RULES AND REGULATIONS – 2013

B.E. / B.Tech. DEGREE PROGRAMMES
(Applicable to students admitted in the year 2013 and later)
NATIONAL ENGINEERING COLLEGE, K.R.NAGAR  
(An Autonomous Institution, Affiliated to Anna University, Chennai)  

B.E. / B.Tech., Degree Programmes  

RULES AND REGULATIONS – 2013  

The following Rules and Regulations shall be applicable for all the U.G. Programmes offered in National Engineering College, K.R. Nagar, Kovilpatti from the academic year 2013 – 2014 onwards.  

CREDIT SYSTEM  

Applicable to the students to be admitted from the academic year 2013 – 2014 in National Engineering College (An Autonomous Institution), Affiliated to Anna University, Chennai.  

1.0. PRELIMINARY DEFINITIONS AND NOMENCLATURE  

In these regulations, the context requires:  

1. “Programme” means Under Graduate Degree Programme. i.e., B.E. / B.Tech. Degree Programme.  
2. “Specialization” means a specialization or discipline of B.E. / B.Tech. Degree Programme like Mechanical Engineering, Information Technology etc.,  
3. “Course” means a Theory or Practical subject that is normally studied in a semester, like Engineering Graphics, Fundamentals of Computing and Programming etc.,  
4. “Controller of Examinations” means the Authority of the Institution who is responsible for all the activities of the End Semester Examinations of this Institute.  
5. “Dean (Academic)” means the authority of the Institution / who is responsible for initiating all the academic activities of the College / Institution and for implementation of relevant rules of this Regulations.  
6. “Head of the Institution” means the Principal of the College / Institution / who is responsible for all the academic activities of that College / Institution and for implementation of relevant rules of this Regulations.  
7. “Chairperson” means Head of the Faculty.  
8. “Head of the Department” means Head of the Department concerned.  
9. “University” means ANNA UNIVERSITY CHENNAI.
2.0 QUALIFICATIONS FOR ADMISSION

2.1 The candidates seeking admission for the First semester B.E. / B.Tech., degree programme should have passed the Higher Secondary Examination in the academic stream with Mathematics, Physics and Chemistry as main subjects of study conducted by the Government of Tamilnadu or an examination accepted by the syndicate of Anna University as equivalent there to. They should also satisfy other eligibility rules as prescribed by the Anna University and Director of Technical Education, Chennai, from time to time.

(OR)

Should have passed the Higher Secondary Examination of Vocational Stream (Vocational groups in Engineering / Technology) as prescribed by the Government of Tamil Nadu.

2.2 Lateral entry admission

(i) The candidates who possess the Diploma in Engineering / Technology awarded by the State Board of Technical Education, Tamil Nadu or its equivalent are eligible to apply for admission to the third semester of B.E. / B.Tech., in the branch corresponding to the branch of study.

(OR)

(ii) The candidates who possess the Degree in Science (B.Sc.) (10+2+3 stream) with mathematics as a subject at the B.Sc. level are eligible to apply for admission to the third semester of B.E. / B.Tech.,

Such candidates shall undergo two additional Engineering subject(s) in the third and fourth semesters or fourth and sixth semesters respectively as prescribed by the respective faculty.

3.0 UG PROGRAMMES OFFERED

1. B.E. (Mechanical Engineering)
2. B.E. (Electronics and Communication Engineering)
3. B.E. (Computer Science and Engineering)
4. B.E. (Electrical and Electronics Engineering)
5. B.E. (Electronics and Instrumentation Engineering)
6. B.E. (Civil Engineering)
7. B.Tech., (Information Technology)
4.0 DURATION OF THE PROGRAMME AND SEMESTER

4.1 The minimum and maximum periods for completion of the UG programmes are given below.

<table>
<thead>
<tr>
<th>Programme</th>
<th>Minimum No. of semesters</th>
<th>Maximum No. of semesters</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.E. / B.Tech.</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>B.E. / B.Tech., Lateral Entry</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>

Each semester normally consists of 90 working days. In any contingent situation, the number of working days per semester shall not be less than 65 days. The Principal is given the discretionary powers to decide the number of working days in such contingencies. The Principal shall ensure that every teacher imparts instruction as per the number of periods specified in the syllabus and that the teacher teaches the full content of the specified syllabus for the course being taught.

4.2 For the purpose of regulations, the academic year will be divided into two semesters, the Odd semester normally spanning from June to November and the Even semester from December to May.

4.3 The First semester of B.E. / B.Tech., Degree Programme normally spans from August to December and Second semester from January to May.

4.4 The courses in the curriculum of the odd semesters will be conducted only in odd semesters and that of the even semesters only in even semesters and a candidate may proceed to any semester if and only if he / she has completed the course prescribed for the previous semesters.

5.0 ATTENDANCE REQUIREMENTS FOR COMPLETION OF A SEMESTER

5.1 A candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester:

   a. He/she shall have earned not less than 75% of attendance in each course in that semester and not less than 75% of attendance on an average in all the courses put together in that semester.

   b. His/her progress shall be satisfactory, and

   c. His/her conduct shall be satisfactory.

5.2 Students who have earned less than 75% attendance in any individual course of the semester are not deemed to have completed the semester.
5.3 A candidate who secures 65% attendance (without considering any leave) in any individual course and an average attendance between 65% and 74% (without considering any leave) in all the courses put together in the current semester due to medical reasons (hospitalization / accident / specific illness) or due to participation in the College / University / State / National / International level Sports events with prior permission from the Principal / competent authority shall be given exemption from the prescribed attendance requirement and he/she shall be permitted to appear for the semester examinations.

