

# **JNTUA RESEARCH REGULATIONS FOR PH.D. PROGRAMMES 2021-22**

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## **RESEARCH REGULATIONS FOR Ph.D. PROGRAMMES OF JNTUA FOR THE ACADEMIC YEAR 2021-22**

Research programmes leading to the award of Ph.D. (Full time and Part Time/External Registration) are offered by Jawaharlal Nehru Technological University Anantapur.

These regulations will come into force from the 2021-22 research admissions onwards.

### **1. Admission Procedure**

Admissions will be made based on the performance in the Andhra Pradesh Research Common Entrance Test (APRCET) and interview.

However, admissions for the ADF programme, Industrial Executives, and FN/PIOs/NRIs will be done as per the University guidelines prescribed from time to time.

### **2. Eligibility**

Ph.D. can be pursued by candidates possessing the minimum qualifications as specified below on a Full-Time (FT)/Part-Time (PT) basis in the Faculties of Sciences, Humanities, Management Studies, Engineering, Food Technology, Bio-Technology and Pharmaceutical Sciences.

Admissions into the Ph.D. programme will be made within the framework of reservation rules in force prescribed by the Government of Andhra Pradesh from time to time.

#### **2.1. Educational Qualifications**

Candidates with a Master's degree in the relevant discipline are eligible for admission into Ph.D. programmes.

##### **2.1.1. Full-Time (FT)**

- a. Candidates for admission to the Ph.D. programme shall have a Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for assessing, accrediting or assuring quality and standards of educational institutions.
- b. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to

SC/ST/OBC (non-creamy layer)/Differently-abled and other categories of candidates as per the decision of the University Grants Commission from time to time, or for those who had obtained their Master's degree before 19<sup>th</sup> September 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible only based on the qualifying marks without including the grace mark procedures.

- c. The full-time Ph.D. courses are offered at the research centers recognized by the University. The research centers are required to provide all the necessary facilities to the admitted candidates. The candidates have to stay at the center for the period of the research and are not allowed to take up any teaching or other jobs. All other criteria like eligibility, supervisors, course work, admission and fee are the same as those for the part-time candidates.
- d. Candidates selected for AICTE Doctoral Fellowship (ADF) programme shall be considered under the Full-time category.
- e. Foreign Nationals/PIOs/NRIs sponsored by the Government of India or their respective Government on any exchange programme or self-sponsored and who satisfy the eligibility conditions as per the University regulations shall

### **2.1.2. Part-Time (PT)**

Candidates satisfying the eligibility conditions noted under sections 2.1.1 above can be admitted as Part-time candidates through the entrance test, as per the following order of priority. Admission into the Part-time category will be made based on service seniority in the respective categories.

- 1. Faculty working in the University.
- 2. (a) Faculty working in Postgraduate and Professional colleges having completed at least two years of service. This provision is also applicable to Faculty teaching Physics, Chemistry, Mathematics and Humanities in professional colleges.  
or  
(b) Faculty working in Polytechnic / Government or private aided Junior or degree Colleges/ Employees working in research institutes/industries having completed at least four years of service.

### **3. Duration of the Programme**

- a) A full-time Ph.D. student admitted with PG qualification is required to spend the minimum prescribed **three years** (maximum of six years) in the Institution.
- b) A part-time Ph.D. student admitted with PG qualification is not

permitted to submit the thesis before the minimum prescribed **Four years** (maximum of eight years).

- c) In case the admitted candidate possesses the **M.Phil. Degree**, minimum of two years duration (maximum of four years) for the full-time programme and minimum **three years** (maximum of six years) for part-time Programme is applicable.
- d) A grace period of 30 Days will be given to the **Ph.D.** Research Scholars after completion of the stipulated period for submission of thesis.
- e) Women candidates and Persons with Disabilities (more than 40% disability) may be allowed a relaxation of two years for a Ph.D. in the maximum duration.
- f) In addition, the women full-time scholars shall be provided Maternity Leave/Child Care Leave once in the entire duration of the Ph.D. Program for up to 240 days.

