Koneru Lakshmaih Education Foundation

(Deemed to be University u/s 3 of UGC Act 1956)

K L UNIVERSITY

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REGULATIONS

FOR M.Tech (by Research)

PROGRAMMES

2013-14

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K L UNIVERSITY
Regulations for M.Tech. (by Research)

Preamble

The objective of the program is to encourage the candidates with Bachelor Degree in Engineering or Technology to take up quality research in engineering by registering themselves for M.Tech. (By Research) Programme leading to Ph.D. A student can obtain the degree after successful completion of the prescribed course /research work stipulated in the regulation. The M.Tech. (By Research) will be in one of the specializations of regular M.Tech. programs being offered by the University.

1.   ELIGIBILITY FOR ADMISSION

  i.   Candidates with a Bachelor's degree in Engineering/Technology or a Master's degree in relevant Sciences, with a good academic record or CSIR/UGC/NET/NBHM/CAT/AIMA or equivalent qualification tenable for the current year in the relevant areas.

  ii.   Associate membership of the following professional bodies with a pass in both Parts A & B with First Class. Such candidates are eligible for admission to M.Tech (By Research) Programme in their parent discipline. Their eligibility for other disciplines will be decided on a case-to-case basis).

- The Institution of Engineers (India)
- The Aeronautical Society of India
- The Indian Institute of Metals
- The Indian Institute of Chemical Engineers
- The Institution of Electronics and Telecommunication Engineers

2.   CATEGORIES

There are different categories of M. Tech. (by Research) programmes as listed below:

a) Full-time: Candidates who pursue full-time study and research in this University shall belong to this category.
b) Full-time/External – sponsored student from Industry or other Organizations including Educational Institutions.
c) Full-time – non-sponsored, non-scholarship student
d) Internal – Sponsored University Staff or Project Staff of KLU
e) Internal – selected as Teaching Assistant of KLU

Note:

  i.   The full-time students will work in the University on full-time basis. The external registrants register at the University but work outside the University. The internal registrants are the University faculty/staff who work on part-time basis at the University.

  ii.   Candidates sponsored by Industry or R&D organizations for pursuing M. Tech. (By Research) programme in this University while continuing in their job can pursue research in their place of employment and/or in the University. There shall be a Research Supervisor recognized by this University and a Research Coordinator in their organization for candidates other than the staff of KL University.

iii. Student of the type (b) shall be sponsored and financed by the sponsoring organization. He should produce a sponsorship-cum-clearance certificate in the given format of the University.

iv. A non-sponsored non-scholarship (self financed) student of type (c) will not receive any financial assistance from the University.

v. An internal registrant of type (d) shall produce a sponsorship-cum-clearance certificate from the Registrar, KLU.

vi. An internal registrant of type (e), selected as a Teaching Assistant, will be paid the Teaching Assistantship, and shall be governed by the applicable rules of the University. Total number of seats under this category may vary from year to year depending on the number of such Teaching Assistantships available.

vii. A scheme for the award of Teaching/Research Assistantship for providing financial assistance to the M.Tech. (By Research) students is described below:

    a) Students admitted to M.Tech. (Research) programmes on full-time basis are considered for the award of 'Half-time' Research/Teaching Assistantship under which they will be paid Rs.8,000/- per month and would be required to provide assistance of 8 hours per week to the Department/Centre.

    b) The maximum duration for which Assistantship can be awarded to M.Tech. (Research) students is 4 semesters.

    c) Only full-time non-sponsored students are eligible for assistantship.

    d) In the first instance, the assistantship is awarded only for one semester. Thereafter continuation of the assistantship during each semester is contingent upon satisfactory academic performance and satisfactory performance in the discharge of responsibilities assigned under the assistantship scheme. For this purpose an SGPA of not less than 7.00 (6.75 in the case of SC/ST/PH) at the end of the semester is treated as satisfactory academic performance.

    e) All fulltime M.Tech.(Research) students participating in a sponsored project/consultancy project (in addition to their assistantship work) can be paid an honorarium of upto Rs.3,000/- p.m. by the PI/CI of the project. All such work can be undertaken only with the consent of their supervisor(s).

    f) No student can receive scholarship/assistantship from more than one source.

viii. Part-Time Programmes: KLU offer M.Tech. (By Research) in the part-time mode for working professionals. They are expected to complete their credit requirements in six semesters (maximum of ten semesters) by registering for a lower load than full-time students in each semester. Departments/Centres offer most of the core courses in a flexible manner, which enable these working professions to attend classes as well as continue with their full-time employment. It may not always be feasible to slot all courses of the programme in the morning and those candidates applying for part-time programmes should be flexible to take courses at other times if required.All such candidates should have a minimum experience of one year at the time of admission.