5.4 The students can take part in any of the following activities:

- Sports and Games: TIES, Inter collegiate, Inter Zonal, Inter University, State level.
- National level and Open Tournaments.
- NCC: Camps and expeditions.
- NSS camps.
- YRC activities.
- Cultural programmes.
- Leadership course organized by other organizations & Alumni Association activities.
- Training programmes and Association activities.
- Projects in Industries/Organizations.
- Placement activities.

5.5 Percentage of attendance for the leave period (Medical Leave or ODL or Both) for the purpose of calculation of eligibility will be worked out based on the actual number of working days during the period of leave availed by the student and the actual total number of working days in that semester.

5.6 The ODL (On Duty Leave) requisition letter of the student shall be forwarded to the Principal through the concerned HOD by the staff in charge of the respective activities before / after completion of every activity.

5.7 The ODL sanctioned letters shall be submitted to the Department office. The Staff In-charge of the department office will check the eligibility for the award of attendance at the end of the semester and the same may be submitted to the Head of the Department for approval.
5.8 Those students who are not deemed to have completed the semester with reference to the conditions specified above shall undergo the semester again in all the courses in the respective semester of next academic year.

6.0 FACULTY ADVISER (TUTOR)

To help the students in planning their courses of study and for general advice on the academic programme, the Head of the Department of the students will allot a certain number of students to the teacher of the Department who shall function as Tutor for those students throughout their period of study. Such Tutor shall advise the students and monitor the courses undergone by them; check the attendance and progress of the students attached to him/her and counsels them periodically. If necessary, the faculty adviser may also discuss with or inform the parents about the progress of the students through concerned Head of the Department.

7.0 CLASS COMMITTEE

7.1 A Class Committee consists of all teachers handling courses of the concerned class, student representatives - cross section of students (Academically good, Average, Poor) and a chairperson who is a faculty not handling the course for the class. The overall goal of the Class Committee is to improve the teaching-learning process. The functions of the Class Committee include:

- Solving problems experienced by students in the classroom and in the laboratories.
- Clarifying the regulations of the degree programme and the details of rules therein.
- Informing the student representatives about the academic schedule including the date of assessments (Tests & Assignments) and the syllabus coverage for each assessment.
- Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems, if any
- Identifying the weak students, if any, and requesting the teachers concerned to provide some additional help or guidance or coaching to such weak students.

7.2 The class committee for a class under a particular branch is normally constituted by the Head of the department. However, if the students of different branches are mixed in a class (like the first semester which is generally common to all branches), the class committee is to be constituted by the Chief Tutor.

7.3 The class committee shall be constituted on the first week of commencement of any semester.
7.4 At least 6 student representatives (usually 3 boys and 3 girls) shall be included in the class committee.

7.5 The chairperson of the class committee may invite the Tutor(s) and the Head of the Department to the meeting of the class committee.

7.6 The Principal may participate in any class committee meeting.

7.7 The chairperson is required to prepare the minutes of every meeting, submit the same to HOD within two working days of the meeting and arrange to circulate among the concerned students and teachers. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the management by the head of the institution.

7.8 The class committee shall meet four times in a semester:

- The first meeting within a week from the date of commencement of the semester.
- The second meeting a week after the first test results.
- The third meeting a week after the second test results.
- The last meeting a week after the third test results or a week before the last working day of the semester.

7.9 During these meetings the student members representing the entire class, shall meaningfully interact and express the opinions and suggestions of other students of the class to improve the effectiveness of the teaching-learning process.

8.0 SYSTEM OF EXAMINATION

8.1 Performance in each course of study shall be evaluated based on (i) continuous internal assessment throughout the semester and (ii) End Semester Examination at the end of the semester.

8.2 Each course, both theory and practical (other than project work) shall be evaluated for a maximum of 100 marks. The project work shall be evaluated for a maximum of 200 marks.

8.2.1 For all theory and practical courses other than project work, the continuous internal assessment shall carry 30 and 40 marks respectively while the End Semester Examination shall carry 70 and 60 marks for theory and practical respectively.

8.2.2 For project work, the continuous internal assessment shall carry 80 marks while the end semester examinations shall carry 120 marks.
8.3 The End Semester Examination (Theory & Practical) of 3 hours duration shall ordinarily be conducted between November and January during the odd semesters and between May and July during the even semesters.

8.4 The End Semester Examination for project work shall consist of evaluation of the final report submitted by the student or students of the project group (of not exceeding 4 students) by an external examiner followed by a viva-voce examination conducted separately for each student by a committee consisting of the external examiner, the guide of the project group and an internal examiner.

8.5 The End Semester Examinations of practical courses including project work shall be evaluated by both Internal and External examiners.

8.6 The End Semester Theory Examinations shall be conducted by Chief Superintendent appointed by the Principal. The Hall Superintendents from the college and outside the college shall invigilate the halls during theory examinations.

8.7 The students involving in malpractice during end semester examinations shall appear before the enquiry committee and punishment will be given by the committee as per the college autonomous norms.

