# Directorate of Research and Development

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**
**KAKINADA-533003, Andhra Pradesh (India)**
Academic Regulations and Guidelines for the Candidates of Research Programmes
(Effective for the candidates admitted for the academic year 2018-19 onwards)

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The Directorate of Research and Development is established to promote research activities of JNTU Kakinada, to obtain the funds from UGC, DST, AICTE and other Government organizations/Research organizations/Autonomous organizations, and to encourage the sponsored research activity by interaction with Industries / Premier educational and Research institutes / organizations. The directorate also monitors and administers the research programs of Ph.D offered by the University in various disciplines.

The Academic Regulations and Guidelines mentioned for performing the activities for monitoring and evaluation of the candidates cover the following aspects.

1. Categories of Ph. Ds' offered
2. Available disciplines
3. Eligibility criteria for the candidates to apply for the  Ph.D Programme
4. Eligibility for University/Constituent Colleges/Research Centers for offering Ph.D programme
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## 1.  Categories of Ph. Ds' offered

The University offers Ph.D (minimum duration is 3 years) programmes in different disciplines. The details are as follows.

- Mathematics / Physics

    o  Ph.D  (Full time / External Registration)

-  Management

    o  Ph.D  ( External Registration)

- Engineering

    o  Ph.D (Full time / External Registration)

## 2.  Available disciplines

The University offers Ph.D  in the following disciplines

- o        Mathematics (Full time / External Registration)
- o        Physics (Full time / External Registration)
- o        Management (External Registration)
- **Engineering (Full time / External Registration**)
    - o        Civil Engineering
    - o        Electrical and Electronics Engineering
    - o        Electronics and Communication Engineering
    - o        Mechanical Engineering
    - o        Computer Science and Engineering
- **Engineering (External Registration)**
    - o        Metallurgy
- **Interdisciplinary**(External Registration)
    - o        Bio-Technology
    - o        Computer science

## 3.  Eligibility criteria for the candidates to apply for the  Ph.D Programme

i.    Candidates applying for Ph.D should have Post Graduate (PG) qualification in the concerned disciplines from any UGC recognized State / Central University / Private University,  Premier National Institutes,  with 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or

an equivalent grade in point scale wherever grading system is followed), 50% marks for SC /ST/OBC candidates, or equivalent relaxation of grade, may be allowed for SC/ST/OBC (non-creamy layer) / differently disabled categories.

ii. Candidates applying for Ph.D research programme under external registration should have minimum of two years experience in Educational Institutions / R & D organizations / Industries. Full time Research Scholars will be admitted without experience.

iii. Candidates who have obtained JRF, SRF or other fellowships from organizations like UGC, CSIR, and AICTE, etc., will be given priority for selection as Full time Research Scholars. (without University fellowship)

iv. Candidates applying for Ph.D in Computer Science and Engineering should have UG in any Engineering discipline and PG qualification in Computer Science and Engineering / Information Technology.

v. However, Candidates having Post Graduate / M. Phil qualification in Physics, Electronics, Mathematics, Computer Science, and Computer Applications disciplines, are eligible for Ph.D in Computer Science.

vi. Candidates interested to apply for interdisciplinary research work, should hold the UG / PG in the relevant area (except for nano-technology). However, he/she may have Supervisor and Co-Supervisor from the area of interdisciplinary research, having Ph.D in those areas.

