NATIONAL INSTITUTIONAL RANKING FRAMEWORK

Methodology for Ranking of Academic Institutions in India

(RANKING METRICS FOR RESEARCH INSITUTION)

Ministry of Human Resource Development
### Summary of Ranking Parameters and Weightages - 2023

(Research Institution)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameter</th>
<th>Marks</th>
<th>Weightage</th>
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<tbody>
<tr>
<td>1</td>
<td>Metric for Quantitative Research</td>
<td>100</td>
<td>0.30</td>
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<td>2</td>
<td>Metric for Qualitative Research</td>
<td>100</td>
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<td>3</td>
<td>Metric for Students and Faculty Contribution</td>
<td>100</td>
<td>0.20</td>
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<td>4</td>
<td>Outreach and Inclusivity</td>
<td>100</td>
<td>0.10</td>
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<td>5</td>
<td>Perception</td>
<td>100</td>
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<td>S.No.</td>
<td>Parameters</td>
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<td>1.</td>
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<td>Ranking weight: 0.30</td>
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<td></td>
<td>A. Combined metric for Publications (PU): 50 marks</td>
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<td>B. Combined metric for Citations Index (CI): 25 marks</td>
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<td>C. Footprint of Projects and Professional Practice (FPPP): 25 marks</td>
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<td>2.</td>
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<td>A. Combined metric for publications in 1st Quartile JCR(JCRQ1): 30 marks</td>
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<td>B. Combined metric for Publications in Top 25 (TOP25): 30 marks</td>
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<td>C. IPR and Patents: Published and Granted (IPR): 20 marks</td>
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<td>D. H- Index (HI): 20 marks</td>
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<td></td>
<td>A. Combined metric for Faculty with PhD (or equivalent) and Experience (FQE): 40 marks</td>
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<td>B. Student Strength including Doctoral Students (SS): 30 marks</td>
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<td>C. Metric for Number of Ph.D. Students Graduated (GPHD): 30 marks</td>
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<td>A. Percentage of 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. Percentage of SC/ST Students(SCTS): 20 marks</td>
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<td>D. Facilities for Physically Challenged Students (PCS): 20 marks</td>
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<td>Perception (PR)</td>
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<tr>
<td></td>
<td>A. Peer Perception: Employers &amp; Academic Peer (PR): 100 marks</td>
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</tbody>
</table>
1. **Metric for Quantitative Research : 100 marks**

   - Ranking weight: 0.30
   - Overall Assessment Metric:
     
     \[ QNR = PU (50) + CI (25) + FPPP (25) \]

   - Component metrics based on :
     
     A. Combined metric for Publications : PU
     B. Combined metric for Citations Index : CI
     C. Footprint of Projects and Professional Practice : FPPP
A. Combined metric for Publications (PU): 50 marks

- \( PU = 50 \times f(P/F_{RQ}) \)
- \( F_{RQ} \) 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 Citations Index (CI): 25 marks

- \( CI = 25 \times f(CC/F_{RQ}) \)
- Here CC is Total Citation Count over previous three years.
- \( F_{RQ} \) 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.

- *Primary Data: Third Party Sources.*
C. Footprint of Projects and Professional Practice (FPPP): 25 marks

- **FPPP = FPR + FPC**
- **FPR = 18.75 × f (RF)**
  - RF is average annual research funding earnings (amount actually received in rupees) per faculty at institute level in previous three years.
- **FPC = 6.25 × f (CF)**
  - CF is average annual consultancy amount (amount actually received in rupees) per faculty at institute level in previous three years.
2. Metric for Qualitative Research (QLR): 100 marks

- Ranking weight: 0.30
- Overall Assessment Metric:

\[
QLR = \text{JCRQ1(30)} + \text{TOP 25 (30)} + \text{IPR(20)} + \text{HI (20)}
\]

The component metrics explained on following pages.

A. Combined metric for publications in 1st Quartile: JCRQ1
B. Combined metric for Publications in Top 25: TOP25
C. IPR and Patents: Published and Granted: IPR
D. H- Index: HI
A. Combined metric for publications in 1st Quartile JCR(JCRQ1): 30 Marks

- \[ JCRQ1 = 30 \times f(JCRQ1/F_{RQ}) \]
- \( JCRQ1 \) is weighted number of publications in 1st Quartile 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 Publications in Top 25 (TOP25): 30 marks

- TOP25 = 30× f (TOP25P/P)

- *P* is weighted number of publications as ascertained from suitable third party sources.
- TOP25P: Number of citations in top 25 percentile averaged over the previous three years.
- *Primary Data: Third Party Sources.*
C. IPR and Patents: Patents Published and Granted (IPR): 20 marks

- **IPR = IPG + IPP**
  
  - **IPG = 10× f (PG)**
  
  - PG is the number of patents granted over the previous three years.
  
  - **IPP = 10 × f (PP)**
  
  - PP: No. of patents published over the previous three years.

- **Primary Data: Third Party Sources.**
D. H-Index: 20 marks

H-Index = 20*HI

HI is weighted number of H Index as ascertained from suitable third party sources (Web of science and Scopus)
3. **Metric for Students and Faculty Contribution (SFC) : 100 marks**

- **Ranking weight: 0.20**

- **Overall Assessment Metric:**

  - \( SFC = FQE(40) + SS(30) + GPHD(30) \)

- **The component metrics are explained on the following pages:**

  A. **Combined metric for Faculty with PhD (or equivalent) and Experience: FQE**
  B. **Student Strength including Doctoral Students: SS**
  C. **Metric for Number of Ph.D. Students Graduated: GPHD**
A. Combined Metric for Faculty with PhD (or equivalent) and Experience (FQE): 40 marks

- \[ FQ = 20 \times \left( F_{RA} / 95 \right), \quad F_{RA} < 95\%; \]
- \[ FQ = 20, \quad F_{RA} \geq 95\%. \]

- *Here* \( F_{RA} \) *is the percentage of Faculty with Ph.D. (or equivalent qualification) with respect to the total no. of faculty required or actual faculty whichever is higher, in the previous year.*

F1=Fraction with Experience up to 8 years;
F2= Fraction with Experience between 8+ to 15 years;
F3=Fraction with Experience > 15 years.

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

- \[ FQE = FQ + FE \]

- *Primary Data: Faculty List in the Prescribed Format.*
B. Student Strength including Ph.D. students (SS): 30 Marks

- \[ SS = f(N_T, N_E) \times 20 + f(N_p) \times 10 \]

- 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 till previous academic year.

- **Primary Data: To be provided in a prescribed Format.**
C. Metric for Number of Ph.D Students Graduated (GPHD): 30 Marks

- $GPHD = 30 \times f(N_{phd})$

- $N_{phd} = $ Average number of Ph.D students graduated (awarded Ph.D) over the previous three years.

- **Primary Data:** Number of graduating Ph.D. Students as reflected in the approved Annual Report/Convocation Report 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. Percentage of SC/ST Students: SCTS
  D. Facilities for Physically Challenged Students: PCS
A. Percentage of Students from other States/ Countries (Region Diversity RD): 30 marks

• RD = 25 \times \text{fraction of total students enrolled from other states} + 5 \times \text{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. Percentage of SC/ST Students (SCTS): 20 marks

- \[ \text{SCTS} = 20 \times f(N_{sets}) \]

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

- \textit{Primary Data: To be provided by the institution in the 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 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.