9.0 PROCEDURE FOR AWARDING MARKS FOR INTERNAL ASSESSMENT

9.1 For all theory courses, the continuous assessment shall be for a maximum of 30 marks (consisting of 25 marks for Tests / Assignments / Seminar / Quiz and 5 marks for Attendance). For all Practical Courses, the continuous assessment shall be for a maximum of 40 marks (consisting of 30 marks for viva, conducting experiments results and 10 marks for attendance). For project work, the continuous assessment shall be for a maximum of 80 marks (consisting of 70 marks for project assessment by three periodical reviews and 10 marks for attendance). The above continuous assessment shall be awarded as per the procedure given below:

a) **Theory Courses**

Three Assessments each carrying 100 marks shall be conducted during the semester by the Staff / Department concerned. The total marks obtained in all three assessments put together, out of 300 shall be proportionately reduced for 25 marks and rounded to the nearest integer (This also implies equal weightage to all the three assessments).

b) **Practical Courses**

Every practical course shall be evaluated based on the completion of experiment, viva-voce and the records of work done. There shall be at least one test during the semester.
c)  **Project Work**

The concerned Head of the Department shall constitute a review committee for the branch. There shall be three assessments (each 100 Marks) during the semester by the review committee. The student shall make presentation on the progress made by him / her before the committee. The total marks obtained in the three assessments shall be reduced for 70 marks and rounded to the nearest integer. (This also implies equal weightage to all the three assessments).

### 9.2 Attendance

The marks for attendance shall be awarded as given below:

<table>
<thead>
<tr>
<th>Attendance</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Theory</td>
<td>For Practical &amp; Project work</td>
</tr>
<tr>
<td>75% to 80% of attendance</td>
<td>2</td>
</tr>
<tr>
<td>81% to 85% of attendance</td>
<td>3</td>
</tr>
<tr>
<td>86% to 90% of attendance</td>
<td>4</td>
</tr>
<tr>
<td>91% to 100% of attendance</td>
<td>5</td>
</tr>
</tbody>
</table>

9.3 Each Staff member shall maintain an “ATTENDANCE AND ASSESSMENT RECORD” which consists of attendance marked for each Lecture / Practical / Project work class, the test marks and the record of class work (topic covered), separately for each course. This should be submitted to the Head of the Department periodically (at least three times in a semester). The Head of the Department will verify the details given by the Staff member. At the end of the semester, the record should be verified by the Principal who will keep this document in safe custody (for five years). The Academic auditing committee appointed by the Principal may inspect the records of attendance and assessment for both current and previous semesters.

### 9.4 REQUIREMENTS FOR APPEARING FOR TERMINAL EXAMINATION

A candidate shall normally be permitted to appear for the End Semester Examination of any semester commencing from First semester if he/she has satisfied the semester completion requirements and has registered for examination in all courses of the semester. Registration is mandatory for end semester examinations as well as arrear examinations failing which the candidate will not be permitted to move to the higher semester. A candidate already appeared for courses or any course in a semester and passed the examination is not entitled to reappear in the same course or courses of the semester for improvement of grades / marks.
9.5 PASSING REQUIREMENTS

9.5.1 A candidate who secures not less than 50% of total marks prescribed for the courses with a minimum of 45% of the marks prescribed for the End Semester Examination in theory and 50% for practical courses (including Project work), shall be declared to have passed the Examination.

9.5.2 If a candidate fails to secure a pass in a particular course, it is mandatory that he/she shall register and reappear for the examination in that course during the subsequent semester when examination is conducted in that course; he/she should continue to register and reappear for the examinations in the failed courses till he / she secures a pass.

9.5.3 The internal assessment marks obtained by the candidate in the first appearance shall be retained and considered valid for all subsequent attempts till the candidate secures a pass. However, from the 3rd attempt onwards if a candidate fails to obtain pass marks (Internal Assessment + End Semester Examination) then the passing requirement shall be as follows:

The candidate should secure 50% and above the maximum marks prescribed for course in the End Semester Examinations alone irrespective of Internal Assessment mark obtained to get pass in that subject.

9.5.4 A candidate shall be declared to have passed in the Physics and Chemistry Laboratory – I, Physics and Chemistry Laboratory – II and Engineering Practices Laboratory practical examinations if he/she secures not less than 50 out of 100 in both Part A and Part B put together, subject to the condition that he/she secures at least a minimum of 20 marks out of 50 in each of the Part A and Part B. If he/she secures less than a minimum prescribed mark 20 in either of the Part A or Part B, he/she has to reappear for the entire laboratory examination (Part A and Part B) in the subsequent semesters till he/she secures the marks as per the above mentioned passing criteria.

9.6 AWARD OF LETTER GRADES

9.6.1 All assessments of a course will be done on absolute mark basis. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain number of points, will be awarded as per the range of total marks (out of 100) obtained by the candidate in each subject as detailed below:
<table>
<thead>
<tr>
<th>Letter grade</th>
<th>Grade Points</th>
<th>Marks Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>10</td>
<td>91 – 100</td>
</tr>
<tr>
<td>A</td>
<td>9</td>
<td>81 – 90</td>
</tr>
<tr>
<td>B</td>
<td>8</td>
<td>71 – 80</td>
</tr>
<tr>
<td>C</td>
<td>7</td>
<td>61 – 70</td>
</tr>
<tr>
<td>D</td>
<td>6</td>
<td>56 – 60</td>
</tr>
<tr>
<td>E</td>
<td>5</td>
<td>50 – 55</td>
</tr>
<tr>
<td>U</td>
<td>0</td>
<td>&lt; 50</td>
</tr>
<tr>
<td>I</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>AB</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

“U” denotes unsatisfactory grade which requires Reappearance (RA) in the examination for that particular course. (RA will figure in Result sheets & Grade sheets). “W” denotes withdrawal from the course. “AB” denotes absent. The Grade "I" denotes inadequate attendance and hence prevention from writing the end semester examination. The Grade “I”, “W” and “AB” will figure only in the Result Sheets.

### 9.6.2 GRADE SHEET

After results are declared, Grade Sheets will be issued to each student which will contain the following details:

- The College Name and Affiliated University.
- The list of courses enrolled during the semester and the grade scored.
- The Grade Point Average (GPA) for the semester.
- The Cumulative Grade Point Average (CGPA) of all courses enrolled from first semester onwards.

