GAYATRI VIDYA PARISHAD
COLLEGE OF ENGINEERING
(AUTONOMOUS)

MADHURAWADA , VISAKHAPATNAM-530048

AFFILIATED TO JNTU KAKINADA

COLLEGE OF ENGINEERING
(AUTONOMOUS)

SYLLABI FOR B.TECH.
UNDER AUTONOMOUS STATUS
FOR 2012 ADMITTED,
2012 LATERAL ENTRY BATCHES

ACADEMIC REGULATIONS
(EFFECTIVE FOR 2012 ADMITTED BATCH)

R 1.0 Qualification for Admission and duration:

R1.1 The selection for category A and B seats shall be as per Govt. of Andhra Pradesh rules.

R1.2 The duration of the programme for the Degree of Bachelor of Technology will be four academic years, with two semesters in each year. However if a student cannot complete within 4 years, he can do so by taking more time but not more than 8 years.

R1.3 The duration of each semester will normally be 20 weeks with 5 days a week. A working day shall have 7 periods each of 50 minutes.

R 2.0 Structure of the Programme:

Semester	No. of Courses per semester Theory + Lab	Credits
I	5 + 3	26
II	5 + 3	26
III	6 + 2	28
IV	6 + 2	28
V	6 + 2	28
VI	6 + 1+ Advanced Communication skills Lab(V/VI semesters) Industry oriented Mini Project	2802
VII	6(Two electives) + 2	28
VIII	3(Two electives) + Seminar + Comprehensive Viva +Project	30
	Total	**224**

Note: Except elective subjects in VII, VIII semesters all courses are compulsory.

a) The curriculum in the first and second semesters shall be common for all the B.Tech. programmes except for Departmental options.

b) Each course is normally assigned a certain number of credits as follows:
- 1 credit per lecture period per week and no credits for tutorials
- 2 credits per laboratory class of 3 periods per week
- 2 credits for Industry oriented Mini Project
- 2 credits for Seminar with 3 periods per week
- 4 credits for comprehensive viva-voce examination
- 12 credits for project work

c) The curriculum for any programme of study shall have a total of 224 credits out of which a minimum of 216 credits are required to be obtained by a student for the award of B.Tech. degree. The default of 8 credits is permitted only from the electives in VII and VIII Semesters.

d) Participation in extra- and co-curricular activities like Sports, Social Service, Cultural and Literary associations is compulsory for all the students as and when they are planned.

   i) A student has to record a participation of minimum of 32 hours in his/her chosen activity during the period of study.

   ii) The activities are monitored and grades are awarded as given below:

          CELLENT

          GOOD

          SATISFACTORY

          UNSATISFACTORY

If a candidate gets an unsatisfactory grade, he/she has to repeat the above activity.

R 3.0 Method of Evaluation:

The performance of a student in each semester shall be evaluated subject-wise with a maximum of 100 marks each for theory and practical/Drawing

subjects. In addition, Industry oriented mini-project, seminar, Comprehensive Viva-Voce and Project work shall be evaluated for 50, 50, 100 and 200 marks, respectively.

R 3.1 Theory:

For all theory courses, the assessment shall be for 30 marks through internal evaluation and 70 marks through external end-semester examination.

R 3.1 a. Internal evaluation:

The 30 internal marks are awarded as follows**:**

Two tests   20 marks each

Four assessments by atleast any two of
the following methods   10 marks each

Assignment/Quiz/Tutorial /Surprise test/ Open book test /Seminar/ Case study/Lab activity/ Term paper / Project etc. as notified by the teacher at the beginning of the semester and distributed evenly over the entire semester.

R 3.1 b. External evaluation:

The question paper shall be set externally and valued both internally and externally. If the difference between the first and second valuations is less than or equal to 15% of the maximum of the paper the better of the two valuations shall be awarded and if the difference between the first and second valuation is more than 15%, the chief examiner appointed has to discuss with the two valuers and have his own assessment of the script. The marks given by the chief examiner shall be final for award.

R 3.2 Practicals:

Practical / drawing shall be evaluated for 100 marks, out of which 50 marks are for external examination and 50 marks are for internal evaluation. The 50 internal marks are distributed as 25 marks for day-to-day work in two cycles and 25 marks for internal examination. The internal examination shall be conducted by the teacher concerned and another faculty member of the same department once for each cycle of instruction period and average of the two shall be considered for award of marks.

10 out of 12 to 16 experiments/exercises recommended are to be completed in a semester.

R 3.3 Industry Oriented Mini Project:

The industry oriented mini project shall be carried out during the summer break for a minimum of 4 weeks after the VI Semester and completed before the start of the VII semester. A report has to be submitted at the beginning of the VII semester for assessment by an internal evaluation committee comprising Head of the Department and two faculty of the department including the project Supervisor for 50 marks. A minimum of 50% of maximum marks shall be obtained to earn the corresponding credits.

