

# HARCOURT BUTLER TECHNICAL UNIVERSITY

## Office of the Dean (Continuing Education and Internal Quality Assurance)

*Note: This Proformahas been designed by the university to carryout in house Academic Audit of the University Departments. (Academic Audit is a scientific and systematic method of reviewing the quality of academic process in the institution. It is related to quality assurance and enhancement of quality in academic activities. It is aimed at understanding the existing system; assessing the strengths and weaknesses of the Departments; suggesting methods for improvement and for overcoming the weaknesses and identifying the opportunities for academic reforms)*

### PROFORMA OF DEPARTMENTAL ACADEMIC AUDIT

1. Name of Department :

2. Date of Review:

#### NOTE:

- i. Please rate the following parameters/indicators on a scale of 1-10, with 10 being the highest depending upon availability/non availability of a well-defined mechanism/process of the said indicator/criteria. For some of the criteria, it could be subjective as well, but based on standard norms/guidelines/or rationale of the experts.
- ii. Kindly give your opinion on the strength and weakness of the Department and your suggestions for improvement

#### A. ACADEMICS

| A.1 | Teaching and learning   | Score |
|-----|---|-------|
| 1   | Admissions in first year  | NA    |
| 2   | Curriculum (Development, Structure, Course Syllabi, Flexibility)  | 8     |
| 3   | Formal Academic Load on Students (Teaching, Laboratory/Practical, Projects)   | 8     |
| 4   | Evaluation Process (Continuing Evaluation, End-Term Evaluation, transparency, redressal mechanism for students)   | 9     |
| 5   | Number of faculty members (Sanctioned, Filled, Vacant, On contract against vacant)  | 6     |
| 6   | Number of technical staff in labs   | 0     |
| 7   | E-Assisted Learning<br>i. Availability of Library Resources (books, book bank, journals and Major Search Engines (like Scopus, Web of Science)<br>ii. Multi-Media Assisted Teaching (such as Use of ICT, Audio, Video, LCD, LAN, e-learning – resources, OpenEducational Resources) | 8     |
| 8   | Technical Societiesfor Students<br>i. Departmental Society<br>ii. Student Chapter(s) of Professional Societies  | NA    |

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|----|--|-----------|
| 9  | Educational Tour/Training/Industrial visits/Internship opportunities   | NA        |
| 10 | Effectiveness of Assisted Learning, Tutorial System, Seminars for B.Tech Students  | 7         |
| 11 | Faculty Mentoring/Faculty Advisor for Students   | NA        |
| 12 | Number of teaching days in a semester  | 9         |
| 13 | Formal mechanism to obtain feedback from students and stakeholders on Curriculum (Such as Student feedback for teaching & Course evaluation etc) | 8         |
|    | <b>Total Score (out of 130)</b>  | <b>63</b> |

| A.2 | Industry- Institute Interaction   | Score        |
|-----|---|--------------|
| 1   | Industrial Training as a part of curriculum                                 | NA           |
| 2   | Involvement of industry expert in designing curriculum.                     | NA           |
| 3   | Organizing expert lectures from industry.                                   | NA           |
| 4   | Involvement of industry expert in UG/PG projects (as Joint Supervision)     | NA           |
| 5   | Participation of students in industrial tours and internship programs.      | NA           |
| 6   | Interaction of faculty with industries in terms of visits, lab development. | NA           |
| 7   | Industrial research projects  | NA           |
|     | <b>Total Score (out of 70)</b>  | <b>NA/00</b> |

| A.3 | Laboratory Development   | Score     |
|-----|--|-----------|
| 1.  | New labs developed in last three year.                             | 7         |
| 2.  | Development of infrastructure in existing labs.                    | 7         |
| 3.  | Up Gradation of existing equipment's including replacement.        | 8         |
| 4.  | Development of Laboratory manuals of experiments in existing labs. | 8         |
| 5.  | Development of new experiments in existing labs.                   | 8         |
|     | <b>Total Score (out of 50)</b>                                     | <b>38</b> |