GPA is the ratio of the sum of the products of the number of credits of courses enrolled and the points corresponding to the grades scored in those courses, taken for all the courses, to the sum of the number of credits of all the courses in the semester, rounded up to 2 decimal points

\[
GPA = \frac{\text{Sum of } [\text{Credits acquired } \times \text{Grade Points}]}{\text{Sum of Credits Registered}}
\]

CGPA will be calculated in a similar manner, considering all the courses enrolled from first semester to last semester rounded up to 2 decimal points. "RA", "I", “AB” and "W" grades will be excluded for calculating GPA and CGPA.
\[ CGPA = \frac{\sum_{i=1}^{n} C_i \cdot GP_i}{\sum_{i=1}^{n} C_i} \]

where \( C_i \) - is the Credits assigned to the course

\( GP_i \) - is the point corresponding to the grade obtained for each Course

\( n \) - is number of all Courses successfully cleared during the particular semester in the case of GPA and during all the semesters in the case of CGPA

9.7 REVALUATION

A candidate can apply for revaluation of his/her semester examination answer script in a theory course, within 2 weeks from the declaration of results, on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of the Department. A candidate can apply for revaluation of answer scripts for not exceeding 5 subjects at a time. The Controller of Examinations will arrange for the revaluation and the results will be intimated to the candidate concerned through the Head of the Department. Revaluation is not permitted for Practical courses, Seminars, Practical Training and for Project work.

10.0 ELIGIBILITY FOR THE AWARD OF THE DEGREE

A student shall be declared to be eligible for the award of the Degree only when

- Successfully gained the required number of total credits as specified in the curriculum corresponding to his/her Programme within the stipulated time.
- No disciplinary action is pending against him/her.
- Successfully completed the field visit / industrial training, if any, as prescribed in the curriculum.
- The maximum time limit for the completion of the B.E. / B.Tech. Degree programmes will be 7 (SEVEN) years (FOURTEEN consecutive semesters) from the date of admission to the first semester of the programme and 6 (SIX) years (TWELVE consecutive semesters) for the lateral entry candidates from the date of admission to the third semester of the programme.
- The award of the Degree shall be approved by the syndicate of the University.
- Successfully completed any additional courses prescribed by the Dean (Academic), whenever any candidate is readmitted under Regulations other than R – 2013.
11.0 CLASSIFICATION OF THE DEGREE AWARDED

11.1 First class with Distinction

A candidate who qualifies for the award of Bachelors degree having passed all the prescribed examinations in all the courses within NINE semesters (SEVEN semesters for Lateral Entry Candidates) consecutively without break of study, in his / her first appearance itself and securing a CGPA of not less than 8.00 shall be declared to have passed in First Class with distinction.

11.2 First Class:

A candidate who qualifies for the award of degree having passed the examination in all the subjects within NINE semesters (all the SEVEN semesters for Lateral Entry candidates) consecutively and securing a CGPA of not less than 6.00 shall be declared to have passed in First class. For this purpose the authorized break of study and withdrawal from the examination will not be counted as an attempt.

11.3 Second Class

All other candidates (not covered in clauses 11.1 and 11.2) who qualify for the award of degree (vide clause 10.0) shall be declared to have passed the examination in second class.

12.0 PROVISION FOR WITHDRAWAL FROM END-SEMESTER EXAMINATION

12.1 A candidate may be granted permission to withdraw from appearing for the examination of any one course or consecutive examinations of more than one course in a semester examination for valid reasons and on prior application.

12.2 Such withdrawal shall be permitted only once during the entire period of study.

12.3 Withdrawal application is valid only if it is made within 10 days prior to the commencement of the examination in that course or courses and recommended by the HOD and approved by the Principal.

12.3.1 Notwithstanding the requirement of mandatory TEN days notice, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.

12.4 Withdrawal shall not be construed as an appearance for the eligibility of a candidate for First Class with Distinction. This provision is not applicable to those who seek withdrawal during VII semester.
12.5 Withdrawal from the End semester examination is **NOT** applicable to the courses with arrear in the previous semesters.

12.6 The candidate shall reappear for the withdrawn courses during the examination conducted in the subsequent semester.

**13.0 PROVISION FOR AUTHORISED BREAK OF STUDY**

13.1 Break of Study shall be granted only once for valid reasons for a maximum of one year during the entire period of study of the degree programme. However, in extraordinary situation the candidate may apply for additional break of study not exceeding another one year by paying prescribed fee for break of study. If a candidate intends to temporarily discontinue the programme in the middle of the semester for valid reasons, and to rejoin the programme in a subsequent year, permission may be granted based on the merits of the case provided he / she applies to the **Principal, in advance**, but not later than the last date for registering for the end semester examination of the semester in question, through the Principal of the Institution stating the reasons therefore and the probable date of rejoining the programme.

13.2 The candidate permitted to rejoin the programme after the break shall be governed by the Curriculum and Regulations in force at the time of rejoining. **If the Regulation is changed**, then, those candidates may have to do additional courses as prescribed by the **Dean (Academic)**.

13.3 The authorized break of study (for a maximum of one year) will not be counted for the duration specified for passing all the courses for the purpose of classification. However, additional break of study granted will be counted for the purpose of classification.

13.4 The total period for completion of the programme reckoned from the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified irrespective of the period of break of study in order that he/she may be eligible for the award of the degree.

13.5 If any student is detained for want of requisite attendance, progress and good conduct, the period spent in that semester shall not be considered as permitted “Break of Study” or “Withdrawal” is not applicable for this case.

