Academic Regulations for B.Voc Degree Programme

Choice Based Credit System (CBCS)
Under NEP

- *Applicable for the students admitted from 2023-2024.*

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I. PREAMBLE

Hindustan Institute of Technology and Science (HITS) - Deemed to be university under section 3 of UGC Act has introduced Choice Based Credit System (CBCS) from the academic year 2015-16. Choice Based Credit System (CBCS) is a proven, flexible mode of learning in higher education which facilitates a student to have guided freedom in selecting his/her own choices of courses in the curriculum for completing a degree program. This revision of regulations, curriculum and syllabi has been carried out further to make it more flexible and adaptive to the technology advancements and industry expectations aiming at multidisciplinary and holistic education under the NEP 2020.

The system permits a student to

(i)   Learn at their own pace through flexible learning process

(ii)   Choose electives from a wide range of courses offered within and outside their departments

(iii)   Undergo additional courses in their special areas of interest

(iv)   Adopt an interdisciplinary / multidisciplinary approach in learning

(v)   Avail transfer of Credits under Academic Bank of Credit

(vi)   Gain Non – CGPA credits to enhance skill/employability by taking up additional project work, entrepreneurship, co-curricular and vocational training.

(vii)   Learn and earn credits through MOOC and Project Based Learning

(viii) Enhance domain Knowledge, Skill and Attitude through participation in innovative Curriculum Design, Delivery, Continuous Assessments, Industry Internships and Projects.

(ix)   Avail multiple entry and exit option

The Curriculum is designed based on Choice Based Credit System (CBCS) with focus on Project Based Learning and Industrial Training, enabling the students to become eligible and fully equipped for employment in industries, higher studies or entrepreneurship.

II. DEFINITIONS AND NOMENCLATURE

In these Regulations, unless the context otherwise requires:

1. "Programme" means Degree Programme like B.Voc. Degree Programme.
2. "Discipline" means specialization or branch of B.Voc. Degree Programme, (e.g. Civil Engineering).
3. "Course" means a theory or practical subject that is normally studied in a semester, (e.g. Mathematics, Physics, etc.).
4. "Vice – Chancellor of HITS" means the Head of the Institution.
5. "Registrar" is the Head of all Academic and General Administration of the Institution.
6. "Dean" means the authority of the institution who is responsible for all academic activities and implementation of relevant rules of these Regulations pertaining to their respective Academic programmes.
7. "Controller of Examinations" means the authority of the institution who is responsible for all activities related to the Examinations conducted by the Institution, publication of results, award of grade sheets and degrees.
8. "Head Student Affairs" is responsible for all student related activities including student discipline, extra and co – curricular activities, attendance and meetings with class representatives, Student Council and parent – teacher meet.
9. "HoD" means the Head of the Department concerned.
10. "Institution" means Hindustan Institute of Technology and Science (HITS), Chennai.
11. "TCH" means Total Contact Hours – refer to teaching – learning engagement.
12. "DEC" means Department Examination Committee.
13. "BoS" means Board of Studies.
14. "BoM" means Board of Management.
15. "ACM" means Academic Council Meeting the highest authoritative body for approval for all Academic Policies.
16. "Class Teacher" is a faculty of the class who takes care of the attendance, academic performance and the general conduct of the students of that class.
17. "CIA" is Continuous Internal Assessment which is assessed for every student for every course during the semester.
18. "ESE" is End Semester Examination conducted by the Institution at the End of the Semester for all the courses of that semester.
19. "AICTE" means All India Council for Technical Education.
20. "UGC" means University Grants Commission.
21. "MHRD" means Ministry of Human Resource Development, Govt. of India.

ACADEMIC REGULATIONS FOR B. Voc

Under Choice Based Credit System (CBCS)

(Effective from Academic year 2023 - 24)

1.0 Vision, Mission and Objectives

The Motto of the Institution is **"To make every man a success and no man a failure"**.

The Vision of the Institution is "To be an international institute of excellence, providing a conducive environment for education with a strong emphasis on innovation, quality, research and strategic partnership blended with values and commitment to society"

1.1 The Mission of the institution is

- To create an ecosystem that promotes learning and world class research.

- To nurture creativity and innovation.

- To instill highest ethical standards and values.

- To pursue activities for the development of the Society.

- To develop national and international collaborations with institutions and industries of eminence.

- To enable graduates to become future leaders and innovators.

  Value Statement

  Integrity, Innovation and Internationalisation

1.2 Further, the Institution always strives

- To train our graduates with the latest and the best in the rapidly changing fields of Architecture, Engineering, Technology, Management studies, Science and Humanities, Laws and Liberal Arts.

- To develop graduates, with a global outlook, possessing Knowledge, Skills and Attitude and capable of taking up challenging responsibilities in the respective fields.

- To mould our graduates as citizens with moral, ethical and social values so as to fulfil their obligations to the nation and the society.

- To promote research in the field of Architecture, Engineering, Technology, Management studies, Health Science, Law, Design, Science and Humanities, Liberal Arts and Allied disciplines.

1.3 Aims and Objectives of the Institution are focused on

- Providing state of the art education in Architecture, Engineering, Technology, Applied Sciences, Law, Health Sciences, Design, Liberal Arts, and Management studies.
- Keeping pace with the ever – changing technological scenario and help the graduates to emerge as competent professionals, fully aware of their commitment to the society and the nation.
- To inculcate a flair for Research, Development and Entrepreneurship.

2.0 Admission

The admission policy and procedure shall be decided from time to time by the Board of Management (BOM) of the Institution, based on the guidelines issued by the UGC/ Ministry of Human Resource Development (MHRD), Government of India. The number of seats in each of the B.Voc. degree programme will be decided by the Board of Management / Statutory authorities of the Government like AICTE/ UGC / etc., taking into account of market demands. Seats are also made available for Non – Resident Indians and foreign nationals as per the Statutory approval, who satisfy the admission eligibility norms of the Institution.