## B. RESEARCH

| B  | Research   | Score     |
|----|--|-----------|
| 1. | Research Ambience in the Department                        | 8         |
| 2. | Quality of Publications                                    | 8         |
| 3. | Relevance of Research to society                           | 7         |
| 4. | Student Exposure to Attending Quality Conferences/Symposia | NA        |
| 5. | Research Intensity of Faculty Members                      | 7         |
| 6. | Inter Departmental Research Collaborations                 | 6         |
| 7. | Industry/externally funded sponsored research              | 7         |
|    | <b>Total Score (out of 70)</b>                             | <b>43</b> |

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### C. OUTREACH ACTIVITIES

|                                | Outreach activities   | Score     |
|--------------------------------|---|-----------|
| 1.                             | Visit to other institutes of higher learning like IITs, IISc, IISER, etc. by faculty.                         | 9         |
| 2.                             | Delivering of talk / lecture in HBTU apart from regular courses.  | 8         |
| 3.                             | Expert lectures in other institutes.  | 7         |
| 4.                             | Visits to other institutes for academic activities like accreditation, academic audit, attending RDCs, BoSetc | 7         |
| 5.                             | Contribution to Professional Societies.   | 8         |
| 6.                             | Editorial responsibilities / reviews of SCI Journals.   | 8         |
| 7.                             | Organization of Seminar, Workshops, Symposia, FDP.  | 9         |
| <b>Total Score (out of 70)</b> |   | <b>55</b> |

### D. Departmental Infrastructure and Human Resource

|                                 |  | Score     |
|---------------------------------|--|-----------|
| 1                               | Adequacy of Class Rooms and Multi-Media Facility   | 9         |
| 2                               | Availability of adequate Laboratories  | 9         |
| 3                               | Availability of Conference/Seminar Room, etc   | 8         |
| 4                               | Availability of adequate Seating Space/Offices and furnishings for Faculty and Research Students   | 9         |
| 5                               | Availability of Internet Services in Research Labs and Class Rooms   | 9         |
| 6                               | Departmental Library   | 9         |
| 7                               | Computing Facilities and Software  | 9         |
| 8                               | Computer and internet facilities: (terminals with LAN facilities, hardwares, printers, photocopy machine, UPS, internet-broadband/wi-fi etc) | 9         |
| 9                               | Faculty- Student Ratio   | NA        |
| 10                              | Support Staff (Technical/Administrative) Adequacy  | 0         |
| <b>Total Score (out of 100)</b> |  | <b>71</b> |

### E. Outcomes

|                                |   | Score     |
|--------------------------------|---|-----------|
| 1                              | Placements of B.Tech Students   | NA        |
| 2                              | Publications per Faculty in Indexed Journals/Year (Average of last three years) | 6         |
| 3                              | Average Citations per Faculty/Year (Last-Three Years) (Web of Science/Scopus)   | 6         |
| 4                              | Recognitions; Awards (National/International) to Faculty/Students               | 5         |
| 5                              | Consultancy and Externally Funded Projects                                      | 7         |
| 6                              | No. of B. Tech / M.Tech / PhD graduates to have taken up career in Academics    | 8         |
| <b>Total Score (out of 60)</b> |   | <b>32</b> |

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## SWOC Analyses

a) Strength: ① Hiring of new & enthusiastic young faculty having Ph.D from well-recognized institutions.

② Plan to start new Master's Programme in Physics Dep<sup>n</sup>

③ Recent impetus to hire more Ph.D students.

### b) Weakness:

① Need for more faculty

② Need for support staff for labs

③ Adequate funding for supporting research activities

### c) Opportunities:

① Research collaborations with various institute

② Establishments of new Research labs

③ More research opportunities from DST, SERB, CSIR


④ Scope of collaboration with industry.

### d) Challenges:

① Low faculty strength

② Lack of interest among students to pursue Science

③ Lack of good research infrastructure.

  
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