NATIONAL INSTITUTIONAL RANKING FRAMEWORK

Methodology for Ranking of Academic Institutions in India

(RANKING METRICS FOR DENTAL)

Ministry of Human Resource Development
Summary of Ranking Parameters and Weightages- 2020
(Dental)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameter</th>
<th>Marks</th>
<th>Weightage</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Teaching, Learning &amp; Resources</td>
<td>100</td>
<td>0.30</td>
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<tr>
<td>2</td>
<td>Research and Professional Practice</td>
<td>100</td>
<td>0.30</td>
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<td>3</td>
<td>Graduation Outcomes</td>
<td>100</td>
<td>0.20</td>
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<td>4</td>
<td>Outreach and Inclusivity</td>
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<td>0.10</td>
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<tr>
<td>1.</td>
<td><strong>Teaching, Learning &amp; Resources (TLR)</strong>&lt;br&gt;<strong>Ranking weight: 0.30</strong></td>
<td>100</td>
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<tr>
<td></td>
<td>A. Student Strength including Doctoral Students (SS): 15 marks</td>
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<td>B. Faculty-student ratio with emphasis on permanent faculty (FSR): 30 marks</td>
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<td>C. Combined metric for Faculty with PhD (or equivalent) and Experience (FQE): 20 marks</td>
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<td></td>
<td>D. Financial Resources and their Utilization (FRU): 35 marks</td>
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<td>2.</td>
<td><strong>Research and Professional Practice (RP)</strong>&lt;br&gt;<strong>Ranking weight: 0.30</strong></td>
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<td></td>
<td>A. Combined metric for Publications (PU): 40 marks</td>
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<td>B. Combined metric for Quality of Publications (QP): 40 marks</td>
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<td>C. Footprint of Projects and Professional Practice (FPPP): 20 marks</td>
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<td>3.</td>
<td><strong>Graduation Outcomes (GO)</strong>&lt;br&gt;<strong>Ranking weight: 0.20</strong></td>
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<tr>
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<td>A. Combined metric for Placement and Higher Studies (GPH): 35 marks</td>
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<td>B. Metric for University Examinations (GUE): 30 marks</td>
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<td>C. Metric for Number of PG Students Graduated (GPG): 35 marks</td>
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<td><strong>Outreach and Inclusivity (OI)</strong>&lt;br&gt;<strong>Ranking weight: 0.10</strong></td>
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<td>A. Percentage Students from other States/Countries (Region Diversity RD): 30 marks</td>
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<td>B. Percentage of Women (Women Diversity WD): 30 marks</td>
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<td>C. Economically and Socially Challenged Students (ESCS): 20 marks</td>
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<td>D. Facilities for Physically Challenged Students (PCS): 20 marks</td>
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<td><strong>Perception (PR)</strong>&lt;br&gt;<strong>Ranking weight: 0.10</strong></td>
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<td>A. Peer Perception: Employers &amp; Academic Peer (PR): 100 marks</td>
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</table>
1. Teaching, Learning & Resources (TLR): 100 marks

- Ranking weight: 0.30
- Overall Assessment Metric:
  \[ TLR = SS \times 15 + FSR \times 30 + FQE \times 20 + FRU \times 35 \]
- Component metrics based on:
  A. Student Strength including Ph.D. Students: SS
  B. Faculty-Student Ratio with emphasis on permanent faculty: FSR
  C. Combined metric for Faculty with PhD (or equivalent) and Experience: FQE
  D. Financial Resources and Their Utilisation: FRU
A. Student Strength including Ph.D. students (MDS) (SS): 15 Marks

- \( SS = f(N_T, N_E) \times 10 + f(N_P) \times 5 \)

- The functions \( f(N_T, N_E) \) and \( f(N_P) \) are functions to be determined by NIRF.
- \( N_T \): Total sanctioned approved intake in the institution considering all UG and PG programs of the institution.
- \( N_E \): Total number of students enrolled in the institution considering all UG and PG Programs of the institution.
- \( N_P \): Total number of students enrolled for the doctoral program (MDS) till previous academic year.

- **Primary Data: To be provided in a prescribed Format.**
B. Faculty-Student Ratio with emphasis on permanent faculty (FSR): 30 marks

- \( \text{FSR} = 30 \times [15 \times (F/N)] \)

- \( N = N_r + N_p \)

- \( F \): Full time regular faculty in the institution in the previous year.

- Regular appointment means Faculty on Full time basis. *Faculty on contract basis/ad-hoc basis will be considered if the concerned faculty has taught in both the semesters of academic year 2018-19.*

- Faculty members with Ph.D. and Master’s degree (MDS) will be considered and counted here. Faculty member with a Bachelor’s degree will not be counted.

- Expected ratio is 1:15 to score maximum marks.

- For \( F/N < 1: 50 \), FSR will be set to zero.

- *Primary Data: Faculty List to be provided in the Prescribed Format.*
C. Combined Metric for Faculty with PhD (or MDS) and Experience (FQE): 20 marks

- $FQE = FE$

- $FE = 6 \min(3F1, 1) + 6 \min(3F2, 1) + 8 \min(3F3, 1)$
  
  Rationale: Full marks for a ratio of 1:1:1

- *Primary Data: Faculty List in the Prescribed Format.*
D: Financial Resources and their Utilisation (FRU): 35 Marks

- FRU = 8.75\times f(BC) + 26.25\times f(BO)

- BC: Average Annual Capital Expenditure per student for previous three years pertaining dental discipline only. (Excluding expenditure on construction of new buildings)

- BO: Average Annual Operational (or Recurring) Expenditure per student for previous three years pertaining dental discipline only. (Excluding maintenance of hostels and allied services)

- Primary Data: Figures in prescribed format for each activity.
2. Research and Professional Practice (RP): 100 marks

- Ranking weight: 0.30

- Overall Assessment Metric:

  \[ RP = PU (40) + QP (40) + FPPP (20) \]

- The component metrics explained on following pages.