Part-time candidates are required to submit a "No Objection Certificate" on a proper letterhead from the appropriate authority in the organization clearly stating the following:

a) The candidate is permitted to pursue studies on a part-time basis
b) That his/her official duties permit him/her to devote sufficient time for research
c) Facilities for research in the candidate's field of research are available at the candidate's place of work; and
d) He/she will be fully relieved from duty and permitted to reside at the University for the period required residency (This is not a requirement for candidates who are working in KLU or in organizations located near to the University).

ix. Sponsored (full-time) candidates seeking admission to MTech (by research) programme on the basis of study leave, must submit a "sponsorship certificate" on a proper letterhead from the appropriate authority in the organization clearly stating the following:

a) For the period of his/her studies in the programme, the candidate would be treated as on duty with usual salary and allowances, and
b) That he/she will be fully relieved and granted study leave for a minimum period of 1 semester.

3. VACANCIES OF FULL-TIME FELLOWSHIPS

Each department shall intimate to the Dean (R&D) regarding the availability of the vacancies, depending upon the project fund and the respective principal investigator requirement. The fellowship will be given by the PI as per the budget approval by the funding agency. PI may recommend fellowship depending upon the availability of funds. Full-time candidates are eligible to apply for Fellowships available under different sponsored projects. Dean (R&D) shall process such application in consultation with the concerned PIs.

4. SELECTION PROCEDURE

a) Applications will be invited by open advertisement in all leading News papers.
b) Out of the applications received, the departments will short-list the candidates for written test and/or interview to be conducted at the University on a pre-announced date.
c) Selection will be based on the Rank in the Written Test & Personal Interview.
d) Candidates with a valid GATE score tenable for the current year may be exempted from the written test requirement and will be given preference in admissions (as prescribed by the University)

5. ADMISSION

a) Candidates whose selection is approved based on the written test have to register to M.Tech. (by Research) programme within the stipulated time by paying prescribed fee. For all the MTech(by research) candidates a guide will be allocated by RPAC Chairman, in a formal manner by taking into account the number of students per faculty supervisor, the available specialization among the faculty supervisors, and the research interest of the student as indicated during interview by the student. The allotment of supervisor shall not be left to the individual student or faculty.

b) A candidate whose registration for M.Tech. (by Research) degree has been cancelled for any reason, will not have a right/ entitled for re-registration. However, based on the merits of the individual case, and taking into consideration of any special circumstances, a candidate may be considered for re-registration.

c) Admission to a M.Tech. (Research) Programme shall be open to candidates who passed the prescribed qualifying examination with a Cumulative Grade Point Average (CGPA) of at least 6.5 in the 0-10 scale grading system, OR not less than 60% marks in the aggregate (taking into account the marks scored in all the subjects of all the public/university examinations conducted during the entire prescribed period for the degree programme). However, this prescribed minimum shall be a CGPA of 6.0 or 55% marks in the aggregate for SC/ST candidates.

d) Student Exchange Programmes and the Transfer of Credits in such cases shall be as per the corresponding MoU approved by Competent Authority.

e) Every Post Graduate student of the University shall be associated with *Parent Department* offering the degree programme that the student undergoes, throughout his study period.

6. ORIENTATION PROGRAMME

Immediately on admission, the students are expected to undergo an orientation programme in the concerned School/Centre. This programme is intended to familiarize the new students with research activities in the School/Centre and establish rapport with the faculty.