2.1. Eligibility for Admission – Multiple Entry

i. Regular Entry (Admission to First Year)

Pass in 10 + 2 examination or already acquired NSQF certification Level 4 in a particular industry sector and opted admission in the skill based courses under NSQF in the institutions recognized as prescribed by AICTE / Statutory Authorities like UGC, / Government.

ii. Lateral Entry for diploma holders (LES) (Admission to Second Year)

Student already acquired NSQF certification Level 5 in a particular industry sector and opted admission in the skill based courses under NSQF in the institutions recognized as prescribed by AICTE / Statutory Authorities like UGC, / Government

iv. Lateral Entry for Engineering / Technology graduates (Admission to Third Year)

Student already acquired NSQF certification Level 6 in a particular industry sector and opted admission in the skill based courses under NSQF in the institutions recognized as prescribed by AICTE / Statutory Authorities like UGC, / Government

2.2   The candidate has to fulfil the prescribed admission requirements / norms of the Institution.

2.3.   In all matters relating to admission to the B.Voc. degree programme, the decision of the Board of Management (BoM) of the Institution shall be final.

2.4.   At any time after admission, if found that a candidate has not fulfilled one or many of the requirements stipulated by the Institution, or submitted forged certificates, the Institution has the right to revoke the admission and forfeit the fee paid. In addition, legal action may be taken against the candidate as decided by the Board of Management.

3.0   Student Discipline

Every student is required to observe utmost discipline and decorum both inside and outside the campus and do not indulge in any activity which may affect adversely the prestige / reputation of the Institution.

3.1   Any act of indiscipline of a student reported to the Head (Student affairs) and Head of the Department will be referred to a Discipline Committee constituted for the purpose. The Committee will enquire into the charges and decide on a suitable punishment if the charges are substantiated. The committee will also authorize the Head (Student Affairs) to recommend to the Vice-Chancellor for the implementation of the decision. The student concerned can appeal to the Vice-Chancellor, whose decision will be final.

3.2   Ragging in any form is a criminal and non-bailable offence in our country. The current State and Central legislations provide stringent punishments including imprisonment. Once the involvement of a student(s) is established in ragging, offending fellow students/staff, harassment of any nature to the fellow students/staff etc. the student(s) will be liable to be dismissed from the Institution, as per the laid down procedures of the UGC / Govt. /Institution. Every senior student of the Institution, along with their parent, shall give an undertaking at the beginning of every academic year in this regard and the same should be submitted at the time of registration for the academic year.

4.0   Structure of the B. Voc Degree Programme

4.1   All B. Voc. degree Programmes will have the curriculum and syllabi (for 3 years) as approved by the respective Board of Studies and Academic Council of the Institution.

4.2   Credits are the weightages, assigned to the courses based on the following general pattern:

One Lecture / Tutorial period per week	--- 1 credit
Up to Three periods of Practical classes per week	--- 1 credit
4 periods of Practical classes per week	--- 2 credits
6 weeks of on job training	--- 15 credits

4.3   The curriculum for B. Voc. programme is designed to have a minimum of **108 Skill Components credits + 72 General Education credits = 180 Credits** that are distributed across six semesters of study for the award of degree.

Choice Based Credit System (CBCS) is followed to provide the students, a balanced approach to their educational endeavour.

Under CBCS, the degree programme will consist of the following categories of courses:

i)   Skill Development Components (SK) – 108 Credits (60 %)

ii)   General Education Component (GE) – 72 Credits (40 %)

iii)   Online / MOOC Courses under Swayam and other recognizing online platforms will be considered as equivalent to courses mapped with the prior approval of Dean.

4.4   A student must earn compulsorily, the credits mentioned under each category shown in **Table 2** and also a minimum total of **180 credits, i.e 180 credits (CGPA)** for the award of B. Voc. degree.

Table 2. Distribution of Credits

No.	Category	Credits	Percentage (%)
1	Skill Development Components (SK)	108	60%
2	General Education Component (GE)	72	40%
	Total Credits		

4.5 The medium of instruction is English for all courses, examinations, seminar presentations and project reports.

5.0 Faculty Advisor

Faculty Advisors are assigned by the respective department to a certain number of students to help the students in planning their selection of courses and programme of study and for getting general advice on the academic programme, Such Faculty Advisor will continue to mentor the students assigned to him for the entire duration of the programme.

5.1 Class Committee

5.1.1 Every section / batch of the B. Voc. Degree programme will have a Class Committee consisting of Faculty and students.

The constitution of the Class Committee will be as follows:

a. Senior Faculty not associated with teaching a course for the particular class shall be nominated by the Head of the Department to act as the Chairman of the Class Committee as approved by the Dean.

b. Course coordinator of each of the lecture – based courses (for common courses).

c. Class teacher of the class.

d. All Faculty handling the courses for that class in the semester.

e. Workshop Superintendent (for first two semesters); as applicable.

f. Four students from the respective class nominated by Head of the Department

g. Faculty Advisors of the respective class.

5.1.2 Course committee

A course committee shall be constituted by the HOD for all the common courses, with the faculty who are teaching the courses and with a Professor of the core department as the Chairman. The Course committee shall meet periodically to ensure the quality of progression of the course in the semester.

5.2 HoDs meeting with the students

a. The HoD shall convene a closed meeting prior to each class committee and course committee meeting with the following members.

         i.   HoD

       ii.   Senior Faculty not associated with teaching a course for the class

     iii.   Class Teacher

     iv.   Five student representatives nominated by the class teacher/ HoD.

b. The above committee shall discuss the academic and other issue, if any, and obtain independent feedback on all faculties on the Teaching Learning Processes, in order to take necessary action. The minutes of the meeting along with student representation and the corrective actions shall be forwarded to the Dean by the HoD.

