

# **ACHARYA NAGARJUNA UNIVERSITY**

NAGARJUNA NAGAR, GUNTUR – 522 510  
ANDHRAPRADESH, INDIA



## **CHOICE BASED CREDIT SYSTEM**

Regulations, Scheme of Instruction,  
Examination and Detailed Syllabi  
for

## **POWER SYSTEMS ENGINEERING**

**2-Year M.Tech Degree Course  
In  
Electrical & Electronics Engineering  
(Semester System)**

**w.e.f. : 2021-2022**

## ACHARYANAGARJUNAUNIVERSITY :: NAGARJUNA NAGAR

### REVISED REGULATIONS FOR TWO - YEAR M.TECH. DEGREE COURSE (CHOICE BASED CREDIT SYSTEM)

(With effect from the batch of students admitted during the academic year 2015-2016)

#### 1.0 ELIGIBILITY FOR ADMISSION

- 1.1 The candidates, both non-sponsored and sponsored, for Admission into M.Tech programme shall have one of the following qualifications.

S.No.	Programme	Qualifications
1.	Chemical Engineering	Bachelor Degree in Chemical Engineering / Chemical Technology / Biotechnology or its equivalent Degree recognized by AcharyaNagarjunaUniversity
2.	Civil Engineering	Bachelor Degree in Civil Engineering or its equivalent Degree recognized by AcharyaNagarjunaUniversity
3.	Computer Science & Engineering	B.Tech / B.E Computer Science and Engineering / Information Technology / M.C.A / M.Sc., Computers / M.Sc., Electronics / M.Sc., Mathematics or its equivalent Degree recognized by AcharyaNagarjuna University.
4.	Electrical and Electronics Engineering	Bachelor Degree in Electrical & Electronics Engineering / Electrical Engineering / Electrical Power Engineering / AMIE (Electrical Engineering) or its equivalent Degree recognized by AcharyaNagarjuna University.
5.	Electronics and Communication Engineering	Bachelor Degree in Electronics & Communication / Electronic & Instrumentation Engineering / AMIE or its equivalent Degree recognized by AcharyaNagarjunaUniversity.
6.	Mechanical Engineering	Bachelor Degree in Mechanical Engineering or its equivalent Degree recognized by AcharyaNagarjunaUniversity.

- 1.2 Admission of Non-sponsored category students: Admission of non-sponsored category students is made on the basis of GATE/PGECET rank. When GATE/PGECET qualified candidates are not available, admission will be on the basis of merit in the qualifying examination. Students with or without GATE/PGECET rank should have obtained a minimum of 50% marks in the qualifying examination to become eligible for admission.

Reservation of seats to the candidates belonging to Scheduled Castes and Scheduled Tribes is as prescribed by the State Govt./University from time to time. If suitable candidates are not available to fill all the seats reserved for S.T category, they shall be filled by students S.C. Category and vice-versa.

If suitable candidates are not available for reserved seats, they shall be filled by the general category candidates.

- 1.3 Admission of Sponsored Category students: Sponsored category students should have at least 50% marks in the qualifying examination to become eligible for admission to the Post Graduate Programme. Preference will be given to those candidates who are GATE/PGECET qualified.

The candidates must have a minimum of two years of full time work experience in a registered firm / company/ industry / educational and research institutions / any government department or government autonomous organizations in the relevant field in which the admission is being sought.

A letter from the employer must be furnished stating that the candidate is being sponsored to get admission. The employer should also indicate that the candidate will not be withdrawn midway till the completion of course. The rule of reservation shall not apply to the admission of sponsored category students.

- 1.4 The total number of full time candidates admitted into a course with or without GATE/PGECET rank should not exceed the sanctioned strength.

## **2.0 MEDIUM OF INSTRUCTION, DURATION AND STRUCTURE**

- 2.1. The medium of instruction shall be in English.
- 2.2. The minimum and maximum period for completion of the P.G. Programme is 4 Semesters for full time students.
- 2.3. Each Semester shall normally spread over sixteen weeks.
- (a) The Programme may consist of
- i. Core Courses
  - ii. Elective Courses
  - iii. Seminars
  - iv. Internship
  - v. Project Work
- (b) The structure of the Programme comprises of two semesters of course work consisting of 6 Core subjects + 6 Elective subjects and 3 Lab courses + 1 Mini Project / Seminar (or) 2 Lab courses + 2 Seminars / Mini Project, followed by two semesters of Project work. In summer break, the student should undergo internship for four weeks duration. The student should present a seminar on the project work done at the end of the third semester. At the end of fourth semester the students should submit Project Thesis.
- (c) Core subjects are fixed in each semester and a student must opt them without any choice. Whereas electives can be chosen by a student from the list of electives given (minimum 18 and maximum 24) according to his choice.
- 2.4. Project work shall be carried out under the Supervision of a Faculty Member in the concerned department.
- 2.5. A candidate may, however, in certain cases, be permitted to work on his Project/Dissertation at the place of employment, any recognized Institution/R&D Organization/Industry with the approval of the Head of the Department concerned and Head of the Organization. In such cases, the Project Work shall be jointly supervised by a member of the faculty and a person from the Organization holding a minimum of P.G. Degree in the concerned area of specialization.
- 2.6. Five copies of the Project Report certified by the Supervisor(s) and the Head of the Department concerned shall be submitted within one Calendar Year after completion of the second semester.
- 2.7. The student is eligible for the submission of M.Tech. Project Report at the end of fourth semester if he/she passed all the course work in the first & second semesters.