#### **4. Allocation of Research Supervisor**

1. The selected Research scholar shall get consent from one of the empaneled supervisors approved by the University.
2. The allocation of a Research Supervisor for a selected research scholar shall be decided depending on the number of scholars per Research Supervisor, the available specialization among the Supervisors and research interests of the scholars as indicated by them at the time of interview.
3. In case of topics that are inter-disciplinary where the expertise needs to be supplemented, the University may appoint a Co-Supervisor.
4. The Number of Research Scholars to be allotted to each supervisor is as follows:

A Research Supervisor, who is a Professor, at any given point of time, cannot guide more than three (3) M.Phil., and Eight (8) Ph.D. scholars (both Full-time and Part-time and as a Supervisor or co-supervisor). An Associate Professor can guide up to a maximum of two (2) M.Phil. and six (6) Ph.D. scholars (both Full-time and Part-time and as a Supervisor or co-supervisor) and an Assistant Professor can guide up to a maximum of one (1) M.Phil. and four (4) Ph.D. scholars (both Full-time and Part-time and as a Supervisor or co-supervisor). However, not more than two Ph.D. scholars shall be allotted to any supervisor in an admission year.

#### **5. List of Research Scholars on website**

The University shall maintain the list of all the Ph.D. registered students on its website on a year-wise basis. The list shall include the name of the registered candidate, the topic of his/her research, the name of his/her supervisor/co-supervisor, date of enrolment/registration.

## 6. Requirements for the award of Ph.D. Degree

The requirements for the award of a Ph.D. degree are

- a) Candidates should have passed Pre-Ph.D. Examinations of all the prescribed subjects.
- b) Candidates should have attended a minimum of 3 RRM's and should have been recommended for Pre-Submission Seminar by the RRC.
- c) Candidates should have published four papers out of which at least two research papers should have been published in refereed Journals and the other may be conference publications before the submission of the thesis for adjudication. Minimum one of the journal publications must be in Science Citation Index Journals or one patent granted based on his/her research work. The filing date of the patent should be after the date of registration to the Ph.D Programme. The other journal publication can be in journals having impact factor given by Thomson Reuters or UGC listed journals. The paper(s) published prior to the admission shall not be counted for fulfilling the requirement. The scholar shall invariably publish JNTU Anantapur as an affiliation in all his/her publications required to meet the submission criteria. The published papers containing the name of the scholar and supervisor(s) will only be considered. Scholars have to provide proof for the approvals of UGC-listed journals and others.
- d) Before the submission of the dissertation/thesis, the scholar shall make a presentation of the Ph.D thesis work in the **Pre-submission seminar**.
- e) The candidate should submit a thesis based on the research work carried out under the supervision of one or more recognized research guides as per the University norms.
- f) After receipt of positive recommendations on the thesis from adjudicators, the candidate should defend the thesis in a viva-voce examination successfully before a committee constituting internal and external examiners, appointed by the Vice-Chancellor.

### 6.1 Course Work

- The credit assigned to the Ph.D. coursework shall be 10 credits (Four Theory Subjects).
- Coursework for Pre. Ph.D. Examination consists of the following four papers.
- Subjects 1 & 2: Two subjects (3 credits for each subject) relevant to the area of research and offered under any approved PG programme of the University in the Constituent units/Research

Centers.