5.3   Basic Responsibilities of Class Committee and Course committee

a. The points of discussion during the above HoDs meeting shall be discussed in the Class committee and Course Committee meetings.

b. To review periodically the progress of the students.

c. To discuss issues concerning curriculum and syllabi and the conduct of the classes.

d. To inform the students about the method of assessment as recommended by the Department Examination Committee ("DEC") at the beginning of the semester. Each class committee / course committee will communicate its recommendations and the minutes of the meetings to the Head of the Department, Dean and the Head (Student Affairs).

e. To conduct meetings at least thrice in a semester as per the Academic Plan issued by the Dean.

f. To review the academic performance of the students including attendance, internal assessment and other issues like discipline, maintenance etc.

6.0   Registration for courses in a Semester

A student will be eligible for registration of courses only if he/she has cleared all dues to the Institution including Hostel, Library and other applicable fees up to the end of the previous semester provided that student is not debarred from enrolment on disciplinary grounds or for other reasons.

6.1   The institution follows a Choice Based Credit System. Accordingly, the students shall be given the option for selecting their choice of courses, and credits. The student is given the option of selecting the number of credits to undergo in a semester, subject to the curriculum requirements of minimum and maximum credits prescribed.

6.2 Except for the first year, registration for a semester shall be done during a specified week before the start of the semester as per the Academic Schedule.

6.3 Late registration/enrolment will be permitted by the respective Dean /Head of School for genuine cases, on recommendation by the Head of the respective department, with a late fee as decided from time to time.

6.4 The student shall make the choice of course in consultation with the Faculty Advisor.

6.5 Students shall have to pay additional fee as prescribed, for registering in certain elective courses under Non - Departmental Electives courses offered by certain specific Departments and for higher level Foreign Languages, as decided from time to time.

7.0 Attendance

The faculty handling a course must finalise the attendance, 3 calendar days before the last instructional day of the course and submit to the HoD through the class teacher.

a. A student **with less than 75% attendance in TCH (Total Contact Hours) in any course, will not be permitted to appear for the end-semester examination in that particular course,** irrespective of the reason for the shortfall of the attendance. The student is however permitted to avail additional Academic Leave up to 10% towards special OD for attending academic related activities like, Industrial Visits, Seminars, Conferences, Competitions etc., with the prior approval of the HoD or on genuine medical reasons. On reporting back, the student shall submit the relevant documents for proof to the HoD for approval of the additional academic leave.

b. A student with an attendance ("TCH" – Total Contact Hours) below 75% (65% for genuine medical conditions / Special On Duty leave) in any course will fall under the category "RA", which means Repeat the Course for want of attendance. Students under "RA" category will **not** be permitted to attend the Regular End Semester Examinations for that course and Continuous Internal Assessment (CIA) marks obtained in the respective course will be treated as null and void.

c. The list of such students under "RA" will be notified by the respective Departments at the end of the course work for each semester. The students with RA courses shall repeat the course as per the procedure vide Clause 7.3.

7.1 Additional condonation may be considered for specific and genuine cases which includes approved leave for attending select NCC / Sports Camps or for cases requiring prolonged medical treatment or critical illness involving prolonged hospitalization.

7.2 For such select NCC / Sports Camps prior permission for leave shall be obtained by the respective faculty coordinator / Director of sports from the designated authority, before deputing the students.

For medical cases requiring prolonged medical treatment / critical illness, submission of complete medical history and records with prior intimation from the parent / guardian regarding the health condition, progress of treatment, etc., to Head (Student Affairs) is mandatory. The assessment of such cases will be done by the attendance sub – committee based on the merit of the case and put up their recommendation to the Vice – Chancellor / designated authority. Such additional condonation is permitted only twice for a student in the entire duration of the programme.

The Vice-Chancellor based on the recommendation of the attendance sub - committee may then accord additional condonation of attendance, only if the Vice-Chancellor/Designated deems it fit and deserving. But in any case, the additional condonation cannot exceed 10% of TCH.

7.3 **Repeat Classes Procedure for RA**

a. The students shall register for the RA courses at the beginning of every semester by paying the requisite fee and attend the repeat classes for RA course during the last period of the time table or by attending special classes with the course faculty or by attending any other special schedule as approved by the Dean/HoD and shall gain the requisite eligibility to attend the End Semester Examination (ESE). The odd semester courses will be offered in the Odd semester and the Even semester courses will be offered in the even semester. The student is permitted to register for a maximum of 5 RA courses under this option.

b. The Continuous Internal Assessment Marks obtained by the student during their regular semester for the course in which they have been categorized as RA will become null and void. The students shall attend the RA classes and take up fresh Continuous Internal Assessments during the repeat classes and gain required attendance and CIA marks

c. The students under "RA" category, who have secured the requisite attendance as applicable vide clause 7.0 and obtained internal assessment marks, by successfully

completing the End of day courses or by attending special classes with the course faculty during the semester, are eligible to register for the End Semester Examinations for that course whenever the examination is conducted. This examination will be treated as arrear (supplementary) examination.

d. **Detention**

A student who **secures RA in all courses** in a semester shall repeat the semester by re-registering for the respective semester in the next academic year. However, student is permitted to appear for arrear (supplementary) examinations, if any, as per eligibility.

e. **Summer Semester:** With the specific approval of the Vice – Chancellor / Designated Authority and as per the requirements / availability of the required time slot and other resources, the Institution may conduct a special Summer Semester after the regular ESE in April/May usually, for students having RA courses in both Even and Odd semesters and conduct the summer semester examinations for the eligible students. However, it is the sole discretion of the vice chancellor to permit such summer semester schedules.