| S. No. | Discipline | Eligibility for the scholar for admission |
|---|---|---|
| 1. | <ul><li>Electronics and Communication Engineering</li><li>Electrical and Electronics Engineering</li><li>Mechanical Engineering</li><li>Civil Engineering</li><li>Computer Science and Engineering</li><li>Information Technology</li></ul> | <ul><li>UG & PG degree in concerned discipline of Engineering</li><li>In case of CSE, UG can be with any Engineering discipline, PG should be CSE discipline</li><li>Minimum 55% in PG for OC and 5% relaxation for SC / ST / OBC / differently disabled candidates</li></ul> |
| 2. | <ul><li>Mathematics</li></ul> | <ul><li>PG programme in Mathematics / Statistics</li><li>Minimum 55% in PG for OC and 5% relaxation for SC / ST / OBC / differently disable candidates</li></ul> |
| | <ul><li>Physics</li></ul> | <ul><li>PG Programme in Physics</li><li>Minimum 55% in PG for OC and 5% relaxation for SC / ST / OBC / differently disable candidates</li></ul> |
| | <ul><li>Management</li></ul> | <ul><li>PG programme in the concerned discipline of Management.</li><li>Minimum 55% in PG for OC and 5% relaxation for SC / ST / OBC / differently disable candidates</li></ul> |
| 3. | <ul><li>Bio-Technology</li></ul> | <ul><li>PG should be in Bio-Technology, Bio-process Engineering, Bio-medical Engineering, M. Pharmacy, Chemical Engineering, Bio-Chemical Engineering & Life sciences. UG should be relevant to life sciences</li><li>Minimum 55% in PG for OC and 5% relaxation for SC / ST / OBC / differently disable candidates</li></ul> |
| 4. | <ul><li>Computer Science</li></ul> | <ul><li>Master of Computer Applications (MCA) / M.Sc (Maths, Computer Science, Electronics, Physics)</li><li>Minimum 55% in PG for OC and 5% relaxation for SC / ST / OBC / differently disable candidates</li></ul> |
| 5. | <ul><li>Metallurgy</li></ul> | <ul><li>Four years B.E./B.Tech in Metallurgical Engineering/ Metallurgical and Materials Engineering/Materials Technology/Mechanical Engineering/Production Engineering/ Ceramic Engineering/ Ceramic Science and Technology/ Nano Technology/ Manufacturing Engineering</li><li>Two years ME/M.Tech in Metallurgical Engineering/ Materials Engineering/ Metallurgical and Materials engineering/ Materials Technology/ Industrial Metallurgy Welding/ Nano Technology/ Metal Casting/ Ceramics/ Corrosion Science and Engineering/ Manufacturing/ Mineral Processing any other specialization of relevance</li><li>Minimum 55% in PG for OC and 5% relaxation for SC / ST / OBC / differently disable candidates</li></ul> |

**4. Eligibility for University/Constituent Colleges/Research Centers for offering Ph.D programme**

- University/ Constituent Colleges and recognized research centers are eligible to offer Ph.D programs only if they satisfy the availability of eligible research supervisors, required infrastructure and supporting administrative research promotion facilities
- PG Departments of the colleges, research laboratories of Government (State/Central) with at least two qualified teachers / scientists / other academic staff in the department concerned along with above facilities.

**5. Allotment of Scholars to Research Centers**

- Only part time scholars are allotted to recognize Research Centers of the University.
- Details of faculty (working in constituent colleges and research centers) along with their domain of research areas may be placed in the website.
- Scholars may be given option whether to work with faculty of Constituents colleges or research Centers.
- Two scholars each may be allotted to the recognized research centers.
- Scholars are allotted to research centers by the University based on merit, specialization and priority exercised by the candidate.
- Research centers shall provide required infrastructure and facilities to the scholars allotted to carry out the research.

*Note:* If the supervisor/co-supervisor is left the research center, then a new supervisor/ co-supervisor shall be appointed from the available faculty fulfilling the norms with approval of JNTUK.

**6. Eligibility criteria for Supervisor/Co-Supervisor**
- Any regular Professor of the University/ Constituent Colleges with at least five research publications in refereed journals and any regular Associate/Assistant Professor of the university/ Constituent college with a Ph.D. degree and at least two research publications in refereed journals may be recognized as Research Supervisor.
- Only a full time regular teacher of the University/ Constituent Colleges can act as a supervisor. The external supervisors are not allowed. However, Co-Supervisor can be allowed in inter-disciplinary areas from other departments of the same institute or from other related institutions with the approval of the DRC.
- The allocation of Research Supervisor for a selected research scholar shall be decided by the Department concerned 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.
- In case of topics which are of inter-disciplinary nature where the Department concerned feels that the expertise in the Department has to be supplemented from

outside, the Department may appoint a Research Supervisor from the Department itself, who shall be known as the Research Supervisor, and a Co-Supervisor from outside the Department /College/Institution on such terms and conditions as may be specified and agreed upon by the consenting Institutions/Colleges.

- 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. An Associate Professor as Research Supervisor can guide up to a maximum of two (2) M.Phil. and six (6) Ph.D. scholars and an Assistant Professor as Research Supervisor can guide up to a maximum of one (1) M.Phil. and four (4) Ph.D. scholars.
- The scholars allotted for research centers shall have either supervisor or co-supervisor from university/ constituent colleges.
- Any ratified Professor/Assoc.Professor/Asst.Professor of JNTUK recognized research center with Ph.D fulfilling above norms are eligible.