**14.0 INDUSTRIAL VISIT**

Every student is required to undergo one Industrial visit per year of the programme. Every teacher shall take the students at least for one industrial visit in a year.
15.0 WITHDRAWAL FROM THE EXAMINATIONS

15.1 A candidate will be permitted to withdraw in any one of the semesters except first semester (Third semester for lateral entry candidates) during the entire duration of the Degree programme, for valid and genuine reasons by making an application in the office of the Controller of Examinations along with the Hall ticket or attendance certificate from the Head of the Department for withdrawal at least one day in advance of the last theory examination in that semester.

15.2 When he/she appears subsequently, he/she has to appear for all the courses of that semester. Subsequent appearance will not be counted as separate attempt.

15.3 Those candidates who withdraw are eligible for the award of First Class and First Class with Distinction as per the requirement in this regard. However he/she will not be ranked.

15.4 Withdrawal is permitted only once in the whole programme.

16.0 DISCIPLINE

Every student is required to observe discipline and decorous behaviour both inside and outside the college and not to indulge in any activity, which will tend to bring down the prestige of the college.

17.0 REVISION OF REGULATIONS AND CURRICULUM

The Academic Council of the College reserves the right to revise or change or amend the regulations, the scheme of examinations, the curriculum and the syllabi from time to time if found necessary.

18.0 SPECIAL CASES

In the event of any clarification in the interpretation of the above rules and regulations, they shall be referred to the Standing Committee. The Standing Committee will offer suitable interpretations/ clarifications / amendments required for special case on such references and get them ratified in the next meeting of the Academic Council. The decision of the Academic Council will be final.

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GUIDELINES FOR
NON – CGPA ONE CREDIT COURSES
(To be Approved during the 4th Academic Council Meeting)

B.E. / B.Tech. DEGREE PROGRAMMES
(Applicable to students admitted in the year 2013 and later)

NATIONAL ENGINEERING COLLEGE
(An Autonomous Institution, Affiliated to Anna University, Chennai)
K.R.NAGAR, KOVILPATTI – 628 503
www.nec.edu.in
### CATEGORY OF ONE CREDIT NON CGPA COURSES

<table>
<thead>
<tr>
<th>Group</th>
<th>Code</th>
<th>Category</th>
<th>CGPA Credit</th>
<th>Minimum Credit Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>NCG11</td>
<td>Sports / Yoga</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NCG12</td>
<td>National Cadet Corps</td>
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<td></td>
<td>NCG13</td>
<td>National Service Scheme</td>
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<td></td>
<td>NCG14</td>
<td>Extra Curricular Activities</td>
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<tr>
<td>Group II</td>
<td>NCG21</td>
<td>English Proficiency Certification</td>
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<td></td>
<td>NCG22</td>
<td>Soft Skills</td>
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<tr>
<td></td>
<td>NCG23</td>
<td>Foreign Languages</td>
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<tr>
<td>Group III</td>
<td>NCG31</td>
<td>Value Added Courses</td>
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<tr>
<td></td>
<td>NCG32</td>
<td>Industrial Training</td>
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<td></td>
<td>NCG33</td>
<td>Industrial Lectures</td>
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<td>Group IV</td>
<td>NCG41</td>
<td>Aptitude Proficiency Certification</td>
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<td></td>
<td>NCG42</td>
<td>Globally accepted Certification Courses</td>
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<td></td>
<td>NCG43</td>
<td>Co-curricular Activities</td>
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</tr>
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<td><strong>Total</strong></td>
<td><strong>13</strong></td>
<td></td>
<td><strong>4</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Note1*: Students should take at least one course each from Groups I to IV. A student has to earn a minimum of 4 credits for the award of the degree. The details for assessing these one credit courses are given below.
## NCG11 SPORTS / YOGA

**CREDIT: 1**

### SPORTS

<table>
<thead>
<tr>
<th></th>
<th>Pre-requisites / Eligibility conditions</th>
<th>A Bonafide student of National Engineering College</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Details</td>
<td>Indoor Events / Outdoor Events – Athletics. <strong>Games:</strong> Football, Volleyball and Basketball. <strong>Athletics:</strong> Sprint events, throws and Jumps. <strong>Indoor:</strong> Chess, Table Tennis and Badminton.</td>
</tr>
<tr>
<td>3</td>
<td>Total number of hours and minimum attendance requirement</td>
<td>20 Hours; Minimum attendance 80%</td>
</tr>
<tr>
<td>4</td>
<td>Number of contact hours and practice hours per week</td>
<td>2 Hours</td>
</tr>
</tbody>
</table>
| 5 | Assessment Procedure – Tests, Examination | Athletic Events (Intra – University)  
   Won I Place : 7 Marks,  
   II Place : 6 Marks,  
   III Place : 5 Marks,  
   IV Place : 4 Marks,  
   V Place : 3 Marks,  
   VI Place : 2 Marks, Satisfied Norms : 1 Mark  
   Games (Intra – University)  
   Winner : 10 Marks  
   Runner – up : 08 Marks  
   Third place : 06 Marks  
   Fourth place : 04 Marks  
   Representation of the University in Open Tournaments.  
   1. District Level : 10 Marks  
   2. State Level : 20 Marks  
   Representation of the University in Inter-University Tournaments.  
   1. State Level : 20 Marks  
   2. National Level : 30 Marks  
   3. University Level : 50 Marks  
   Criteria for allocation of credits, and conditions for repeating the training, in case of failure | A minimum of 50 Marks out of 100 (Participation – 30 Marks, Attendance – 20 Marks) |
YOGA

The course is designed for improving personal efficiency and harmony in all facets of life. Simplified Kundalini Yoga or SKY is a physical, mental and spiritual discipline packaged by Yogiraj Vethathiri Maharishi for developing strength, awareness, Character and consciousness. The practice of Pranayamam, Acupressure, Asanas and Thavam in Simplified Kundalini Yoga raises the body awareness to prepare the body, nervous system, and mind to handle the Life energy better. Thavam or Meditation practice is initiated by senior SKY mentors or practitioners.