- Subject 3: Research methodology & IPR (2 Credits) offered under any approved PG programme of the University in the Constituent Units/Research Center or **Online certification offered by NPTEL/Swayam (Minimum of 8 weeks)**
- Subject 4: Research & Publication ethics (2 Credits) either through self-study or Online certification offered by NPTEL/Swayam (Minimum of 8 weeks)
- The scholar shall attend classes along with PG students and will be evaluated in the same relative grading scale of the course work i.e Evaluation pattern in mid-exams and end-semester exams shall be as per the Academic Regulations existing at that time for that particular PG Programme in that Academic Unit.
- The subjects selected must be intimated to the Director, R&D with endorsement from the supervisor, co-supervisor (if any). The syllabus of the Subjects which the candidate has registered should be sent to the Director, R&D with the endorsement of the Supervisor, Head of the Department offering the Course and the Principal of the Constituent units/Research Centers of the University opted by the Scholar.
- **Scholars enrolled in the Disciplines not offering PG programmes by the University shall select Subjects 1 & 2 from the University approved list of subjects in their concerned discipline. Coursework for these two subjects shall be conducted in the Constituent units of the University. The subjects selected along with the syllabus must be intimated to the Director, R&D with endorsement from the supervisor, co-supervisor (if any). Examination for these subjects shall be conducted by the University for 100 Marks.**
- Candidates will be intimated about the last date for registration of these subjects once the admissions are completed.
- Selected Subjects cannot be changed in the future.
- The course work shall be completed within 2 years from the date of admission for both Full-time and Part-time scholars. The candidate has to acquire a minimum of 75% attendance in each subject. Otherwise, he/she has to repeat the course work.
- Examination for Subject 4 if opted for self-study shall be conducted by the University for 100 Marks.
- **Those who complete Subject 3 & Subject 4 through MOOC shall produce the certificate of completion with the grades endorsed by the Research Supervisor to the Director, R&D, JNTUA.**
- The candidates shall obtain 50% marks in each subject to pass the

examination.

- The Constituent unit/Research Centre shall submit the marks obtained by the Students in the Subjects the scholars have registered to the Director, R&D, JNTUA.
- The University shall issue a consolidated marks memo for the Scholars.

Note:

- Candidates who fail in the first attempt will be given only four more attempts to qualify in the examination. Mere registration for the examination shall not be considered as an attempt unless the candidate appears for the examination.
- Candidate admission shall be canceled if he/she does not complete his four subjects in a maximum of five attempts.

## **6.2. Exemption from Pre-Ph.D. Course Work**

Candidates already holding M. Phil and admitted to the Ph.D. programme through the admission process, and those who have already completed the course work in M.Phil may be exempted by the University (courses that are completed at M.Phil only exempted) from the Ph.D. course work. However, if the supervisor recommends the course work, in such case, it is required to complete the course work even though the scholar has been admitted with the M.Phil degree.

## **6.3. Research Review Meetings**

1. RRM's are conducted to assess the quality of work carried out regularly and thereby, suggesting the candidate on suitable modifications to be incorporated for improvement of the quality in the proposed research work.
2. RRM's shall be conducted every three months in the concerned departments. The scholars exhibiting significant progress in their Research work can only register for RRM.
3. The candidate has to give a seminar on research progress in the Research Review Meetings.
4. Scholars shall attend the Research Review meeting after publishing/presenting a research paper on their research topic.
5. All scholars shall attend and present for at least one Research Review Meeting in a year.

## **6.4. Pre-submission seminar/Open seminar:**

Before the submission of the dissertation/thesis, the scholar has to submit five hard copies and a soft copy of the synopsis to the Director, Research & Development. As per the directions, the scholar shall make a presentation in the Department before the Doctoral Research Committee (DRC) which shall also be open to all faculty members and other research

scholars. The feedback and comments obtained from them may be suitably incorporated into the draft dissertation/thesis in consultation with the Research Supervisor. Doctoral Research Committee should certify the eligibility for submission of the thesis.

### **6.5. Plagiarism Check**

Before the submission of the Ph.D. thesis, the candidate has to submit a soft copy of the thesis for a plagiarism check. Scholars will be permitted for submission of the Thesis, only if the Plagiarism similarity is less than or equal to 20%.