Note: Any regular faculty of the University/ Constituent Colleges and Any ratified faculty from JNTUK recognized research center is eligible to supervise/co-supervise after one year from award of his/her Ph.D.

| S. No. | Discipline | Qualification to supervise the research scholars |
|---|---|---|
| 1. | <ul><li>Electronics and Communication Engineering</li><li>Electrical and Electronics Engineering</li><li>Mechanical Engineering</li><li>Civil Engineering</li><li>Computer Science and Engineering</li><li>Metallurgy</li></ul> | <ul><li>Faculty Member / Scientist should have Ph.D qualification from State University / Central University /IITs' /IIMs /NITs / IISc or any other UGC recognized private University / reputed foreign University in the concerned discipline. UG and PG programme should be in the concerned Engineering discipline only</li><li>In case of Metallurgy, Ph. D qualification in Metallurgy / Mechanical Engineering is required</li><li>In case of Inter-disciplinary / Multi-disciplinary research, the Supervisor / Co-Supervisor from the disciplines involved are required.</li></ul> |
| 2. | <ul><li>Mathematics</li><li>Physics</li><li>Management</li></ul> | <ul><li>Faculty Member / Scientist should have Ph.D qualification from State University/Central University / NITs/ IITs'/or any other UGC recognized private University or reputed foreign University in the concerned discipline. However their PG programme should be in the concerned discipline</li><li>In case of Inter-disciplinary / Multi-disciplinary research, the Supervisor / Co-Supervisor from the relevant disciplines involved are required.</li></ul> |
| 5. | <ul><li>Bio-Technology</li></ul> | <ul><li>Faculty Member / Scientist should have Ph.D qualification from State University/Central University / NITs / IITs or any other UGC recognized private University in the Bio-Technology discipline, Bio-process Engineering, Bio-Chemical Engineering, Pharmacy</li><li>However their UG / PG programme should be in related disciplines specific to the research field of the candidate, viz., Bio-Technology, Chemistry, Microbiology, and Life</li></ul> |

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|---|---|---|
| | | sciences.<br>• Qualified expert should be working in State / Central organizations with R & D activity (or) from State / Central Universities of repute |
| 6. | • Computer Science | • Faculty Member / Scientist should have Ph.D qualification from State University/Central University / NITs / IITs or any other UGC recognized private University in the Computer Science / Computer Science and Engineering discipline.<br>• Qualified expert should be working in State / Central organizations with R & D activity (or) from State / Central Universities of repute |

## 7. Admission procedure

A Common Research Admissions Test has been conducted for admission into various research programs of all the Universities of the State.

Admissions will be made by the Directorate of Admissions and final selection tp research programs will be intimated to the candidates.

- List of qualified candidates (discipline wise) has been shared to the University by the Convener (RCET 2018).
- All the qualified candidates opted JNTUK, Kakinada (irrespective of the preference number) shall be called for interview.
- Candidates shall be admitted in the Ph.D programme based on merit in written test and interview.
- Candidates who have qualified in the UGC/CSIR/NET/SLET examinations are exempted from appearing the written test. However, they have to attend the interview.
- Candidates possessing M Phil degree (regular) / distance mode, but recognized by Directorate of Distance Education of UGC or any other authorized organization are exempted from appearing written test. However, they have to attend the interview.

## 8. Criteria for the Recognized Research center to offer Ph.D

The Department should have minimum of two Faculty Members / Scientists who are actively working in the area of research, registered by the student of Ph.D programme.

The laboratory equipment / software packages that are required for the research, as recommended by the Supervisor / Co-Supervisor must be available in the Department / Recognized Research center. Institution / organization authorities should give the letter accordingly. The department should be accredited by NBA or it should be with Permanent affiliation, if the department is from affiliated institute of any University.

## 9. Course Work Requirements

All scholars registered must clear 3 subjects listed below:

**Paper –I:** Research Methodology which could also cover areas such as Quantitative methods, computer applications, research ethics and review of published research in the relevant field, training, field work, etc. for 100 marks/Four Credits.