7. TRANSFER TO MTECH (REGULAR)

In general the transfer is not permitted as the objectives of M.Tech. (By Research) are different from Regular M.Tech. However, the Dean (R&D) may permit case by case after careful examination depending on the necessity. In such transfer cases the students have to follow the M.Tech. regulations and fee structure. The equivalence of courses, program structure and the period will be decided by Dean (Academics).

8. DURATION OF THE M.Tech (By Research) PROGRAMME

The duration of the M.Tech. (by Research) programme and the time limit for submission of dissertation are counted from the date of provisional registration. The minimum and maximum duration of time for submission of dissertation are given below:

Duration	Minimum	Maximum
Full Time	Two years	Four years
Part Time	Two Years	Five years

The registration of the student who has not submitted his/her thesis by the end of extended period will be cancelled, without giving any further notice.

Special cases, if any, would be looked into by the Research Board of the University upon the recommendation of Research Progress Assessment Committee (RPAC.)

9.   RESEARCH PROGRESS AND ASSESSMENT COMMITTEE (RPAC)

After approval of Research Work Proposal, half yearly assessments are made, through open seminars, to ensure satisfactory progress. The M.Tech. (By Research) student shall submit, through his Guide(s), a progress report of his research through RPAC to the Dean (R&D). The continuance of registration of all M.Tech. (By Research) students is subject to satisfactory progress made by them.

The following will be the composition of the RPAC in each department, constituted by VC in consultation with Dean (R&D).

Eminent researcher possessing a Ph.D. degree in the department	- Chairman
Head of the Department	- Convener
Two senior faculty members possessing Ph.D.	- Members
Researcher from allied department	- Member

10.   COURSE WORK AND COMPREHENSIVE EXAMINATION

10.1 Course work

The Course Work Evaluation shall be similar to that of other courses, and the details are given in the corresponding section in the Regulations (General) Common to all Degree Programmes.

10.2 Research Proposal Submission and Assessment

Every M.Tech. (Research) student is required to submit (within the first SIX months of joining in case of Full-Time status and within the first ONE year of joining for others) his research proposal in the prescribed format, containing problem identification, state of the art technology, plan of research work etc. The Monitoring Committee appointed by RPAC shall assess the proposal through an open seminar and communicate the   recommendation for approval or otherwise to the Dean (R&D).

10.3 Research Progress Assessment

After approval of Research Work Proposal, half yearly assessments are made, through open seminars, to ensure satisfactory progress. The Student shall submit, through his Guide(s), a progress report of his research to Dean (R&D) through the RPAC.

The continuance of registration of all M.Tech. (Research) students is subject to satisfactory progress made by them.

i.   The RPAC of the Student shall meet within a period of one month from the date of communication of the provisional registration and prescribe course work for the Student.

ii.   A minimum of eight courses at P.G. level being offered under any approved programme of K L University (if necessary from any other approved institution) shall be recommended by the RPAC from courses approved by the Board of Studies. If a course is newly prescribed as a core course, then each such course shall be designed to be covered in not less than 45 contact

hours of instruction and shall be approved by the appropriate Board of Studies. Not more than one such new core course may be prescribed for the Student.

iii. Regularly, offered PG electives shall not be taken as **Special Elective** and the student shall wait to undertake such course when it is offered to the PG students in the Department.

iv. If any course, specific to the area of research has to be newly designed, then such course shall be formulated as a Special Elective to be covered in not less than 45 contact periods of instruction and the course syllabus shall be designed by the Supervisor, recommended by the RPAC and shall be approved by the appropriate Board of Studies/Academic Council. These courses shall be of PG level. A student shall be permitted to undertake **only one such Special Elective** based on the recommendations by RPAC.

v. No change in the courses prescribed shall be made without the prior approval of the RPAC.

vi. Normally the courses taken after the date of provisional registration only shall count towards this requirement.

The prescribed courses shall normally be completed within one year from the date of provisional registration for full time Student and two years for part-time Student.

11.   ATTENDANCE REQUIREMENTS

a) All students must attend every lecture, tutorial and practical classes.
b) To account for approved leave of absence (eg., representing the University in sports, games or athletics; placement activities; NCC/NSS activities, etc.) and/or any other such contingencies, like medical emergencies, etc.,the attendance requirement shall be a minimum of 75% of the classes actually conducted.