✓ Improves concentration and mental ability
✓ Activates dormant brain cells
✓ Promotes natural immunity
✓ Regulates hormonal imbalances
✓ Prevents and controls chronic diseases

Duration : One Year
Time & No. of days/week : Monday & Wednesday Evening 5.30PM to 6.30PM
Evaluation Procedure
The students have to practice in
i. Simplified physical Exercise (simple, synchronous and scientifically evolved yoga exercise to enhance vital circulations and natural immunity)
ii. Life Force Meditation (improves calmness of mind, enhances willpower, cultivates awareness, promotes intellectual sharpness and clarity of thinking)
iii. Kaayakalpa Practice (to enhance vital energy, thereby slowing down ageing process and maintaining health and youthfulness)
iv. Introspection Practice (Analysis of Thoughts, Moralization of Desires, Neutralization of Anger, Eradication of Worries and Realization of Self)
v. Surya Namaskaram practice which includes 12 asanas.

Each day after completing the practices, they have to fill up the spiritual diary. At the end of each month, they have to submit the spiritual diary to the co-ordinator of the programme. At the end of the course the students have to undergo 3 days Personal Contact Programme (PCP) at Aliyar Temple of consciousness during Friday, Saturday and Sunday.
NATIONAL CADET CORPS (NCC)  CREDIT: 1

Norms and procedures described for NCC credit:

1. 85% average attendance in NCC Parade from Date of Enrollment to Date of Discharge
2. Participation in Minimum 05 NCC activities like Rally, Banthopasthu etc..
3. Cadet should get pass in Weapon Training Test.
4. Cadet should have 100% Camp attendance

<table>
<thead>
<tr>
<th>PARTICULARS</th>
<th>EXAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>After Completion of 2 years NCC training and one NCC Camp</td>
<td>Eligibility for NCC B – Certificate Exam</td>
</tr>
<tr>
<td>After Completion of 3 years NCC training and Pass in NCC B – Certificate and two NCC Camps</td>
<td>Eligibility for NCC C – Certificate Exam</td>
</tr>
</tbody>
</table>

Note: If the student gets pass in NCC B – Certificate Examination One credit will be given.

NATIONAL SERVICE SCHEME (NSS)  CREDIT: 1

<table>
<thead>
<tr>
<th>S.No</th>
<th>Condition / Attribute</th>
<th>Fulfilling Requirement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pre-requisites Eligibility conditions</td>
<td>A bonafide student of the National Engineering College</td>
</tr>
<tr>
<td>2.</td>
<td>Details of the orientation programme</td>
<td>At least one programme per year</td>
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<tr>
<td>3.</td>
<td>Membership in NSS</td>
<td>Two years</td>
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<td>4.</td>
<td>Contact Hours</td>
<td>12 hours per semester</td>
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<td></td>
<td>Minimum Attendance Requirement</td>
<td>75%</td>
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<tr>
<td>5.</td>
<td>Assessment Procedure</td>
<td>As per NSS Norms, presence behavior</td>
</tr>
<tr>
<td>6.</td>
<td>Passing Requirements</td>
<td>Any 5 activities must be participated during the two years period.</td>
</tr>
</tbody>
</table>
**Extra-Curricular Activities**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Condition / Attribute</th>
<th>Fulfilling Requirement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pre-requisites Eligibility conditions</td>
<td>A bonafide student of the National Engineering College (An Autonomous Institution) For inter-college / inter-university competitions, students will be shortlisted based on their previous achievements / the selection process.</td>
</tr>
<tr>
<td>2.</td>
<td>Details</td>
<td>As prescribed by the organization / department / clubs. Activities include Photography, Music, Dance, Literature club, Quiz club, Debate club, Nature club and any other activity.</td>
</tr>
<tr>
<td>3.</td>
<td>Total number of hours and minimum attendance requirement</td>
<td>Two years 80% attendance</td>
</tr>
<tr>
<td>4.</td>
<td>Assessment Procedure – Tests, Examination</td>
<td>Based on participation and performance</td>
</tr>
</tbody>
</table>
| 5.   | Criteria for allocation of credits, and conditions for repeating the training, in case of failure | For Inter-college / inter-university competitions:  
1\textsuperscript{st} Prize : 8 points  
2\textsuperscript{nd} Prize : 6 points  
3\textsuperscript{rd} Prize : 4 points and participation : 2 points  
For Intra-university competitions:  
1\textsuperscript{st} Prize : 4 points  
2\textsuperscript{nd} Prize : 3 points  
3\textsuperscript{rd} Prize : 2 points and participation : 2 points  
Students should secure 20 points to earn 1 credit |
### NCG21  ENGLISH PROFICIENCY CERTIFICATION  CREDIT: 1