R 3.4 Seminar:

The seminar shall have two components, one chosen by the student from the course-work without repetition and approved by the faculty Supervisor. The other component is suggested by the Supervisor and can be a reproduction of the concept in any standard research paper or an extension of concept from earlier course work. A hard copy of the information on Seminar topic in the form of a report is to be submitted for evaluation along with presentation. The presentation of the seminar topics shall be made before a committee comprising the Head of the Department, seminar supervisor and a senior faculty of the department. The two components of the seminar are distributed between two halves of the semester and are evaluated for 50 marks each. The average of the two components shall be taken as the final score. A minimum of 50% of maximum marks shall be obtained to earn the corresponding credits.

R 3.5 Comprehensive Viva-Voce:

The comprehensive Viva-Voce will be conducted by a committee comprising Head of the Department, two senior faculty of the respective department and an External Examiner from outside the College. This is aimed at assessing the student's understanding of various subjects studied during the entire program of 4 years. The Comprehensive Viva-Voce shall be evaluated for 100 marks at the end of VIII semester. A minimum of 50% of maximum marks shall be obtained to earn the corresponding credits.

R 4.0 Project:

The Project work shall be spread over the entire VIII Semester and of somewhat innovative in nature, exploring the research bent of mind of the student. A project batch shall comprise of not more than four students. A mid-course review is conducted by HOD and the Supervisor on the progress for 20% of the marks. On completion of the project a second evaluation is conducted for award of internal marks of another 20% before the report is submitted making the total internal marks 40%.

The final evaluation shall be based on the report submitted and a viva-voce exam for 60% marks by an external examiner.

R 5.0 Attendance Requirements:

It is desirable for a candidate to put up 100% attendance in the class in all the subjects. However, a candidate shall be permitted to appear for the end semester examination provided he records a minimum of 75% attendance for each subject in any semester. However, condonation for shortage of attendance may be given on Medical grounds, if a certificate to the extent is submitted to the HOD when the candidate first returns to the classes. Certificates submitted afterwards shall not be entertained on any count. A condonation fee as fixed by the college for those who put in attendance between 65 and 74 per cent shall be charged before the student is permitted to the end examination. Attendance may also be condoned as per the State Government rules for those who participate in prestigious sports, co- and extra-curricular activities provided their attendance is in the minimum prescribed limits for the purpose and recommended by the concerned authority.

Attendance will be indicated in the marks memo by a letter code as follows:

Grading of Attendance :

90% and above	A (Very Good)
75% to 89%	B (Good)
65% to 74%	C (Condoned)
Below 65%	D (Detained)

A student who gets less than 65% (D Grade) attendance in a maximum of two courses in any semester shall not be permitted to take the end semester examination in which he/she falls short. His/her registration for those courses will be treated as cancelled. The student should re-register and repeat those courses as and when offered next.

R 5.1 : If a student gets D grade in more than two courses in any semester he/she shall be detained and has to repeat the entire semester.

R 6.0 Minimum Academic Requirement:

The following academic requirements shall be met along with the attendance requirements mentioned above to be eligible for the award of the B.Tech. degree.

i.   A student shall acquire at least C grade in attendance to be eligible to appear for the end-semester examination in the concerned subject

ii.   A student shall be deemed to have satisfied the minimum academic requirements and earned the credits allotted to each theory, if he/she secures not less than 35% of marks in external end examination, and a minimum of 40% of marks on the aggregate of internal evaluation and external examination taken together.

iii.   In case of practical / drawing / project / seminar, a student shall be deemed to have satisfied the minimum academic requirements and earned the credits allotted to each of them if the student secures a minimum of 50% in the end examination and not less than 50% marks on the aggregate in the internal evaluation and external end examination taken together.

iv.   A student shall be promoted from IV to V semester, if he acquires 76 out of 108 credits upto the end of IV Semester (from I, II, III semesters regular and supplementary examinations & IV semester regular examinations) before he/she enters V Semester.

v.   A student shall be promoted from VI to VII semester, if he acquires116credits out of 164 credits up to the end of VI Semester (from I, II,III, IV, V semesters regular and supplementary examinations & VI semester regular examinations) before he/she enters VII Semester.

vi. The curriculum for any programme of study shall have a total of 224 credits out of which a minimum of 216 credits are required to be obtained by a student for the award of B.Tech degree. The default of 8 credits is permitted only from the electives in VII and VIII semesters. Student shall register and put up minimum attendance in all the 224 credits.

vii. Once he/she is eligible for the award of the degree as per R6.0(vi), marks obtained in the best 216 out of 224 credits shall be considered for the award of Percentage/Class/Division.

viii. A student who fails to earn 216 credits as indicated in the course structure including compulsory subjects as indicated in table given in R2.0 within eight academic years from the year of his/her admission shall forfeit his/her seat and his/her admission stands cancelled.