7.4 Student who have obtained "RA" for any course but appeared for the ESE examination in that particular course under any circumstance, the marks obtained will be considered as "null and void". The result of the particular course will be marked "RA" in the semester grade sheet and he/she has to gain the requisite eligibility to attend the End Semester Examination (ESE) for the course vide clause 7.3.

7.5 Student shall remit all payments due to the Institution within the prescribed dates, (unless and otherwise special approvals are obtained by any student for extension of payment dates) failing which their names, roll numbers will be blocked in the institution's registry / ERP till the dues are cleared. Students having arrears in fee (Tuition fee / Hostel fee or any other) payment to the institution will be prevented from appearing for current semester ESE. However, they can appear for the Examinations in their arrear courses.

8.0 Assessment Procedure

Every course shall have two components for assessment namely,

a. Continuous Internal Assessment "CIA": This assessment will be carried out throughout the semester as per the Academic Schedule.

b. End Semester Examination "ESE": This assessment will be carried out at the end of the Semester as per the Academic Schedule. In the End Semester Examination ("ESE") **the student should secure the prescribed minimum mark in each course in the ESE as given in the Table 3 for passing.**

c. **There are no separate minimum marks prescribed for CIA for any course.**

The weightages for the various categories of the courses for CIA and ESE is given in Table 3.

Table 3 Weightage of the CIA and ESE for various categories of the courses

No.	Category of Courses	CIA weightage	ESE Weightage	Minimum ESE marks to be obtained (50% of ESE)	Passing minimum (CIA + ESE) (out of 100)
1.	Theory Course	50%	50%	25	45%
2.	Theory Course with Practical Components	50%	50%	25	45%
3.	Practical Course	50%	50%	25	50%
4.	On Job Training	50%	50%	25	50%
5.	Project and Viva Voce	50%	50%	25	50%

d. Improvement of CIA Marks

The students who fail in a course ("F" Grade) due to less CIA marks but having required attendance and other eligibility to appear for ESE is allowed to improve his /her CIA marks by undergoing the fresh internal evaluation procedure and appear for supplementary ESE whenever it is offered in the subsequent semester(s).

e. Procedure for improvement in CIA Marks

Students who wish to improve their CIA marks in a particular course shall register for the same with the respective HoD / Course faculty whenever the course is offered in the subsequent semester(s). The student has to remit the prescribed fee at the time of registration as applicable and undergo the internal assessment improvement procedure as prescribed by the course faculty with the approval of HoD. Student

can write the ESE in the subsequent semester(s) and the revised internal assessment mark (CIA) will be considered for processing the results. **This will be considered as arrear (supplementary) examinations.** The improved CIA mark in the subsequent attempt(s) is limited to a maximum of 30 marks out of 50 (60%) only. The number of courses for which a student can register for internal improvement scheme at a time is restricted to a maximum of 5. The student, if so desire, will be allowed to attend repeat classes for RA as mentioned in clause 9.3 with the approval of course faculty.

f. Each faculty shall maintain separate Academic assessment record for all courses handled by him/her and the same shall be submitted to the HoD for periodical verification. The faculty shall deposit the Assessment records with the HoD at the end of each semester for safe custody.

8.1 Theory Course Assessment weightages

The general guidelines for the assessment of Theory Courses, Department Electives "DE" and Non – Department Electives "NE" shall be done on a continuous basis is given in Table 4.

Table 4 (a): Weightage for Assessment – Theory Course / DE / NE

No.	CIA/ ESE	Assessment (Theory Course / DE / NE)	Weightage
1.	CIA	First Periodical Assessment	15%
2.		Second Periodical Assessment	15%
3.		Seminar/Assignments/Project	10%
4.		Surprise Test / Quiz etc., as approved by the Department Examination Committee "DEC"	5%
5.		Attendance*	5%
6.	ESE	End Semester Examination	50%

*Attendance Percentage
- >= 95 to <= 100 – 5 Marks
- >= 90 to < 95 – 4 Marks
- >= 85 to < 90 – 3 Marks
- >= 80 to < 85 – 2 Marks
- >= 75 to < 80 – 1 Mark
- < 75 – 0 Mark

8.2 **Practical Course / On Job Training:** For practical courses, the assessment will be done by the course teachers as below:

    a. Continuous Internal Assessment   --   50%

    b. End Semester Examination   --   50%

On Job Training can be assessed based on periodic reviews and end of course viva voce with report for On Job Training activities.

Table 4 (b): Weightage for Assessment – Practical Course

No.		Assessment (Practical Course)	Weightage	Maximum Marks
1.		First Periodical Assessment	15%	15 Marks
2.		Second Periodical Assessment	15%	15 Marks
3.	CIA	Weekly assignment/Observation / Modelling / Lab records and viva as approved by the Department Examination Committee "DEC"	10%	10 Marks
4.		Surprise Test / Quiz etc., as approved by the Department Examination Committee "DEC"	5%	5 Marks
5.		Attendance*	5%	5 Marks
6.	ESE	End Semester Examination	50%	50 Marks

* Attendance Percentage
- $>= 95$ to $<= 100 - 5$ Marks
- $>= 90$ to $< 95 - 4$ Marks
- $>= 85$ to $< 90 - 3$ Marks
- $>= 80$ to $< 85 - 2$ Marks
- $>= 75$ to $< 80 - 1$ Mark
- $< 75 - 0$ Mark

8.3 **Theory courses with practical Component:** For theory courses with practical component the assessment will be calculated as follows as approved by the "DEC".

a. Continuous Internal Assessment -- 50%
b. End Semester Examination -- 50%

Table 4 (c) Weightage for assessment - Theory courses with practical Component

No.		Assessment (Theory courses with practical Component)	Weightage
1.		First Periodical Assessment (Theory)	15%
2.		Second Periodical Assessment (Theory)	15%
3.	CIA	Practical Assessments #	10%
4.		Observation / lab records as approved by the Department Examination Committee "DEC"	5%
5.		Attendance*	5%
6.	ESE	End Semester Examination (Theory)	25%*
7.	ESE	End Semester Examination (Practical)	25%*

to be conducted by the course handling faculty
* Minimum 12.5 marks from ESE (Theory) and 12.5 marks from ESE (Practical) to pass the ESE.