**Paper–II:** Advanced Subject Paper/Recent Advances in the Subject for 100 Marks/Four Credits.

**Paper–III:** Research Area for 100 marks / Four Credits.

Remarks:     (i) Paper – II & Paper – III need not have the same syllabi / content of the M.Tech subjects offered. They can be customized to suit to the requirements of the scholars and are to be recommended by the respective Supervisor / Co-Supervisor and duly approved by DRC.
(ii) Registration of subjects under Paper – II & Paper – III shall be completed within 6 months from the date of admission.

## 10. Course Work Examination

- External examination of Paper – I is to be conducted immediately after the course work.
- End examination in respect of Paper – II & Paper – III must be conducted within one year from the date of admission.
- Regular / Supplementary examinations for Paper – II & Paper – III may be conducted once in a year.
- Candidate has to pass these two subjects with minimum of 50% marks / equivalent grade.
- In case, the candidate fails to pass in four attempts his/her admission shall be cancelled.
- Re-Registration after two attempts may be allowed for one subject only and should pass within two attempts otherwise admission gets cancelled.

## 11. Residential Requirement for External scholars

- Candidate should have minimum of six months residential requirement to enable the candidate to interact for the research work with Supervisor/ Co-Supervisor. Supervisor and Co-Supervisor should issue the completion of residential requirement certificate accordingly before the submission of the thesis. The period of stay for attending the audit courses and credit course should be treated as residential requirement. Further, even if the candidate work for research in the institution / organization, where Supervisor / Co-Supervisor works, that period also may be considered as Residential period.

**12. Constitution of Research Review Committee**
- RRC consists of the following members:
- Chairman, BOS
- Head of the Department  (Convener)
- 3 faculty members (combination of two Professors and one Associate Professor or vice-versa subjected to availability).

*Note*
(i) The presence of Supervisor and / or Co-Supervisor is optional and they are not permitted to act as RRC member for their own scholars.
(ii) The reconstitution of RRC members shall be made for every two years.
(iii) Minimum of 60% attendance of RRC members is mandatory.

**13. Roles or functions of RRC Members**

- Obtain declaration from the supervisor/co-supervisor(if any) and scholar in percentage of progress made in the research.
  Requirement:
    i)   $1^{st}$ RRC: minimum 20%
    ii)  $2^{nd}$ RRC: minimum 50%
    iii) $3^{rd}$ RRC: minimum 90%
- Review of remarks of Research work of previous progress and provide remarks on present work.
- Ensure for compliance of remarks made in Research Review Meetings to include in draft copy of thesis before submission to DRC.
- Recommendation for Pre-talk from the members present.

**14. Constitution of DRC (Doctoral Research Committee)**

DRC consists of the following members:
- Chairman, BOS
- Head of the Department  (Convener)
- All Professors of the department including Constituent Colleges.
- Besides Chariman, BoS and Convener the DRC shall consist of 3 Professors. For departments not meeting this requirement, Vice Chancellor shall nominate the External Professor (s) from the panel submitted by Chairman-BoS through R&D.
- Expert from any National / International / R&D organizations / State Universities (Optional).

Note    (i) The presence of Supervisor and / or Co-Supervisor is optional and they are not Permitted to act as DRC member for their own scholars.
        (ii) Minimum of 60% attendance of DRC members is mandatory.

## 15. Roles or functions of DRC Members

- To ensure the compliance of recommendations /remarks suggested in all Research Review Meetings in the draft copy of thesis.
- To provide the list of eligible journals
- To conduct Pre-talk (Pre submission talk)
- To examine the eligibility to change of Supervisor/ Co Supervisor/ Research area/title/Pre-Ph.D subjects approvals and re-registrations
- Finalization of Pre-Ph.D subjects in respective paper-II & paper-III
- Recommendation/suggestions for submission of thesis.
- To approve eligible supervisor/co-supervisor

## 16. Research Review Meetings

- RRMs shall be conducted for every six months in concerned departments. The candidate has to give open seminar on research progress.
- All scholars shall present for a minimum of 3 Research Review Meetings with satisfactory report all the times.
- RRMs 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.
- In case of progress of research scholar is unsatisfactory in Research Reviews, the research advisory committee shall record the reasons for the same and suggest the corrective measures. If the research scholar fails to implement these corrective measures in two consecutive RRC meetings, the RRC may recommend to the University with specific reasons for cancellation of the registration of the scholar.
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  **Note:** If the scholar progress in any Research Review Meeting is not satisfactory that Research Review Meeting performance will not be taken into account.