### **6.6. Submission of the Thesis**

- a. After meeting the required criteria and passing Pre-Ph.D. examination, the candidate shall submit his/her thesis on the concerned topic of research.
- b. External Research Scholars shall submit Ph.D. Thesis to the Director, R&D whereas Full-time scholars in the Research Centres shall submit their Thesis through proper channel to the Director, R&D.
- c. On completing the research work, the candidate is required to submit two hard copies of the thesis (softbound) on the subject of his/her research along with a soft copy and one synopsis report (soft and hard copy) after incorporating all suggested changes by DRC in Pre-submission seminar.
- d. A candidate shall not submit the whole or any substantial part of his Thesis for the award of any degree/Diploma by any University

### **6.7. Evaluation of Ph.D. Thesis**

1. The Ph.D. thesis submitted by a research scholar shall be evaluated by at least three external examiners, who are not in employment of the same University.
  - a) The supervisor shall furnish a panel of 09 examiners with their consent, out of which, (a) minimum 03 examiners from IITs/IISc/IISERs/IIMs, (b) minimum of 03 examiners from IITs (central Govt.)/Central Government R&D Institutions or equivalent/ NITs/Central Universities and (c) maximum of 03 examiners from State Government Universities/State Govt. IITs.
  - b) In the case of Pharmacy discipline, the supervisor will furnish a panel of 09 examiners, out of which, (a) a minimum of 06 examiners from NIPER/Centrally Funded Institutions or Research organizations, (b) a maximum of 03 examiners from State Government Universities/State Govt. IITs.
  - c) In the case of English discipline, the supervisor will furnish a panel of 09 examiners, out of which, (a) minimum of 06



examiners from IITs/NITs/ EFLUs/Central Universities (b) a maximum of 03 examiners from State Government universities/State Govt. IIITs

- d) Out of the 09 examiners, maximum of 03 examiners shall be within the state of Andhra Pradesh.
  - e) No examiner shall be drawn from JNTUA and the Institute/University where the Supervisor(s)/scholars are employed
  - f) The Vice-Chancellor is authorized to change the examiner(s) if the panel submitted by the Supervisor is not satisfactory.
  - g) The Vice-Chancellor will nominate 03 examiners in consultation with experts in the relevant discipline.
  - h) The Vice-Chancellor shall, out of the panel of 12 experts, select and appoint three examiners.
2. The Adjudicator's summary report of the thesis should be accompanied by a detailed report with the following options. In case the thesis is recommended for revision or rejected outright, the reason for the same has to be incorporated in the report.
- a) The thesis attains the required standards for the award of a Ph.D. degree.
  - b) The thesis attains the required standard for the award of Ph.D degree and comments may be justified at the time of Viva-Voce Examination.
  - c) The thesis requires revision and submission to the Doctoral Committee.
  - d) The thesis requires revision and re-submission for re-evaluation by the same examiner.
  - e) The thesis is Rejected.

The Doctoral Committee shall check and verify the answers to the comments made by the examiners only and they shall not evaluate the whole thesis. If the answers are satisfactory and incorporated in the final thesis then the committee shall recommend for the viva voce examination else recommend for the proper incorporation of the comments or suggestions made by the examiners once again.

3. The University's decision shall be as per the following.

<b>S. No.</b>	<b>Examiner 1</b>	<b>Examiner 2</b>	<b>Examiner 3</b>	<b>Decision of the University</b>
1.	Accept	Accept	Accept	Accepted for conducting Viva-voce
2.	Accept	Accept	Revise	Revise the thesis and

				send it to the examiner / Doctoral committee for acceptance
3.	Accept	Accept	Reject	<p>The thesis is sent to the fourth examiner.</p> <p>If the thesis is accepted, then viva-voce is conducted.</p> <p>If the thesis is recommended for revision, then the thesis is to be revised and sent to the examiner / doctoral committee. If the doctoral committee accepts the thesis, viva-voce is conducted.</p> <p>If the thesis is rejected by the fourth examiner, then the thesis is sent to the fifth examiner. If the thesis is rejected then the thesis will be rejected.</p> <p>If the thesis is recommended for revision, then the thesis is to be revised and sent to the examiner / doctoral committee. If the doctoral committee accepts the thesis, viva-voce is conducted.</p>
4.	Accept	Revise	Revise	Revise the thesis and send it to examiners / Doctoral committee for acceptance
5.	Accept	Revise	Reject	<p>Revise the thesis and send it to the 4<sup>th</sup> examiner.</p> <p>If the fourth examiner accepts the thesis for</p>