12.   COURSE STRUCTURE

The complete M.Tech. (Research) programme will be of minimum 2 years duration for all the candidates. The maximum period allowed to complete the M.Tech. (Research) programme is 4/5 years, provided the fees are paid for each extended year(s). The maximum or minimum period will be counted from the date of registration to the date of submission of dissertation. The candidate has to deposit the requisite fee for each semester of extended duration.

Semesters	Nature of Course	Credit of Course	Remarks
I & II	Six (6) courses are to be completed within one year. In these courses Research Methodology, Mathematics and a Seminar are core and another three are to be recommended by guide and approved by RPAC.	As per M.Tech. programs 18-24 credits	Courses 1-6 are Theory & Practical courses, to be taken from regular M.Tech. programmes. The students have to take regular classes along with M.Tech. (Full Time) students. These courses will have comprehensive written mid and end semester examinations as per the rules for M.Tech. (Full Time) Programmes.

	Research Progress Seminar - I (II Semester)	10 credits (100 Marks)		The student will submit two copies of credit/Research Progress & seminar report to the Guide(s) at any time in the semester in which registered. The student shall make oral presentation on his/her seminar topic as per time schedule decided by the Guide(s) before RPAC.
	Note: Minimum 18 credits are to be earned in I year with above subject Combinations. Attendance requirement is must as per the University rule for Theory courses.			
III	Research Progress Seminar II	10 credits (100 Marks)		Research Progress Seminar II will have evaluation at the end of 3rd semester & before registration of next semester. The examinations of Research Progress Seminar will be taken by RPAC and Chairman(outsidede department/ University), to be appointed by the Vice Chancellor.
IV	Research Progress Seminar III	10 credits (100 Marks)		Research Progress Seminar will have one evaluation at the end of 4th semester & before submission of dissertation. The examinations of Research Progress Seminar will be taken by RPAC and a Chairman to be appointed by the Vice Chancellor.
V	Dissertation (Research Work)	25 credits (250 Marks)		(I) The submission of dissertation shall be allowed only after i) Successful completion of course work allotted to the students. ii) Successful completion of Research Progress Seminars 1,2 & 3 and proof of communication of research papers at least one peer reviewed journal. The committee for evaluation of synopsis would consist of Supervisors, one examiner from the relevant field and one examiner (outside department), both, are to be appointed by the Vice Chancellor
	Dissertation Report Examiner 1– 100 Marks Examiner 2– 100 Marks **Viva-Voce – 50 Marks** (The candidate shall secure an aggregate of 40% in dissertation report to take-up VIVA VOCE)			(III)The final dissertation examination shall be taken by viva-voce after obtaining a minimum of 40% in dissertation reports. Examination Board consists of Supervisors, one examiner from the relevant field and Chairman (out side department) and an External examiner are to be nominated by the Vice Chancellor. (IV)The result will be declared only after acceptance or publication of one full length paper of which at least in peer reviewed Journal under SCIE. **(Mandatory)**
	Total Credits	**73-79**		

The medium of instruction, examination, seminar and project reports will be in English.

A student should secure a minimum CGPA of 5.5 in the course work.

 Grading Procedure: As applicable to PG programs of the University.

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13. COMPREHENSIVE EXAMINATION

a) Every candidate whether pursuing the course work at KLU or elsewhere, has to appear at the final examination to be conducted by KLU and shall secure minimum qualifying grades.

b) On the successful completion of the prescribed course work, as evidenced by the Grade sheet given by the Controller of Examination, the RPAC shall conduct for every Student an oral examination to test the overall background knowledge of the Student in the broad area of specialization. Based on the results of this examination, the RPAC shall recommend to the Dean (R & D) for the confirmation of the provisional registration and to proceed further with hi/her M.Tech (By Research) work within one month from the date of the comprehensive examination held.

c) If, based on the results of the oral examination, a Student is not approved by the RPAC, and then a grace period of up to a maximum of Six Months shall be given, and at the end of which the Student shall be re-examined. If found satisfactory, the RPAC shall recommend to the Dean (R&D) for confirmation to proceed with the Research work. Otherwise, the Student's provisional registration shall be cancelled.