## 17. Pre-Talk

- Draft copy with plagiarism report from R&D must be submitted before Pre-talk/ presentation. The plagiarism report should be in compliance with UGC guidelines.
- Prior to the submission of the dissertation/thesis, the scholar shall make a presentation in the Department before the DRC concerned 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. DRC should certify the eligibility for submission of the thesis.

- The Research Review is to be conducted by the committee in the Pre-talk within 4 weeks from the date of issue of the letter from the Directorate.
- For pre-talk, minimum 60% members of DRC is mandatory.
- Concurrence from all the members present regarding the performance of the candidate is required.

## 18. Duration and extension of the Program

- 3 years including course work and a maximum of 6 years for full time scholars.
- 4 years including course work and a maximum of 8 years for part time scholars.
- Extension of maximum One year is permitted, after expiry of maximum duration (6/8 years as case may be) with recommendations from Supervisor / Co-Supervisor and approval from DRC.
- The women candidates and persons with disability (More than 40%) may be allowed a relaxation for 2 years in the maximum duration for full time scholars only.

## 19. Early submission

- Early submission is not permitted for full time scholars.
- However, part time scholars can submit the thesis after completion of 3.5 years from the date of submission subjected to the following conditions.

- ✓ Published at least four (4) international journal papers.
- ✓  Have recommendation of DRC
- ✓ Have an outstanding contribution with high quality standard reputed journals
- ✓ Have valid reason thereof for early submission with patents, awards etc.

Note: The course work and examinations shall be conducted at JNTUK campus only.

## 20. Change of Area

- Application for change of area should be submitted, with the recommendations of Supervisor and Co-Supervisor along with abstract.
- This may be examined by the DRC and their recommendations are required to accept the change of area.
- Candidate has to re-register and pass for paper-II and / or paper-III which shall be approved by DRC. DRC shall thoroughly check the necessity of re-registering the new subject(s) with respect to permitted area of research with that of original area.
- Change of Area is permitted only once in the Ph.D. programme. The submission of thesis is permitted only after two years, from the date of change of area.
- Change of Area is permitted within 2 years for full time scholars and 3 years for part time scholars from date of admission. (However the stipend will be given for a total period of 3 years only)

- If the candidate is permitted to avail change of area, then the candidate has to attend minimum two RRC meetings after the date of approval for change of area.

## 21. Change of Supervisor / Co-Supervisor

- Application of the candidate is required to be signed by both the present and   new Supervisors and Co-Supervisors.
- Change of Supervisor / Co-Supervisor may be permitted by the recommendations of RRC.
- Change of Supervisor / Co-Supervisor is permitted only once in the Ph.D. programme.
- Submission of thesis is permitted only after two year from the date of change of Supervisor / Co-Supervisor.
- Change of Supervisor / Co-Supervisor will not be permitted after 2 years for fulltime and 3 years for part time from date of admission.
- Change of Supervisor is permitted in unforeseen circumstances only with the special permission of the Hon'ble Vice-Chancellor.

## 22. Tution Fee per year

- Rs.30,000 (Full Time / Part Time)
- Rs.5,000 (Internal Regular Faculty / Assistant Professors (c))*

*Applicable if the services are continued in JNTUK& its constituent colleges until completion of his/her Ph.D

Upon selection through admission process, the candidates shall be required to pay the fee as per the prescribed criteria.  Fee has to be paid on or before 31$^{st}$ July, in every academic year, subsequent to admission, till the successful completion of the programme and submission of thesis or cancellation of the admission as the case may be. If the fee is not paid by the stipulated date, late fee of Rs.2000/- is levied (within six months from due date), Rs. 4000/- is levied (within one year from due date).

Mode of fee payment is by crossed demand draft in favour of the "The Registrar, JNTUK Kakinada' payable at Kakinada drawn on any Nationalized Bank. A candidate must write his name, roll number and complete address (Mobile No. and E-mail address) on the back of the demand draft.

Candidate must preserve all fee receipts and photo copies of the demand drafts and produce them as and when required.

If any reason, a candidate takes his / her original certificates temporarily from the University, candidate has to submit the requisition application with recommendation from the Supervisor and Co-Supervisor, mentioning the date before which the certificates will be returned to the office. If he/she does not return before the mentioned date, the candidate may have to forfeit the admission.