<table>
<thead>
<tr>
<th>S.No</th>
<th>Condition / Attribute</th>
<th>Fulfilling Requirement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pre-requisites Eligibility conditions</td>
<td>As given by certification issuing authority. Students are eligible to appear for the BEC exam at any semester.</td>
</tr>
<tr>
<td>2.</td>
<td>Detailed course content / Syllabus</td>
<td>As given by the certifying authority</td>
</tr>
<tr>
<td>3.</td>
<td>Duration of the course, total number of hours and minimum attendance requirement</td>
<td>Two weeks intensive training. Minimum attendance 80%</td>
</tr>
<tr>
<td>4.</td>
<td>Number of contact hours and practice hours per week</td>
<td>45 hours of training followed by online assessment.</td>
</tr>
<tr>
<td>5.</td>
<td>Assessment Procedure – Tests, Examination</td>
<td>Examination conducted by the certifying authority</td>
</tr>
</tbody>
</table>
| 6.   | Criteria for allocation of credits, and conditions for repeating the training, in case of failure | A minimum score in TOEFL iBT, GRE  
A minimum total score in IELTS  
A minimum score in the examination conducted by the Cambridge University (BEC) |

### NCG22  SOFT SKILLS  CREDIT: 1

**Content:**

Module 1: Personality Grooming and Communication Skills  
Module 2: Analytical and Problem Solving Skills  
Module 3: Presentation Skills, Group Discussion, Interview Skills  

**Duration:** 3 Weeks (One Week after the 2nd Semester, One Week after 3rd or 4th Semester and One Week after the 5th or 6th Semester)  

**Assessment:** Will be made by the trainer at the end of each week.

### NCG23  FOREIGN LANGUAGES  CREDIT: 1

**Duration:** 40 Hours of language classes.  

**Assessment:** Examination conducted by the certifying authority
GROUP – III

NCG31 VALUE ADDED COURSES CREDIT: 1

These courses are to be conducted by the respective Departments and the Students from other departments may also be allowed to attend the same.

Assessment Procedure: Online / Written Examination conducted by the certifying authority.

NCG32 INDUSTRIAL TRAINING CREDIT: 1

- Training undergone in R & D organization and Institutions like IITs and IISC may also be considered as Industrial Training.

Eligibility conditions : Completion of the 3rd Semester Course work
Duration : 2 weeks
Assessment : Industrial Training Report (40%)
Students Presentation (40%)
Oral Examination (20%)

NCG33 INDUSTRIAL LECTURES CREDIT: 1

Eligibility conditions:
If the Guest Lecture is arranged by an other department, the student should obtain the prior approval of his / her HOD, to attend the same.

Duration:
Nine Guest Lectures should be completed. Each Guest Lecture should be of about 90 minutes duration.

Assessment:
Proof of attending the 9 Guest Lectures, along with the report on the outcome of attending each of the Guest Lectures should be presented by the student. The HOD will form an Evaluation Committee to assess the report of the student (50% weightage) and also to conduct the oral examination (50%), Quizzes and assignments.
## NCG41  
### APTITUDE PROFICIENCY CERTIFICATION

**CREDIT:** 1

<table>
<thead>
<tr>
<th>S.No</th>
<th>Condition / Attribute</th>
<th>Fulfilling Requirement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pre-requisites Eligibility conditions</td>
<td>Students can take these exams after completion of the 4th semester</td>
</tr>
<tr>
<td>2.</td>
<td>Detailed course content / Syllabus</td>
<td>As given by the certifying authority</td>
</tr>
<tr>
<td>3.</td>
<td>Duration of the course, total number of hours and minimum attendance requirement</td>
<td>40 to 80 hours, based on the nature of the course. Minimum attendance 80%</td>
</tr>
<tr>
<td>4.</td>
<td>Assessment Procedure – Tests, Examination</td>
<td>Examination conducted by the certifying authority</td>
</tr>
</tbody>
</table>
| 5.   | Criteria for allocation of credits, and conditions for repeating the training, in case of failure | *GRE : A minimum total score of 1000 (for verbal and quantitative reasoning – the max score is 1600)  
*GMAT : A minimum score of 500 (for verbal and quantitative reasoning – the max score is 800)  
*CAT : A minimum score of 70 percentile,*GATE : A valid GATE score  
*NAC-Tech : A minimum score of 55%(NASSCOM – Assessment of Competence Technology) |
| 6.   | Any rules to be adhered to, specific to the individual courses                        | *Score valid for only two years                                                           |

*Score valid for only two years*
These courses are conducted by

1. **HP ATA**
   - HP ATA Cloud
     - HP ATA Connected Devices
     - HP ATA Networks
     - HP ATA Servers and Storage

2. **Microsoft**
   - MCTS – Microsoft Certified Technologist Specialist (.Net)
   - MCITP – Microsoft Certified IT Professional
   - MCPD - Microsoft Certified Professional Developer (.Net)
   - MCDBA - Microsoft Certified Database Administrator
   - MCTS - Microsoft Certified SQL Server
   - MCSE - Microsoft Certified System Engineer
   - MCSA - Microsoft Certified System Administration
   - MCAD – Microsoft Certified Application Developer (.Net)
   - MCSD – Microsoft Certified Solution Developer (.Net)

3. **National Instruments (LabVIEW)**
   - CLA – Certified Labview Architect Examination
   - CLD – Certified Labview Developer Examination
   - CLAD – Certified Associate Developer Examination

4. **Oracle**
   - Oracle – 10g/11g Administrator
   - Oracle – 10g/11g Certified Associate
   - Oracle – 10g/11g Certified Professional

5. **IBM Certification**
   - IBM Professional Certification Program
   - IBM Certified Solution designer – Relational Software
   - IBM Certified Advanced Deployment personnel – Tivoli
   - IBM Certified System Administrator – Websphere
   - IBM Service Oriented Architecture