R 7.0 Make-up program for defaulters:

A make-up programme during 8.40 - 10.20 a.m. / 3.20 - 5.00 p.m. in subsequent semesters is offered for those students who had taken the course earlier but failed to fulfill the attendance requirements and detained due to shortage of attendance in not more than two subjects. However, this facility shall not be extended to those candidates who are detained for want of attendance as per regulations R 5.1.

i. Make-up programme shall be announced at the beginning of every semester. The announcement of subjects offered for the summer programme is at the discretion of the Principal. A student shall have to register within the time stipulated in the announcement by paying the prescribed fee.

ii. The number of total contact hours and method of evaluation for any make-up program shall be the same as those for a regular semester.

iii. It is desirable for a candidate to put up 100% attendance in all the subjects registered for the make-up programme. However 25% concession in attendance may be permitted at the discretion of the principal based on the merits of the individual case under extraneous conditions with proper evidence. No further

condonation of attendance on par with the regular semester shall be permitted.

iv.   If a candidate is failed to satisfy the attendance requirement in a course registered during make-up programme, then he has to repeat the course in the subsequent make-up programme when offered next.

v.   The method of internal evaluation is same as for the regular B.Tech. programme. I mid examination shall be completed by the end of IV weeks and II mid to be completed by the end of VIII weeks of the programme.

vi.   The earlier internal marks secured in the regular semester for the subjects registered in the make-up programme are nullified and internal marks from the latest make-up programme shall be final.

vii.   The credits for the courses registered during the make-up programme can be earned from the end semester examinations following the corresponding regular semester.

viii.   Attendance and completion of subjects during the make-up programme shall be suitably reflected in the consolidated marks memo. No student can register for more than two courses during a make-up term. Withdrawal from a make-up program after registration will not entitle for any refund of fees.

R 8.0 Supplementary examinations:

Supplementary examinations for the odd semester shall be conducted with the regular examinations of even semester and vice versa, for those who appeared and failed in regular examinations.

R 9.0 Class/Division :

70% and above	: First Class with distinction
60% and above, but less than 70%	: First Class
50% and above, but less than 60%	: Second Class.
40% and above, but less than 50%	: Pass Class
Less than 40%	: Fail

REGULATIONS FOR B.TECH. (LATERAL ENTRY) STUDENTS ADMITTED INTO III SEMESTER (II YEAR) (UNDER AUTONOMOUS STREAM)

RL 1.0

1.1   The selection and admission process shall be as per Government of Andhra Pradesh rules through ECET.

1.2   A student admitted to B.Tech. through lateral entry scheme joins the College in the III Semester of the respective 8-Semester program. The duration of the programme is 3 years / 6 semesters. However, if a student can not complete within 3 years, he can do so by taking more time but not more than consecutive 6 years / 12 semesters.

RL 2.0   These students are exempted from social work.

RL 3.0   The attendance requirements shall be same as those admitted into four year B.Tech programme, I- Semester (Autonomous stream).

RL 4.0   Minimum Academic Requirements:

   i)   A student shall be promoted to the VII Semester only after securing 80 credits out of 112 credits up to the end of VI Semester (from III,IV,V semesters regular and supplementary examinations & VI semester regular examinations) before he/she enters VII Semester.

   ii)   A student shall register and put up minimum required attendance in all the 172 credits counted from the regular course structure of VIII semester B.Tech. programme and earn at least 164 credits prescribed as compulsory to be qualified for the award of B.Tech. degree. The remission of 8 credits is only from the electives.

   iii)   Marks obtained in the best 164 credits out of 172 credits shall be considered for the award of Percentage / Class / Division.

RL 5.0 All other regulations are same as those applicable to the students admitted into B.Tech I-Semester under Autonomous stream.

RL 6.0 Subjects are identified as exempted / mandatory / pre-requisite. A student has to attend the classes and the examinations as and when conducted in subjects prescribed as mandatory / pre-requisite ~~and has to earn the credits in the examinations as and when conducted~~. The evaluation for the above courses may be totally internal. The ~~credits /~~ marks obtained in the mandatory / pre-requisite subjects shall not be counted for the award of degree / Percentage / Class / Division.

TRANSITORY REGULATIONS FOR STUDENTS RE-ADMITTED INTO II - YEAR OF AUTONOMOUS STREAM FROM PREVIOUS REGULATIONS

1. The student has to attend classes in the subjects declared as pre-requisite before joining into II year (III or IV semester) under autonomous stream offered in the preceding semester and has to attend ~~earn the credits in~~ the examinations as and when conducted.