In the event of cancellation of Ph.D registration by the candidate on his/her request or by University for any reason, the entire fee amount due till the date of cancellation, must be cleared by the candidate for receiving his / her original certificates.

## 23. Pre-Submission procedure

Candidates after completing the Ph.D work, and ready to submit the thesis, must satisfy the following aspects.

- Residential requirement, Course work, and Pre-Ph.D examinations must be completed.
- All scholars shall present for a minimum of 3 Research Review Meetings with satisfactory report all the times.
- University Fee as prescribed, with necessary fine (if any) should be paid
- Minimum two research publications for Ph.D. are mandatory. They should be in Science Citation Index Journals or journals having impact factor from Thomson Reuters are mandatory from the research contributed. Otherwise, The publications should be in the list of journals specified in the list given in UGC website : http://www.ugc.ac.in/ugc_notices.aspx?id=1604 other journals suggested by respective Board of Studies.
- The candidate should be first author for the research papers. Research Papers should be authored by Candidate, Supervisor and Co-Supervisor only.
- Candidate may acknowledge the support extended by other expert in the research paper, however, he / she should not be as author.
- Quality of the work is to be adjudged by the RRC, in the review meetings and their recommendations should be made available in the candidate record by Director (R & D)
- Letter from the candidate through Supervisor, for arrangements of pre-talk.
- Pre-talk may be arranged in the University premises.
- Recommendations (Excellent/Good/Satisfactory/Not satisfactory) from the RRC may be forwarded to the Directorate (R&D).
- Synopsis reports (6 copies) and draft copy of the Ph.D thesis (1 copy) have to be submitted to the Directorate (R&D) along with a request letter for the Pre-talk, for forwarding the same to the Convener / Chairman (BoS) for conducting the pre-talk.
- Candidate has to submit the thesis within maximum 6 months from the date of Pre-talk.
- Research Review Committee Members may give suggestions in Pre-talk. The candidate, Supervisor and Co-Supervisor have to submit a letter that the suggestions are incorporated in the Ph.D thesis.

## 24. Requirements for Anti-Plagiarism

Plagiarism would be quantified into following levels in ascending order of severity for the purpose of its definition:

- Similarities upto 30% excluding publications is allowed for submission.
- Level 1: Similarities above 30% to 40%
  Such Scholar shall not be allowed for submission of the Thesis and shall be asked to submit a revised thesis within a stipulated time period of not exceeding 6 months
- Level 2: Similarities above 40% to 60%
  Such Scholar shall not be allowed for submission of the Thesis and shall be asked to submit a revised thesis after a time period of one year but not exceeding eighteen months.
  New research scholars shall not be allocated to such Research Supervisor/ Co-supervisor for a period of two years.
- Level 3: Similarities above 60%
  Such Scholar shall not be allowed for submission of the Thesis and shall be asked to submit a revised thesis after a time period of three years.
  New research scholars shall not be allocated to such Research Supervisor/ Co-supervisor for a period of three years.

## 25. Submission requirements

Candidate has to submit the following along with Ph.D. thesis.

- Anti-Plagiarism approval letter issued by the Directorate (R & D) before Pre-talk and before final submission
- Synopsis reports (10 copies)
- Ph.D. thesis (8 copies) along with National and International Journal Papers published by the candidate (to be included in thesis binding), If research paper is yet to be published, publication acceptance letter has to be included.
- No dues certificate
- Letter from the candidate with necessary recommendations from the Supervisor and Co-Supervisor
- Sealed cover with the panel of the Examiners (9 names) as recommended by the Supervisor and Co-Supervisor. Out of them, three Examiners are from reputed premier institutes, viz., IITs'/IIMs'/IISc/ISI, Kolkata, etc., three Examiners are from NITs'/ Central Universities, etc., three Examiners are from State Universities (outside Andhra Pradesh, including National Research Centres), and three Examiners are from state Universities.

- Photostat copy of examination fee receipt for processing the thesis.

R&D Director shall obtain:

- Sealed cover with the panel of the Examiners (3 names) as recommended by the respective BOS Chairman. Chairman BoS will give another three examiners one each from IIT / NIT / State Universities or its equivalent.

- If Chairman, BOS is Supervisor or Co-Supervisor, the panel of 3 names is given by the Expert whose name is suggested by the Hon'ble Vice-Chancellor.