  A. Combined Metric for Publications: PU
  B. Combined Metric for Quality of Publications: QP
  C. Footprint of Projects, Professional Practice: FPPP
A. Combined metric for Publications (PU): 40 marks

- PU = 40 × f(P/F_{RQ})
- *P* is weighted number of publications as ascertained from suitable third party sources.
- *F_{RQ} is the maximum of nominal number of faculty members as calculated on the basis of a required FSR of 1:15 or the available faculty in the institution.*
- **Sources:** Third party sources.
B. Combined metric for Quality of Publications (QP): 40 Marks

- \[ QP = 20 \times f \left( \frac{CC}{F_{RQ}} \right) + 20 \times f \left( \frac{TOP25P}{P} \cdot F_{RQ} \right) \]

- Here CC is Total Citation Count over previous three years.
- P is as computed for PU.
- \( F_{RQ} \) is the maximum of nominal number of faculty members as calculated on the basis of a required FSR of 1:15 or the available faculty in the institution.
- TOP25P: Number of citations in top 25 percentile averaged over the previous three years.

- **Primary Data: Third Party Sources.**
C. Footprint of Projects, Professional Practice (FPPP): 20 marks

- **FPPP = FPR + OPD**
- **FPR = 10 \times f (RF)**
  - RF is average annual research funding earnings (amount actually received in rupees) per faculty at institute level in previous three years.
- **OPD = 10 \times f (Average OPD per Day)**
3. Graduation Outcome (GO): 100 marks

- Ranking weight: 0.20
- Overall Assessment Metric:

  \[ \text{GO} = \text{GPH}(35) + \text{GUE}(30) + \text{GPG}(35) \]
- The component metrics are explained on the following pages:
  
  A. Combined metric for Placement and Higher Studies: GPH
  B. Metric for University Examinations: GUE
  C. Metric for Number of PG Students Graduated: GPG
A. Combined Metric for Placement and Higher Studies (GPH): 35 marks

- \( \text{GPH} = 35 \times \left( \frac{N_p}{100} + \frac{N_{hs}}{100} \right) \)

- \( N_p = \text{Percentage of graduating students (in UG/PG programs) placed in the previous three years.} \)
- \( N_{hs} = \text{Percentage of graduating students (in UG/PG programs) who have been selected for higher studies in the previous three years.} \)

- \textit{Primary Data: To be provided in a prescribed format}
B. Metric for University Examinations (GUE): 30 Marks

- GUE = 30 × min [(N_g/80), 1]

- N_g is the percentage of Students (as a fraction of the approved intake), averaged over previous three years, passing the respective university examinations in stipulated time for the program in which enrolled.

- Primary Data: To be provided in a prescribed format.
C. Metric for Number of PG Students Graduated (GPG): 35 Marks

- \( \text{GPHD} = 35 \times f(N_{\text{gpg}}) \)
- \( N_{\text{gpg}} \) = Average number of PG (MDS) students graduated over the previous three years.

- *Primary Data: To be provided in the prescribed format.*
4. Outreach and Inclusivity (OI): 100 marks

- Ranking weight: 0.10

- Overall Assessment Metric: 
  \[ OI = RD(30) + WD(30) + ESCS(20) + PCS(20) \]

- The component metrics are explained on following pages:
  
  A. Percentage of Students from other States/ Countries (Region Diversity): RD
  B. Percentage of Women (Women Diversity): WD
  C. Economically and Socially Challenged Students: ESCS
  D. Facilities for Physically Challenged Students: PCS
A. Percentage of Students from other States/ Countries (Region Diversity RD): 30 marks

- RD = 25 × fraction of total students enrolled from other states + 5 × fraction of students enrolled from other countries

- *Primary Data: To be provided in the prescribed format.*
B. Percentage of Women (Women Diversity WD): 30 marks

• WD = $15 \times \left(\frac{N_{WS}}{50}\right) + 15 \times \left(\frac{N_{WF}}{20}\right)$

• $N_{WS}$ are the percentage of Women students.

• $N_{WF}$ are the percentage of Women Faculty including the women members in senior administrative positions, such as Heads of Departments, Deans or Institute Heads.

• Expectation: 50% women students and 20% women faculty.

• *Primary Data: To be provided in the prescribed format.*
C. Economically and Socially Challenged Students (ESCS) : 20 marks

- ESCS = 20 × f(N_{esc})

- $N_{esc}$ is the percentage of UG students being provided full tuition fee reimbursement by the institution to pursue their degree programs.

- *Primary Data: To be provided by the institution in a prescribed format.*
D. Facilities for Physically Challenged Students (PCS): 20 marks

- PCS = 20 marks, if the Institute provides full facilities for physically challenged students, as outlined.
  
  Else, in proportion to facilities.

- Basis: Verifiable Responses to Questions.

- *Primary Data: To be provided in a prescribed format.*
5. Perception (PR) – 100 marks

• Ranking weight: 0.1
• Overall Assessment Metric: PR = 100
• Component metrics are explained in the following pages:
  A. Peer Perception: Employers & Academic Peers (PR): 100 marks
A. Peer Perception: Employers & Academic Peer (PR) : 100 marks

• This is to be done through a survey conducted over a large category of Employers, Professionals from Reputed Organizations and a large category of academics to ascertain their preference for graduates of different institutions.

• Comprehensive list will be prepared taking into account various sectors, regions, etc.

• Lists to be updated periodically.