14. RESEARCH WORK

The dissertation shall report in an organized and scholarly fashion, an account of original research work of the student leading to discovery of new facts or techniques or correlation of facts already known (analytical, experimental, hardware oriented etc) and demonstrating a quality contribution to the advancement of knowledge as well as the student's ability to undertake sustained research.

The research work can be taken-up within the University by associating himself/
herself with an on-going project of the department.

(Or)

Individually

(Or)

During the course of the program for reasons stated by the supervisor and forwarded by the HOD, a student shall be permitted to spend up to one year in an institution or organization or a project approved for the purpose, outside the University for carrying out research related to his/her area.The student who carried-out research outside the University in an institution recognized by KLU, such as DRDO, NALCO, ISRO, BHEL, etc. shall submit the synopsis only after a minimum of one month on his/her return.

The student shall attend at least one Seminar/Conference/Workshop during the entire program.
The student shall publish at least one paper in a refereed impact factor Journal.

15. SYNOPSIS

a) The student shall submit six copies of the synopsis of his/her work prepared in accordance with the format and specifications prescribed by the University to the RPAC through the supervisor.

b) If the RPAC approves the research work reported in the synopsis; a seminar will be given by the student.

16. DISSERTATION

16.1 Three copies of the dissertation shall be prepared in accordance with the format and specifications prescribed by the university.

16.2 Dissertation shall be submitted within one month from the date of approval of Synopsis. Dissertation shall be evaluated by two examiners appointed by VC from the panel suggested by RPAC through Dean (R & D). The panel should contain at least six names from within the country.

> **Dissertation Report**
> Examiner 1– 100 Marks
> Examiner 2– 100 Marks
>
> **Viva-Voce – 50 Marks**
>
> **Note:** The candidate shall secure an aggregate of 40% in dissertation report to be eligible for VIVA VOCE

17. CONSTITUTION OF VIVA-VOCE EXAMINATION BOARD

Following is the constitution:

One examiner of the dissertation (as appointed by VC)	-	Member
Supervisor	-	Convener
Chairman, RPAC	-	Chairman
BOS Chairman	-	Invitee

If necessary, VC may nominate a member from outside the panel.

18. AWARD OF M.TECH. (BY RESEARCH) DEGREE

The student shall be awarded with the M.Tech. (by Research) degree on recommendations by the viva voice examination board, with the approval of VC.

19. TERMINATION FROM THE PROGRAMME:

A student shall be required to leave the M.Tech. (Research) Degree Programme under the following circumstances:
   a) If the course work is not completed within the first THREE semesters in the case of full-time students, and within the first SIX semesters in case of internal/external registrants.
   b) If a CGPA of at least 5.50 is not secured in the course work
   c) If a student fails to submit satisfactory Research Proposal in THREE attempts
   d) If the M.Tech. (Research) Dissertation has not been accepted after TWO resubmissions
   Based on disciplinary action on the recommendation of the appropriate committee.**.**

20. PUBLICATION OF DISSERTATION

Papers arising out of the Dissertation may be published by the student and the Supervisor. However the Dissertation as a whole shall be published by the Student with prior approval of the Vice-Chancellor.

21.   THE ACT OF PLAGIARISM

In the case of students who have committed the act of plagiarism, his/her Dissertation /Degree shall be forfeited and his/her research registration shall be cancelled and also he/she shall be debarred to register for any other programme in the University.

22.   CONVERSION TO Ph.D.

After a review by the RPAC, the students showing excellent   performance and having scored a minimum of 6.75 CGPA (over all) can be considered for getting registered in the Ph.D. rogramme. The conversion is subject to the minimum qualifications laid down for the admission in the Ph.D. programme. The date of conversion will be considered as the date of registration in the Ph.D. programme and thereafter he will be governed by the rules and regulations applicable for the Ph.D. students. Conversion to Ph.D. will be on the basis of application from interested student, which has been recommended by the Monitoring Committee appointed by Chairman, RPAC and approved by the Vice-Chancellor.