- In case of absence of BoS, Expert from other University recommended by University will be giving three examiners one each from IIT / NIT / State Universities or its equivalent.
- Recommended Examiners should be experts in the area of specialization
- Vice-Chancellor is authorized to change the Examiners, if the panel of Examiners recommended by the Supervisor is not satisfactory / not as per the guidelines. BOS Chairperson may prepare the list of experts in each specialization as per the required research publications and expertise, and may be made available to Vice-Chancellor.

## 26. Examination Fee

- Rs. 10,000/-

## 27. Criteria for the Examiners

Panel of Examiners for Ph.D. thesis may be recommended by the Supervisor & Co-Supervisor in a sealed cover.

- Minimum 9 Examiners have to be recommended by the Supervisor and Co-Supervisor.
- Names of 3 Examiners will be recommended either by Chairman, BOS or Nominee by Hon'ble Vice-Chancellor.
- Out of them, three Examiners are from reputed premier institutes, viz., IITs'/IIMs'/IISc/ISI, Kolkata, etc., three Examiners are from NITs'/ Central Universities, etc., three Examiners are from State Universities (Including other state universities and National Research Centers).
- Vice-Chancellor is authorized to change the Examiners, if the panel of Examiners recommended by the Supervisor is not satisfactory / not as per the guidelines.

## 28. Viva –Voce Examination

- Viva-Voce examination date is to be fixed in consultation with internal and external Examiners
- All questions are answered and necessary modifications in the thesis are done by the candidate in consultation with Supervisor/Co-Supervisor

- Viva-Voce is to be conducted only in the presence of Internal and external Supervisors. However, the presentation of the thesis may be allowed in the presence of interested faculty and candidates.
- Chairman, BOS shall be invitee for viva-voce examination, whereas Head of the Department is the Convener.
- Candidate has to submit the corrected copy of thesis and answers to the Examiners questions are to be submitted to the Directorate (R&D).
- In case the Examiners who accepted the thesis are not available for the conduct of the Viva-Voce examination, the Vice-Chancellor may nominate another Examiner from the original panel of Examiners
- The Internal and External Examiners shall jointly report the candidate's work as "Satisfactory / Not Satisfactory".
- If the Examiners report is "Not Satisfactory", the candidate shall appear again for the Viva-Voce examination after three months. If he / she fails to get a "Satisfactory" report even at the second Viva-Voce examination, he / she shall not be eligible for the award of the Ph.D. examination.
- Upon successful completion of the Viva-Voce examination, and on consideration of the reports of the individual Examiners, the Vice-Chancellor may approve the announcement of the award of the provisional Ph.D. Degree to the candidate.
- The award of the Degree shall be confirmed by the Executive Council of the University.

## 29. Evaluation of Thesis

- If one Examiner rejects the thesis, the thesis will be sent to next examiner in the panel.
- If the two Examiners reject the thesis, the candidate shall revise and re-submit it within one year. Such cases will be again referred to DRC for due recommendations, followed by routine procedure.
- The thesis shall be summarily rejected if all the three Examiners reject it.
- Candidate has to revise the Ph.D. thesis within six months as per the recommendations of the Examiner(s), in case of the revision recommended by the Examiners. In such case, the recommended suggestions and modifications are to be incorporated by the candidate and review report is required by the RRC members. In case the RRC members do not satisfy with the revision, the thesis will be rejected.
- Director of Evaluation has to submit the panel of Examiners to the Vice-Chancellor to select five Examiners on priority. The Vice-Chancellor is empowered to modify the Examiners in the panel recommended by the Supervisor and Co-Supervisor as per the recommendations of constituted committee / by himself with his experiences.

Director of Evaluation shall send the synopsis reports to the first three Examiners recommended by the Vice-Chancellor. If any of the Examiners, does not accept, or respond for the thesis evaluation within two weeks time, then fourth/fifth Examiner will be considered by the Director of Evaluation, as recommended by the Vice-Chancellor.

Thesis will be communicated to the Examiners by the Director of Evaluation, upon receiving the acceptance to evaluate the thesis, in response to the synopsis reports received by them, within one week.

Director of Evaluation has to continuously remind the Examiners (once in every month), about the evaluation reports only after three months from the date of dispatch of thesis.