8.4   For final year Project / Dissertation /, the assessment will be done on a continuous basis as given in Table 7.

Table 7: Assessment of Project work

No.	Review / Examination scheme	Weightage	Weightage
1.	First Review	10%	10 Marks
2.	Second Review	20%	10 Marks
3.	Third Review	20%	10 Marks
4.	Project report and Viva – Voce (ESE)	50%	10 Marks

* Rubrics shall be prescribed by the DEC with the approval of HoD.

For the final year project and Viva – Voce end semester examination, the student shall submit a Project Report in the prescribed format issued by the Institution. The first three

reviews will be conducted by a Committee constituted by the Head of the Department. The End semester assessment will be based on the project report and a viva on the project conducted by a Committee constituted by the Registrar / Controller of examination. This may include an external expert.

8.5   Flexibility in Assessment

The respective Departments under the approval of the Department Examination Committee (DEC) may decide the mode of assessment, based on the course requirements.

9.0 Repeat Examinations

a. Students who fail to secure a pass ("F" grade) in their regular End semester examination in any course(s) may be provided with an opportunity to register and appear for the repeat Examinations conducted immediately after the announcement of results. The students shall submit the prescribed registration forms along with repeat examination fee as per the time line specified by COE.

b. The students **who fail to secure a pass on being absent in their End Semester Examination for any regular course due to genuine reasons** are also permitted to appear for the Repeat Examinations.

c. During the even semester, the Repeat Examinations will be conducted for even semester courses only and during the Odd semester it will be conducted for Odd semester courses only.

d. The schedule for the Repeat Examinations will be notified through the Academic Calendar which will be published at the beginning of every academic year/semester(s) which depends on the availability of time slots in a semester and other resources. **This will not be treated as arrear (supplementary) examination.**

e. No Repeat examination will be conducted for Honours and Minors.

f. However, it is the sole discretion of the Vice Chancellor to permit such repeat examinations.

10.0   Multiple Exit

10.1   The students can exit after the completion of one semester with the **Certificate** in a discipline or a field; **Diploma** after the study of **two semesters** and Advanced Diploma after the completion of **four semesters.**

10.2   The students shall be required to earn at least **fifty per cent of the credits** in the Skill Components and General Education to apply for an exit option and Student should undergo an "Exit Programme" as recommended by the "Exit Committee" to attain the additional credits, If any, with the approval of Vice Chancellor to obtain the Certification (after first semester), Diploma (After two semester), Advanced Diploma (After four semesters year) as Tabulated in Table 8.

Table 8: Multiple Exit

No.	Exit	Year	Corresponding NSQF level	Eligibility for Exit
1.	Diploma	After First Year	5	50% of credits from (Skill Components and General Education) + Additional Credits on Successful completion of "Exit Programme"
2.	Advanced Diploma	After Second Year	6	

11.0   Maximum Duration of the Programme

A   student may complete the programme at a slower   pace   than   the   regular pace, but in any case in not more than additional two years from the minimum duration of the programme excluding the semesters withdrawn as per clause 12.0.

A student completing the B.Voc. programme during the extended period than stipulated duration will not be eligible for any Institution Ranks.

12.0   Temporary Withdrawal from the Programme

  a. A student is permitted to take a break, up to a maximum of 2 semesters, during the entire programme to clear the backlog of arrears (supplementary).

  b. A student may be permitted by the Vice- Chancellor to temporary break from the entire programme for a maximum of two semesters for reasons of ill health, Start –

up venture or other valid reasons as recommended by a committee consisting of Head of Department, Dean and Head (Student Affairs).

13.0 Declaration of results

13.1 A student shall secure the minimum marks as prescribed in Clause 8.0 (Table 3) in all categories of courses in all the semesters to secure a pass in that course.

13.2 **Arrear (Supplementary) Examinations:**

a. If a candidate secure "F" / "RA" / "DE" / "AB" in any course as applicable, due to not satisfying the minimum passing requirement – as per clause 16.1 student shall register for Arrear (supplementary) examinations by paying the prescribed examinations fee, in the subsequent semesters whenever it is offered. During the even semester, the supplementary exams will be conducted for even semester courses and during the odd semester the supplementary exams will be conducted for odd semester courses. However, Vice Chancellor shall permit to conduct Odd and Even semester supplementary examinations together in any semester. Student need not attend the contact classes again. The Internal Assessment marks secured by the candidate will be retained for all such attempts. However, student under RA category must attend the contact classes and earn the required CIA and attendance.

a. No supplementary examination will be conducted for Honours and Minors.

13.3 **Revaluation of Answer Scripts**

Student can apply for the revaluation of End semester examination answer script (Regular / Supplementary) in a theory / theory with practical course, after the declaration of the results, on payment of a prescribed fee.

13.4 **Revaluation is not permitted for Practical, ON Job Training courses.** However, based on genuine grievances as approved by the Examination Grievance Committee, a student may be permitted to apply for revaluation in the above courses. **Revaluation is not permitted for repeat examinations and online examinations, If any.**

13.5 After 4 years, i.e., completion of one year (2 semesters) from the normal duration of the programme, the internal assessment marks obtained by the student will not be considered in calculating the passing requirement. A candidate who secures 50% in the end semester examination only will be declared to have passed the course.