				conducting the viva voce. If the fourth examiner recommends revision, then revise the thesis and send it to the examiners/doctoral committee. If the fourth examiner rejects, it is rejected.
6.	Accept	Reject	Reject	The thesis is rejected.
7.	Revise	Revise	Revise	Revise the thesis and send it to examiners / Doctoral committee for acceptance
8.	Revise	Revise	Reject	Send to the fourth examiner after revision If the fourth examiner rejects, it is rejected. If the fourth examiner recommends for revision, then revise as per the three examiners and send it to the examiners / doctoral committee If the fourth examiner accepts the thesis for conducting the viva voce.
9.	Revise	Reject	Reject	Thesis is rejected
10.	Reject	Reject	Reject	The thesis is rejected.

The gist of the above table is that the scholar is permitted to attend a viva-voce examination only if three positive reports are obtained. The Vice-Chancellor shall appoint the doctoral committee.

#### **6.8. Ph.D. Open Viva-voce examination**

- a) The open viva-voce of the research scholar to defend the dissertation/thesis shall be conducted only if the evaluation report(s) of the external examiner(s) on the dissertation/thesis is/are satisfactory and include a specific recommendation for awarding the Ph.D. Degree.
- b) The viva-voce relating to the Ph.D. thesis shall be conducted by a

viva-voce committee to be nominated by the Vice-Chancellor.

The viva-voce committee shall consist of

1. Research Supervisor and Co-supervisor (if any)
2. One of the examiners who adjudicated the thesis (to be nominated by the Vice-Chancellor)
3. The Head of the Department (all the concerned Heads, in the case of inter-disciplinary).
4. The Chairperson of the Board of Studies (all the concerned chairpersons, in the case of inter-disciplinary) – Optional
5. Director (R&D) – Optional

The decision of the internal examiner (one of the supervisors) and the external examiner is final for the award of the degree.

- c) The viva voce is open to all members of the department and allied departments. The candidate shall have to successfully defend his/her Thesis work.
- d) A candidate who is not successful at the Viva-Voce may be permitted to take the viva-voce a second time within three months. No candidate shall be permitted to take the viva-voce more than twice. If the candidate fails for the second time, the case shall be disposed of by the Vice-Chancellor on its merits.
- e) After the completion of the Viva-Voce examination, the Viva-Voce Committee will submit the recommendations along with the soft copy of the thesis (to be submitted by the scholar to the Committee) for placing on INFLIBNET through UGC, to the Directorate of R&D.
- f) The Ph.D. degree shall be awarded only after uploading the thesis in INFLIBNET (Shodhganga).

#### **7. Provisional Certificate**

Before the actual award of the degree, the University shall issue a provisional certificate to the effect that the Degree has been awarded following the provisions of the UGC Regulations, 2016.

#### **8. Depository with SHODHGANGA INFLIBNET**

Following the successful completion of the evaluation process and before the announcement of the award of the Ph.D. degree(s), the R & D directorate shall submit an electronic copy of the Ph. D. thesis to the SHODHGANGA INFLIBNET, for hosting the same to make it accessible to all Institutions/Colleges.

#### **9. Conversion from Full-Time to Part-Time and Vice-Versa**

The Conversion of the Ph.D. research from full-time to part-time and vice-versa shall be approved by the Vice-Chancellor only once during the tenure, subject to submission of necessary documents along with the recommendation of the Supervisor(s) and Principal /Director of the Centre of the Supervisor and the Scholar after

completion of one year from the date of registration and on payment of the Conversion fee of Rs.5000/-.