6. **CISCO Networking Academy**
   - CCNA - Certification course

7. **Adobe**
   - 9A0-055 – Adobe Dream Weaver CS3 ACE Examination
   - 9A0-058 – Adobe Flash CS3 ACE
   - 9A0-311 – Certified Macromedia Flash 8 Examination
   - 9A0-803 – Certified Dream Weaver 8 Developer Examination
   Adobe certified associate.
8. Red Hat Linux Certification
   • RHCE – RedHat Certified Engineer
   • RHCT – RedHat Certified Technician

9. Sun Microsystems
   • SCJP – Sun Certified Java Programmer
   • SCJD – Sun Certified Java Developer
   • SCSA – Sun Certified System Administrator (Level 1 & 2)
   • SCNA – Sun Certified Network Administrator
   • SCSA – Sun Certified Security Administrator

10. JAVA
    • OCWCD - Oracle Certified Web Component Developer
    • OCJP – Oracle Certified Java Programmer

11. Related to Civil Engineering
    3D Studio (Viz / Max / Design) Primavera
    AutoCAD
    STADDD.Pro
    ANSYS
    Primavera
    MS Project
    Revit Architecture
    Arc View GIS

12. Related to Mechanical Engineering
    AutoCAD
    Solid works
    Pro E Wild Fire 4
    Unigraphics NX5
    CATIA
    Hyper mesh 10
    ANSYS
    Nastran 2010
    Patran 2010
    ADAMS
    Piping and PDS Software
    3D Studio
    Any new Certification programmes may be included with the permission of the Director.

Assessment Procedure: Online / Written Examination conducted by the certifying authority.

Any new Certification programmes may be included with the permission of the Director.
CO-CURRICULAR ACTIVITIES

<table>
<thead>
<tr>
<th>S.No</th>
<th>Condition / Attribute</th>
<th>Fulfilling Requirement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pre-requisites eligibility conditions</td>
<td>A bonafide student of the National Engineering College (An Autonomous Institution)</td>
</tr>
<tr>
<td>2.</td>
<td>Details of the course</td>
<td>Co-curricular activities are divided into the following four groups.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>1. Professional Society Activities:</strong></td>
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<tr>
<td></td>
<td></td>
<td>Participation in activities of Professional Societies (National or International) like the</td>
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<td>Institution of Engineers, ISTE, IEEE, ASME, SAE, IETE, IME, etc., which contributes to</td>
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<td>the growth of the students.</td>
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<td><strong>2. Paper presentations / Publications:</strong></td>
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<tr>
<td></td>
<td></td>
<td>Symposia / Seminars / Conferences – Choosing a Topic – Preparation of papers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>3. Value – Added Courses:</strong></td>
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<tr>
<td></td>
<td></td>
<td>Content and the details of various value – added courses to be specified by the workshop</td>
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<tr>
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<td>/ Course Co-ordinator.</td>
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<td><strong>4. Mini-projects / Model Development:</strong></td>
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<tr>
<td></td>
<td></td>
<td>A mini-project which is relevant to the branch of interest of the student; a simulation</td>
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<tr>
<td></td>
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<td>model developed by the student with the guidance of a faculty member.</td>
</tr>
<tr>
<td>3.</td>
<td>Duration</td>
<td>Two years</td>
</tr>
<tr>
<td>4.</td>
<td>Assessment Procedure – Tests, Examination</td>
<td><strong>1. Professional Society Activities:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Membership certificate from a professional society for a minimum period 2 years. Evidence</td>
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<td></td>
<td>of active participation / involvement in all the activities organized by the professional</td>
</tr>
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<td></td>
<td></td>
<td>society. A Completion Certificate from the respective in-charges will be required to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>clear this activity.</td>
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<tr>
<td></td>
<td></td>
<td><strong>2. Paper presentations / Publications:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Certificate of presentation of technical papers in symposia / seminars / conferences.</td>
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<tr>
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<td>A minimum of 1 paper in an inter-college or 2 papers in an intra-college technical event.</td>
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<td>(OR)</td>
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<td></td>
<td></td>
<td>Publication of technical articles in National / International magazines / journals /</td>
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<tr>
<td></td>
<td></td>
<td>proceedings.</td>
</tr>
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<td></td>
<td></td>
<td><strong>3. Value – Added Courses:</strong></td>
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<td></td>
<td></td>
<td>Certificate of participation in Workshops and short-term courses (Internal or External).</td>
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<td></td>
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<td>The total duration should be at least 3 days. A Completion Certificate from the respective</td>
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<tr>
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<td>in-charges will be required to clear this activity. The Program Director / Staff in-</td>
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<tr>
<td></td>
<td></td>
<td>charge of this activity is responsible for ensuring the minimum duration and performance</td>
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<td>of the students as per the guidelines framed by the departments with respect to the nature</td>
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<tr>
<td></td>
<td></td>
<td>of the course.</td>
</tr>
</tbody>
</table>
4. **Mini-projects / Model Development:**
Developing a simple project / Prototype; computer simulation of a system using an industry – standard software package.
An Evaluation Committee formed by the HOD views this activity and the marks are awarded as follows: Report (40%), Presentation (30%) and Oral Examination (30%).

5. **Criteria for allocation of credits, and conditions for repeating the training, in case of failure.**
Satisfactory completion of any two of the four groups given above.
Format for Completion of Non-CGPA Courses

Name of the Student : 
Register Number : 
Department : 
Semester : 
Section : 

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Code</th>
<th>Name of the Non-CGPA Course</th>
<th>Duration</th>
<th>Name of the Course Coordinator</th>
<th>Remarks*</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

* - (Satisfactory / Good / Very Good / Excellent)

Student's Signature  Signature of the Class Coordinator  Signature of the Head of the Department With Seal