13.6 Student who earns required credits for the award of degree after 5 years for B.Voc. programme (on expiry of extended period of 2 semesters over and above normal duration of course) will be awarded only *second class* (Clause 16.1) irrespective of the earned CGPA. However, the period approved under temporary withdrawal, if any, from the programme (12.0) will be excluded from the maximum duration as mentioned above.

13.7 Semester Exchange Programme:

Students who are allowed to undergo internship or Training in Industries in India or abroad during their course work or attend any **National** / International Institution(s) under semester abroad programme (SAP) up to a maximum of 2 semesters will be granted credit transfer for the Course Work/project work done by them in the Industry /Foreign Institution as per the recommendations of the credit transfer committee. The leave period of the students for International internships / Semester Abroad programme etc., will be accounted for attendance.

13.8 Twinning, Dual, Integrated Programmes

The Twinning, Dual, Integrated Programmes shall have separate regulations as approved by statuary authorities of the Institution.

14.0 Grading

14.1 A grading system as shown in Table 10 will be followed.

Table 10: Grading system

Range of Marks	Letter Grade	Grade Points	Remarks
90 – 100	S	10	Outstanding
80-89	A+	09	Excellent
70-79	A	08	Very Good
60-69	B+	07	Good
55-59	B	06	Above Average
50-54	C	05	Average
45-49 (Theory, Theory with Practical)	P	04	Pass

<45 (Theory, Theory with Practical)	F	--	To Reappear for end-semester examination
< 50 (Practical Course, Design Project, Comprehension, Internship, Project and Viva Voce)	F	--	To Reappear for end-semester examination
--	AB	--	Absent for the End Semester Examination
--	RA	--	Repeat the course due to Lack of minimum attendance (below 75%) in regular course (clause 9.0)
--	DE	--	**DETAINED (DE)** "RA" in all theory courses except Non Department Elective (NE) of a semester. The student is detained and has to repeat the entire semester as per the Clause 9.1 d - Detention

14.2   GPA and CGPA

GPA is the ratio of the sum of the product of the number of credits Ci of course "i "and the grade points P_i earned for that course taken over all courses "i" registered and successfully completed by the student to the sum of Ci for all "i". That is,

$$GPA = \frac{\sum_i C_i P_i}{\sum_i C_i}$$

CGPA will be calculated in a similar manner, in any semester, considering all the courses enrolled from the first semester onwards. CGPA/ GPA will be rounded to first decimal point.

14.3   The Grade card will not include the computation of GPA and CGPA for courses with letter grade **F, RA, AB** and **DE** until those grades are converted to the regular grades.

14.4   A course successfully completed cannot be repeated.

15.0   Grade Sheet

15.1   Letter grade

Based on the performance, each student is awarded a final letter grade at the end of the semester in each course. The letter grades and corresponding grade points are given in Table 10.

15.2 Student is considered to have completed a course successfully and earned credits if student secures a letter grade other than "F", "RA" "AB" and "DE" in that course.

15.3 After results are declared, grade sheet will be issued to each student which will contain the following details:

a. Program and discipline for which the student has enrolled.

b. Semester of registration.

c. The course code, name of the course, category of course and the credits for each course registered in that semester

d. The letter grade obtained in each course

e. Semester Grade Point Average (GPA)

f. The total number of credits earned by the student up to the end of that semester in each of the course categories.

g. The Cumulative Grade Point Average (CGPA) of all the courses taken from the first semester.

h. Credits earned under Non CGPA courses.

i. Additional credits earned for B. Voc (Hons.) and B. Voc with Minor specialization.

16.0 Class/Division

16.1 Classification is based on CGPA and is as follows:

$$CGPA \geq 8.0: \text{First } \textbf{Class with distinction}$$

$$6.5 \leq CGPA < 8.0: \textbf{First Class}$$

$$5.0 \leq CGPA < 6.5: \textbf{Second Class.}$$

16.2 (i) Further, the award of 'First class with distinction' is subject to the candidate becoming eligible for the award of the degree having passed the examination in all the courses in his/her first appearance with effect from II semester, within the minimum duration of the programme.

(ii) The award of 'First Class' is further subject to the candidate becoming eligible for the award of the degree having passed the examination in all the courses within 5 years

for the students admitted in first year, 4 years for for the students admitted in second year, 3 years for for the students admitted in third year, 2 years for the students admitted in fourth year

(iii) The period of authorized break of the programme (vide clause 12.0) will not be counted for the purpose of the above classification.

17.0 Academic Bank of Credits

17.1. The Academic Bank of Credits (ABC), a national-level facility is adopted to promote the flexibility of the curriculum framework and interdisciplinary/multidisciplinary academic mobility of students across the Higher Education Institutions (HEIs) in the country with appropriate "credit transfer" mechanism.

17.2 Student who have completed a portion of courses in other approved Institutions of repute and earned required credits under ABC shall be admitted to the appropriate admission level of the programme (vide Clause: 2) based on the recommendation of the credit transfer committee on a case to case basis and approved by the Vice Chancellor. The credit transfer committee shall suggest additional credits as required for admission in to the appropriate level of admission in the programme.

The validity of credits earned will be for a maximum period of seven years or as specified by the Academic Bank of Credits (ABC). The procedure for depositing credits earned, its shelf life, redemption of credits, would be as per UGC (Establishment and Operationalization of ABC scheme in Higher Education) Regulations, 2021

17.3 Admission norms for working Professional:

Separate admission guidelines are available for working / experienced professionals for candidates with the industrial / research experience who desire to upgrade their qualification as per recommendation of Credit Transfer Committee and the Academic Council.