**10. Change of Supervisor**

If a candidate wishes to change a Supervisor or a co-supervisor for valid reasons, the request may be considered by the University as per the merits of the case. However, in such cases where the candidate is permitted, he/she can submit the thesis only after one year from the date of change of Supervisor or inclusion of an additional supervisor. Publications with earlier supervisor/co-supervisor satisfying the norms are permitted.

**11. Change of Topic**

The research scholar has to submit the application form in the prescribed format for the Change of Topic and it will be permitted based on the recommendation of the Chairman, Board of Studies and with the approval of the Vice-Chancellor. However, submission of the thesis is permitted only after one year from the date of change of topic. The exact title of the thesis shall be finalized during the Pre-submission seminar by the committee.

**12. Research Review Committee (RRC)**

Every discipline of Ph.D programmes must have a Research Review Committee (RRC). The RRC will be constituted by the Vice-Chancellor with a minimum of three members. All members must fulfill the eligibility norms of the supervisor.

**Functions of RRC:**

The functions of the Research Review Committee are:

1. To Conduct Research Review Meetings.
2. To assess the progress of the research work and provide suggestions, if any, to improve the quality.
3. Review the suggestions of the previous research review meeting and provide remarks on the present work.
4. In case the progress of the research scholar is unsatisfactory in a Research Review, the research review committee shall record the reasons for the same and suggest corrective measures.
5. In the last Research review meeting before applying for the Pre-Submission Seminar, the committee has to ensure the compliance of remarks made in early Research Review Meetings.
6. Recommendation for Pre-Submission Seminar.

**13. Doctoral Research Committee (DRC)**

Doctoral Research Committee (DRC) will be constituted by the Vice-Chancellor with a minimum of three members per scholar discipline-wise. All members must fulfil the eligibility norms of the supervisor.

**Functions of DRC**

The functions of the Doctoral Research Committee are:

1. To conduct a Pre-submission seminar for the research scholars.
2. To suggest changes in the draft copy of the Thesis produced during the Seminar.
3. Recommendation for final submission of the Thesis.
4. Deciding the suitable title for the Thesis.

#### **14. General Information**

- a. The academic regulations should be read as a whole for purpose of any interpretation.
- b. Malpractices rules-nature and punishments are as per the PG regulations of the University.
- c. Wherever the words “he”, “him”, “his”, occur in the regulations, they also include “she”, “her”, “hers”, respectively.
- d. In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.
- e. The University may change or amend the research regulations or syllabi at any time and the changes or amendments shall be made applicable to all the students on rolls with effect from the dates notified by the University.
- f. The registration of a Ph.D. scholar may be canceled by the University within the stipulated period if the candidate fails to satisfy the conditions stipulated in the admission order or violate the rules and regulations of Ph.D. after giving notice to the concerned candidate.
- g. The admitted candidates are advised to see the JNTUA website [www.jntua.ac.in](http://www.jntua.ac.in) for instructions from time to time.

**For any clarifications, candidates can contact  
Research & Development Cell of JNTUA.**

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#### **Fee Details**

Tuition fee per Year:       Rs. 40,000/-

The candidate has to pay the tuition fee once every year. The first-year tuition fee should be paid at the time of Admission. The tuition fee from the second year onwards shall be paid at the beginning of the year from the date of Admission. One month grace period is permitted for the payment of the Annual Fee. Beyond the grace period, a penalty of Rs.1000/- per month shall be paid.

A grace period of one month is extended to all scholars for thesis submission without any fee.

*\*Non-payment of the tuition fee for two consecutive years will lead to the cancelation of admission without any prior notice to the candidate.*

Candidates must preserve all fee receipts and photocopies of the demand drafts and produce them as and when required.

**Other Fees:**

Fees for Pre-Submission Seminar	: Rs.7,500/-
Fees for Plagiarism check (up to 3 times)	: Rs. 3,000/-
Fees for Submission of Thesis	: Rs. 20,000/-