2. For subjects which are ~~not prerequisites but~~ declared as mandatory, the instruction may be taken during the following make-up programmes or as and when they are offered and has to attend ~~shall earn the credits in~~ the examinations as and when conducted.

3. For subjects which are declared as substitute, the instruction may be taken during the following make-up programmes or as and when they are offered and shall earn the credits in the examinations as and when conducted.

4. The re-admitted students have to appear and pass the I year / II Year I semester (in case of readmission into II semester)

subjects by appearing for the examinations as and when conducted by JNT University Kakinada in the failed subjects.

5. Promotion to V semester:

For a student readmitted into III, IV semesters (II year) of Autonomous Stream, to get promoted to V semester (III year - I semester) one has to earn 80 credits up to the end of IV semester. (The credits for I year courses shall be earned from regular and supplementary examinations conducted by JNTU-K and for III semester from regular and supplementary examinations conducted by GVPCE(A) and for IV semester from regular examinations conducted by GVPCE(A) including the courses prescribed as pre-requisite and mandatory for re-admission.

5. Promotion to VII semester:

For a re-admitted student to get promoted to VII semester (IV year) the following criteria must be satisfied: A student shall be promoted from VI to VII semester, if he acquires 116 up to the end of VI Semester (from I, II, III, IV, V semesters regular and supplementary examinations, including pre-requisite / mandatory courses & VI semester regular examinations) before he/she enters VII Semester.

6. The student seeking readmission into II year shall abide by all other relevant regulations in force under the autonomous stream in addition to the above and shall secure a pass in pre-requisite and compulsory courses.

7. For the award of the degree, a student shall acquire 216 credits. However, a pass in pre-requisite or mandatory courses shall not be essential for the award of the degree if one satisfies the attendance requirements in such courses, provided the total number of courses attended exceeds those equivalent to 224 credits as per the prescribed curriculum.

The credits / marks obtained in the mandatory / pre-requisite subjects shall not be counted for the award of degree / percentage / class / division.

TRANSITORY REGULATIONS FOR STUDENTS RE-ADMITTED INTO III – YEAR (V, VI Semesters) OF AUTONOMOUS STREAM FROM JNTU-K REGULATIONS

1. The student has to attend classes in the subjects declared as pre-requisite before joining into V or VI semester under autonomous stream offered in the preceding semesters/ make-up programme and has to attend ~~earn the credits in~~ the examinations as and when conducted.

2. For subjects which are ~~not prerequisites but~~ declared as mandatory, the instruction may be taken during or in the subsequent semester / make-up programme and has to attend ~~shall earn the credits in~~ the examinations as and when conducted.

3. For subjects which are declared as substitute, the instruction may be taken during the following make-up programmes or as and when they are offered and shall earn the credits in the examinations as and when conducted.

4. The Re-admitted students have to appear and pass the I, II and III year- I semester (in case of readmission into II semester) subjects by appearing for the respective examinations as and when conducted at the earliest by J.N.T. University Kakinada in the failed subjects.

5. Promotion to VII semester:

    The promotion into VII semester (IV year I semester) for those readmitted into V or VI semester shall be in accordance with the then prevailing rules of JNTU-K.

6. A student seeking re-admission into V or VI semester (III year) shall abide by all other relevant regulations in force under the autonomous stream.

7. For the award of the degree, a student shall acquire 216 credits. However, a pass in pre-requisite or mandatory courses shall not be essential for the award of the degree if one satisfies the attendance requirements in such courses, provided the total

number of courses attended exceeds those equivalent to 224 credits as per the prescribed curriculum.

The credits/ marks obtained in the mandatory / pre-requisite subjects shall not be counted for the award of degree / percentage / class / division.

Transitory regulations for students re-admitted into VII or VIII semesters of B.Tech. programme of autonomous stream from JNTU stream.

1. A student readmitted into VII or VIII semesters has to study the courses prescribed in the corresponding semesters of course structure of the autonomous system and shall earn the credits from the end semester examinations.

2. Shall earn the credits of the previous semesters from the supplementary examinations conducted by JNTU-K from time to time.

3. The student seeking readmission into VII or VIII semesters shall abide by all other relevant regulations in force under the autonomous stream.

R 10.0 General:

i.   Where the words 'he', 'him', 'his', occur, they imply 'she', 'her', 'hers', also.

ii. The academic regulation should be read as a whole for the purpose of any interpretation.

iii. In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Chairman, Academic Council is final.

iv. The college may change or amend the academic regulations or syllabi from time to time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the college.