18.0 Eligibility for Award of the B.Voc Degree

18.1 Student shall be declared to be eligible for award of B. Voc degree if student has satisfied the prescribed academic requirements. There shall not be any fee due to the institution and not having pending disciplinary action.

19.0 Change of Discipline

19.1   If the number of students in any discipline of B.Voc. programme as on the last instructional day of the First semester is less than the sanctioned strength, then the vacancies in the said disciplines can be filled by transferring students from other disciplines subject to eligibility. All such transfers will be allowed on the basis of merit of the students. The decision of the Vice-Chancellor shall be final while considering such requests.

19.2   All students who have successfully completed the first semester of the course will be eligible for consideration for change of discipline subject to the availability of vacancies and as per norms.

20.0   Power to modify

Notwithstanding all that has been stated above, the Academic Council is vested with powers to modify any or all of the above regulations from time to time, if required, subject to the approval by the Board of Management.

----End of the regulations ----

B.Voc. Automobile Servicing Technology

(Duration: 3 Years)

CURRICULUM and SYLLABUS

(Applicable for Students admitted from Academic Year 2023-2024)

DEPARTMENT OF AUTOMOBILE ENGINEERING

SCHOOL OF MECHANICAL SCIENCES

HINDUSTAN INSTITUTE OF TECHNOLOGY AND SCIENCE

HINDUSTAN INSTITUTE OF TECHNOLOGY AND SCIENCE

Motto:

To Make Every Man *a* Success *and* No Man *a* Failure

Vision:

To be an International Institute of Excellence, providing a conducive environment for education with a strong emphasis on innovation, quality, research and strategic partnership blended with values and commitment to society.

Mission:

- *To create an ecosystem that promotes learning and world class research.*
- *To nurture creativity and innovation.*
- *To instill highest ethical standards and values.*
- *To pursue activities for the development of the Society.*
- *To develop national and international collaborations with institutes and industries of eminence.*
- *To enable graduates to become future leaders and innovators.*

Value Statement:

Integrity, Innovation, Internationalization.

DEPARTMENT OF AUTOMOBILE ENGINEERING

VISION

To enable the graduates to be successful in their career as an Automobile Engineer.

MISSION

M1:   To inculcate knowledge in Automobile Engineering

M2:   To impart skills and training on the advancements in Automobile Engineering such as Automotive Electronics, Autonomous Vehicles, etc.

M3:   To instill the highest ethical standards to be a Professional Automobile Engineer for social development.

PROGRAMME OUTCOMES (PO's)

Graduates will be able to:

PO1	:	Work proficiently with professional skill set in Automobile service- related fields.
PO2	:	Work in par with the standards stipulated by the global and national regulations.
PO3	:	Acquire expertise and required hands-on skills in the field of Automobile servicing
PO4	:	As an individual, as a member of a team, and as a leader, work responsibly and creatively at all times.
PO5	:	Exhibit professionalism and work ethics with environmental concerns and sustainability goals of the future.

PROGRAMME SPECIFIC OUTCOMES: (PSO's)

PSO1	:	Problem analysis and testing of vehicles which enable the students to compete globally.
PSO2	:	Carry out investigation on fuel economy, emission reductions, alternate fuels for the benefit of the society and environment.

<table>
<tr><td colspan="10">Curriculum 2022 for B.Voc in Automobile Servicing Technology</td></tr>
<tr><td colspan="10">SEMESTER – I</td></tr>
<tr><td>SL. NO</td><td>COURSE CATEGORY</td><td>COURSE CODE</td><td>NAME OF THE COURSE</td><td>L</td><td>T</td><td>P</td><td>C</td><td>S</td><td>TCH</td></tr>
<tr><td colspan="10">Theory</td></tr>
<tr><td>1</td><td>GEP</td><td>VLS01001</td><td>Communication skills</td><td>2</td><td>0</td><td>2</td><td>3</td><td>1</td><td>4</td></tr>
<tr><td>2</td><td>GE</td><td>VMA01001</td><td>General Mathematics</td><td>2</td><td>1</td><td>0</td><td>3</td><td>1</td><td>3</td></tr>
<tr><td>3</td><td>GEP</td><td>VPH01001</td><td>Applied Physics</td><td>2</td><td>0</td><td>2</td><td>3</td><td>1</td><td>4</td></tr>
<tr><td>4</td><td>GEP</td><td>VME01001</td><td>Basic Engineering graphics</td><td>2</td><td>0</td><td>2</td><td>3</td><td>1</td><td>4</td></tr>
<tr><td>5</td><td>GVP</td><td>VAT01001</td><td>Fundamentals of Automobiles</td><td>2</td><td>0</td><td>2</td><td>3</td><td>1</td><td>4</td></tr>
<tr><td colspan="4">Total per week</td><td>10</td><td>1</td><td>8</td><td>15</td><td>5</td><td>19</td></tr>
<tr><td colspan="10">On-Job-Training (OJT)</td></tr>
<tr><td>6</td><td>SK</td><td>VAT01800</td><td>Automotive Service Technician Level 5 (ASC/Q 1403)</td><td></td><td></td><td></td><td>15</td><td></td><td></td></tr>
<tr><td colspan="7">Total Credits</td><td>30</td><td></td><td></td></tr>
</table>

GE= General Education; GP = General Practical; SK=Skill Component; VP= Vocational Practical (Dept specific-Practical)
GV= General Vocational (Dept specific- Theory); GEP - Practical integrated General Education; GVP - Practical Integrated Vocational