- 2.8. In a special case, if any candidate unable submit his/her Project Report at the end of fourth semester due to ill health or any other reason permitted by the head of the institution, he/she will be allowed submit at a later date and the viva-voce examination will be conducted, if clause 2.7 is satisfied.

### **3.0. ATTENDANCE**

- 3.1 The candidate shall put up a minimum of 75% attendance in each subject.
- 3.2 Condonation of shortage in attendance up to 10% in any subject may be condoned by the University on the recommendations of the Principal of the concerned College for reasons of ill health and the application is submitted at the time of actual illness and is supported by a certificate from the authorized Medical Officer approved by the Principal.
- 3.3 If the candidate does not satisfy the attendance requirement in any subject he or she shall not be permitted to appear for the University examination in that subject and has to repeat that subject when next offered or study any other specified subject as may be required. In case of repetition the new internal marks will be taken into amount.
- 3.4 Failure in securing minimum prescribed attendance in any subject of previous Semester (s) is no bar for enrollment to the next semester.

### **4.0. EVALUATION**

- 4.1 The performance of the candidate in each semester shall be evaluated subject wise. The maximum marks for each subject, seminar etc, will be as prescribed in the curriculum. The Internal Evaluation for Theory subjects shall be based on two mid- term examinations and two assignments. In every theory subject, out of 40 sessional marks, 30 marks are allotted to mid-term examination and 10 marks for assignments. The best of the performances in the two midterm examinations, one held in the middle of the semester and another held immediately after the completion of the instruction, will be considered. The internal evaluation for practical subjects is based on the day-to-day performance and semester end internal practical Examination.
- 4.2 The marks for Seminar will be awarded by internal evaluation made by two staff members of the faculty of the department concerned.
- 4.3 For taking the University examination in any theory or practical subject, candidates shall be required to obtain a minimum of 50% marks in Internal evaluation in that subject failing which he/she shall be required to repeat the course in that subject when next offered or study any other specified subject as may be required. In case of repetition the new internal marks will be taken into amount.
- 4.4 A candidate shall be deemed to have secured the minimum academic requirement in a subject if he or she secures a minimum of 50% marks in internal evaluation.
- 4.5 In case the candidate does not secure the minimum academic requirement in any subject he/she has to reappear in the University examination in that subject or any equivalent subject prescribed.
- 4.6 Failure to attain the minimum academic requirement in any subject of previous semester (s) is no bar for enrolment to the next semester.

- 4.7 The performance of the students in each semester shall be evaluated subject wise. The distribution of marks between sessional work (based on internal assessment) and University Examination will be as follows:

Nature of the subject	Sessional Marks	University Exam. Marks
Theory subjects	40	60
Practical's	40	60
Seminar / Internship / Project Seminar	100	--
Project work	50	150(viva voce)

## 5.0 AWARD OF CREDITS

Credits are awarded for each Theory/Practical/Seminar/Project Subjects. Each theory subject is awarded 4 credits and each practical/Seminar subjects is awarded 2 credits. Project seminar in III Semester is awarded 8 credits and Project Viva-voce at the end of IV Semester is awarded 16 credits.

## 6.0 AWARD OF GRADES

S.No.	Range of Marks	Grade	Grade Points
1	≥85%	S	10.0
2	75%-84%	A	9.0
3	65%-74%	B	8.0
4	60%-64%	C	7.0
5	55%-59%	D	6.0
6	50%-54%	E	5.0
7	≤49%	F(Fail)	0.0
8	The grade 'W' represents withdrawal/absent (subsequently changed into pass or E to S or F grade in the same semester)	W	0.0

A Student securing 'F' grade in any subject there by securing 0 grade points has to reappear and secure at least 'E' grade at the subsequent examinations in that subject.

'W' denotes withdrawal/absent for a subject:

- After results are declared and Grade sheets will be issued to each student which will contain the following details:
- The list of subjects in the semester and corresponding credits and Grade obtained
- The Grade point average(GPA) for the semester and
- The Cumulative Grade Point Average(CGPA) of all subjects put together up to that semester from first semester onwards

GPA is calculated based on the following formula:

$$\frac{\text{Sum of [No.Credits X Grade Point]}}{\text{Sum of Credits}}$$

CGPA will be calculated in a similar manner, considering all the subjects enrolled from first semester onwards.

## **7.0 AWARD OF DEGREE AND CLASS**

A candidate who becomes eligible for the award of the degree shall be placed in the following three divisions based on the CGPA secured by him/her for the entire Programme

S.No.	Class	CGPA
1	First Class With Distinction	8.0 or more
2	First Class	6.5 or more but less than 8.0
3	Second Class	5.0 or more but less than 6.5

## **8.0 WITH-HOLDING OF RESULTS**

The result of a candidate may be withheld in the following cases

- i. The candidate has not paid dues to the institution
- ii. A case of indiscipline is pending against the candidate
- iii. A case of malpractice in examination is pending against the candidate The issue of degree is liable to be withheld in such cases

## **9.0 GENERAL**

- 8.1. The University reserves the right of altering the regulations as and when necessary.
- 8.2 The regulations altered will be applicable to all the candidates on the rolls Irrespective of the fact that the regulations at the time of admission of the student to the programme are different.
- 8.3 The Academic Regulations should be read as a whole for purpose of any Interpretation Whenever there is a dispute regarding interpretation of regulations, the decision of the Vice-Chancellor is final.