="list-style-type: none"> <li>Solid Waste Management, Industrial Effluence, &amp; particulate Emission.</li> <li>*ThooymaiThamilagam Thittam, Govt of Tamilnadu,</li> <li>Flood management and Save 'Cauvery River'</li> </ul>	<ul style="list-style-type: none"> <li>Child Marriage, Women Trafficking, Infanticide &amp; Foeticide and Family Welfare</li> </ul>



### **Faculty Empowerment on Outcome Based Education**

Initiatives to implement OBE were taken by the Deanery of Academics since 2016 through various workshops, seminars and invited talks.

Name of the programme	:	<b>Curriculum Design and Evaluation Techniques</b>
Sponsors	:	Department of Bio-Technology, Govt. of India & Bishop Heber College
Duration	:	21.11.2016 - 22.11.2016
Resource Persons	:	Dr. D. Brahadeeswaran, Former Professor & Head, Department of Policy Planning and Educational Research, National Institute of Technical Teachers' Training and Research, Chennai Dr. E. Ramganes, h, Chair, School of Education, Professor & Head, Department of Educational Technology, Bharathidasan University, Tiruchirappalli

A two day workshop on 'Curriculum Design and Evaluation Techniques' sponsored by the Department of Biotechnology, Govt. of India under STAR College Scheme was organized in association with the IQAC, Bishop Heber College on November 21 and 22, 2016 at the Multipurpose Auditorium, for all the members of the staff of the Departments of Basic Sciences.

On the first day Dr. D. Brahadeeswaran gave a wonderful insight on the ideal design of a curriculum and the governing features of its enrichment. He explained thoroughly the following:

- Attributes of Curriculum
- Curriculum design and development phases
- Taxonomy of Educational Objectives
- Rules for stating General Objectives and Specific Objectives for the course





- Factors influencing the effectiveness of curriculum implementation

Apart from the theoretical instructions a working session on designing and improving a curriculum was attended by the teachers and care was taken that the teachers get trained in all the above features related to curriculum design and development

**Impact:** Teachers formed micro groups and developed learning outcomes and planned assessment strategies which are to be measured during, after at the end of the academic year.



### **OBE and Evaluation Changes**

Implementation of OBE curriculum necessitated change of Assessment schemes. In order to train teachers on Blooms Taxonomy based question paper setting and quantifying Course outcomes, the Internal Quality Assurance Cell (IQAC) of the college organised a workshop for Examinations and Evaluation Reforms on 10 March 2018. Academic experts from reputed institutions shared their valuable knowledge, insights and experiences with the teaching staff members. Experiential Sharing on best practices, Training on e-resources for teaching, Training on Question paper setting



and discussion on Proposed Model plans are the chief brainstorming topics and concepts provided by academic experts like Prof. M.R. Arulraj, Assistant Controller of Examinations Loyola College (Autonomous), Chennai – 600 034, Dr. S. Mumtaj Begum, Controller of Examinations, Lady Doak College (Autonomous), Madurai 625002, Dr. A. Edward William Benjamin, Professor, Department of Education, Bharathidasan University, Trichy-2 4 Dr. S. Senthilnathan, Associate Professor of Educational Technology, BDU, Trichy and Dr. S. Leo Stanley, Associate. Professor, DDE, Alagappa University, Karaikudi during the sessions.



Prof. M.R. Arulraj, Assistant Controller of Examinations Loyola College , Chennai addressing the gathering





Question paper setting and discussion headed by Dr. S. Mumtaj Begum, Controller of Examinations, Lady Doak College



Different Assessment Models were Explained by Dr. S. Leo Stanley, Associate. Professor, DDE, Alagappa University, Karaikudi







Dr. A. Edward William Benjamin, Professor, Department of Education, Bharathidasan University, Trichy addressed the science faculties.



Technical session by Dr. S. Senthilnathan, Associate Professor of Educational Technology, Bharathidasan University, Trichy

The second phase of implementation was in full swing in the academic year 2019-20. The OBE syllabus based on Revised Bloom's Taxonomy Knowledge levels was successfully implemented in June 2019. Deanery of Academics organized a one-day Orientation Program on Curriculum Development & Designing: Enhancement of the Structure of the Syllabus based on the Bloom's Taxonomy Classification on 22 June 2019 (Saturday), in the Multipurpose Auditorium, Bishop Heber College. The Resource Person for this Orientation Program was Dr. S. Parthasarathy, Director, University Informatics Centre, Professor & Head, Department of Bioinformatics, School of Life Sciences, Bharathidasan University, Trichy 620 024. The purpose of the program was to help the faculty of our college in understanding the method of preparing the curriculum based on the model of Bloom's Taxonomy. This was planned to equip them towards excellence in the designing of the curriculum and up gradation of the syllabus in the global scenario. Departments developed

The third phase in the execution of OBE syllabus took place in 2020, when the existing syllabus was fine-tuned and tailored to suit the needs of the learners. To review the syllabi of the departments for the OBE requirements, a series of review meetings from 20.08.2020 to 28.08.2020 were organized by the Deanery of Academics. Departmental presentation of syllabi was made based on Outcome Based Education. The Articulation Mapping and PO, PSO & CO were formulated for all the Departments. A panel of intra-departmental experts verified and suggested pioneering ideas to enhance and hone the PO, PSO and CO and staff were given guidelines in calculating the attainment and articulating the action plan to be taken based on the attainment.