			Curriculum 2022 for B.Voc in Automobile Servicing Technology						
			SEMESTER – II						
SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
			Theory/Theory with Lab						
1	GEP	VLS01002	Personality development and soft skills	2	0	2	**3**	1	4
2	GE	VCS01001	Introduction to Computer Programming	3	0	0	**3**	1	3
3	GEP	VCT01001	Applied Chemistry	2	0	2	**3**	1	4
4	GVP	VAT01002	Automotive Electrical and Electronics	2	0	2	**3**	1	4
5	GVP	VAT01003	Two and Three Wheelers	2	0	2	**3**	1	4
			Total per week	**11**	**0**	**8**	**15**	**5**	**19**
			On-Job-Training (OJT)						
6	SK	VAT01801	Spare Parts Operations Executive Level 5 (ASC/Q 1502)				**15**		
			Total Credits				**30**		

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			Curriculum 2022 for B.Voc in Automobile Servicing Technology						
			SEMESTER – III						
SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
			Theory/ Theory with Lab						
1	GE	VCE01001	Environment and sustainability	3	0	0	**3**	1	3
2	GVP	VAT01004	Automotive Engines	3	0	4	**5**	1	7
3	GVP	VAT01005	Automotive Chassis	3	0	4	**5**	1	7
4	GV	VAT01006	Automotive Transmission	2	0	0	**2**	1	2
			Lab/Practical						
			Total per week	**11**	**0**	**8**	**15**	**4**	**16**
			On-Job-Training (OJT)						
5	SK	VAT01802	Automotive Service Technician Level 6 (ASC/Q1404)				**15**		
			Total Credits				**30**		

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			Curriculum 2022 for B.Voc in Automobile Servicing Technology						
			SEMESTER – IV						
SL. NO	**COURSE CATEGORY**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
			Theory						
1	GE	VMB01001	Entrepreneurial Development	3	0	0	**3**	1	3
2	GVP	VAT01007	Vehicle Body Repair, Denting & Painting	2	0	2	**3**	1	4
3	GVP	VAT01008	Manufacturing Technology	3	0	2	**4**	1	5
4	GVP	VAT01009	Automotive Materials and Measurements	3	0	2	**4**	1	5
			Lab/Practical						
5	VP	VAT01400	Computer Aided Drafting Laboratory	0	0	2	**1**	0	4
			Total per week	11	0	8	**15**	4	21
			On-Job-Training (OJT)						
6	SK	VAT01803	Quality Controller (ASC/Q1605)				**15**		
			Total Credits				**30**		

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			Curriculum 2022 for B.Voc in Automobile Servicing Technology						
			SEMESTER – V						
SL. NO	**COURSE CATEGORY**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
			Theory						
1	GE	VMB01002	Professional Ethics and Human Values	3	0	0	**3**	1	3
2	GVP	VAT01010	Automobile Maintenance Service & Repairs	2	0	2	**3**	1	4
3	GVP	VAT01011	Electric and Hybrid Vehicles	2	0	2	**3**	1	4
4	GV	VAT015xx	Department Elective-I	3	0	0	**3**	1	3
5	GV	VAT015xx	Department Elective-II	3	0	0	**3**	1	3
			Total per week	13	0	4	**15**	4	17
			On-Job-Training (OJT)						
6	SK	VAT01804	Body Shop In-Charge (ASC/Q1413)				**15**		
			Total Credits				**30**		

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			Curriculum 2022 for B.Voc in Automobile Servicing Technology						
			SEMESTER – VI						
SL. NO	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
			Theory						
1	GV	VAT01012	Automotive Refrigeration and Air Conditioning	3	0	0	**3**	1	3
2	GV	VAT01013	Garage Organization & Transport Management	3	0	0	**3**	1	3
3	GV	VAT01014	Alternate fuels for IC Engines	2	0	0	**2**	1	2
4	GV	VAT015xx	Skill Elective	3	0	0	**3**	1	3
			Lab/Practical						
5	VP	VAT01401	Project Work	0	0	8	**4**	0	8
			Total per week	11	0	8	**15**	4	19
			On-Job-Training (OJT)						
6	SK	VAT01805	Service Supervisor (ASC/Q1412)				**15**		
			Total Credits				**30**		

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			LIST OF DEPARTMENTAL ELECTIVES						
			Department Elective-I						
SEM	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
5	GV	VAT01500	Automotive Aerodynamics	3	0	0	3	0	3
5	GV	VAT01501	Engine Exhaust System Development	3	0	0	3	0	3
5	GV	VAT01502	Automotive Sensors and Applications	3	0	0	3	0	3
5	GV	VAT01503	Off Road Vehicles	3	0	0	3	0	3

			Department Elective-II						
5	GV	VAT01504	Dynamics of vehicle control	3	0	0	3	0	3
5	GV	VAT01505	Performance Tuning of I.C. Engines	3	0	0	3	0	3
5	GV	VAT01506	Modern Vehicle Technology	3	0	0	3	0	3
5	GV	VAT01507	Vibration and Noise Control	3	0	0	3	0	3

			SKILL ELECTIVE						
6	GVP	VAT01508	On board Diagnostics	2	0	2	3	0	4
6	GVP	VAT01509	Vehicle testing	2	0	2	3	0	4
6	GVP	VAT01510	Electronic Engine Management System	2	0	2	3	0	4
6	GVP	VAT01511	Automotive Pollution and Control	2	0	2	3	0	4

Curriculum 2022 for B.Voc in Automobile Servicing Technology		
Credit distribution		
Semester	**General Education (GE+GP+GV)**	**Skill Component (VP+SK)**	**Total Credits**
I	14	16	30
II	13	17	30
III	11	19	30
IV	11	19	30
V	12	18	30
VI	11	19	30
Total Credits	**72**	**108**	**180**
Percentage	**40%**	**60%**	