Examiner has to give the recommendations in the following aspects.

i) Outline the main features of the thesis

ii) Critically to evaluate the thesis and send a report on the thesis in not less than 500 words

iii) Make one of the four following definite recommendations:

- The thesis attains the required standard for the award of the Ph.D degree.
- The thesis requires revision and re-submission to the Research Review Committee (RRC)
- The thesis requires the revision and re-submission for re-evaluation by the same Examiner
- The thesis is rejected.

## 30. Preparation of Thesis

Candidate has to prepare the thesis within two months after the Synopsis seminar The candidate has to submit the synopsis report and thesis as per the following guidelines.

- A4 size Executive Bond, 100 GSM paper
- Laser printout of the thesis should be with following margins
  - o 1.5" spacing – Left margin (Before binding)
  - o 1.0" spacing – Right margin
  - o 1.0" spacing – Top margin
  - o 1.0" spacing – Bottom margin
- All page numbers should be on bottom right corner
- The thesis should be typed with Times New Roman font
- Font sizes:  Chapter Headings    ….  16 font (with Bold)
  Side Headings    …..  14 font (with Bold)
  Side Sub-Headings    ….  12 font (with Bold)
  Running text    ….  12 font (without Bold)

- All Table and Figure captions    …. Only at the bottom of
  Table / Figure with 12 font (with Bold)
- All References should be sequentially numbered and ordered as per Alphabetic order of  Author's name (But not initial)
- All References should be given either in IEEE  / ASME / ASCE format
- Chapter numbers (like, Chapter 1), Side Headings Number ( 1.1), Side sub Headings Number (1.1.1 ) may be mentioned.
- Line spacing to be 1.5"/ Paragraph spacing to be 1.5"

- Thesis is to be written in Latex format / pdf format. ( Soft copy to be submitted in both MS word,  as well in Latex / pdf format)
- Inclusion of Research papers having impact factor is mandatory, at the end of the thesis.
- List of Figures, List of Tables, and List of symbols may be included.
- Chapters, viz., Introduction, Literature review, Minimum Three Contributory chapters,   Conclusions are recommended
- Reference numbers to be included in the Text [ ].
- Chapter captions to be included in every chapter on top left corner of the paper.
- All Mathematical equations  and symbols, to be in Italic form
- The Title cover, Certificate, and Contents, to be in the prescribed format. (Annexure 8)
- Binding: The dissertation / thesis shall be properly bound, using hard cover of Black  Colour with Gold  Colour Letters. The contents of Title cover may printed on the Hard cover.  Two separate blank papers may be provided at the beginning and at the end of the thesis.

## 31. Ph.D awarding procedure with Gazette Notification

Notification for the issue of Ph .D degree has to be released by the Registrar/ Director of Evaluation of the University, with the approval of Vice-Chancellor, and to be communicated to Examiners, Supervisor/Co-Supervisor, RRC Members, Principal of the Constituent colleges for necessary information to all the Heads of the Departments, Secretary to the Vice-Chancellor, Rector, Registrar & all Directors.

Following the successful completion of the evaluation process and announcement of the award of Ph.D., the University shall submit a softcopy of the Ph.D thesis to the UGC within a period of 30 days, for hosting the same on INFLIBNET, accessible to all institutions / Universities. Along with declaration of the Ph.D. the University/Institution shall issue a Provisional Certificate certifying to the effect that the Degree has been awarded in accordance with the provisions of the Regulations of the University Grants Commission.

## 32. Cancellation of Ph.D admission

If the candidate is not interested to continue Ph.D programme, after getting admission, the candidate may discontinue the work, and inform the Directorate through proper channel with the recommendation of Supervisor and Co-Supervisor. Candidate has to pay the entire fee as per the fee structure till the year of cancellation (including year of cancellation). Director (R&D) will return all the certificates available with the Directorate with requisition made by the candidate. However, any publications, which are outcome out his /her research, should be published, with the affiliation to this University.

### 33. Information to Research scholars

Information pertaining to the Research scholars will be communicated only through JNTU Kakinada website. From the Admission to Award of the degree, all the necessary formats, guidelines and information pertaining to Research Review meetings, will be made available only in JNTU Kakinada, website. No personnel communication will be conveyed to the candidates / Supervisors/Co-Supervisors.

### 34. National Journal of Engineering, Science and Technology forum

University is contemplating to start University Journal, viz., National Journal of Engineering, Science and Technology to promote the quality research publications. All the Research scholars are advised to enroll as the Members of the forum.