PREAMBLE:

Guru Jambheshwar University of Science and Technology started its journey on October 20, 1995 under Haryana State Legislative Act No. 17 of 1995 at Hisar, Haryana State of India to impart education on the frontiers of Technology, Pharmacy, Environmental Studies, Non-conventional Energy Sources, Mass Media and Management Studies. The University is recognized by the University Grants Commission (UGC) under Section 2(f) for recognition of degrees on 11.1.1996 and under section 12(B) of the UGC Act to be eligible for central assistance on 7.2.1997.

The University has been accredited 'A' Grade by National Assessment and Accreditation Council (NAAC), in 2002 as grade `A' and has been re-accredited as grade `A' with (CGPA 3.26), in 2009. Thereafter, the University has also been re-accredited third time as "A" Grade with (CGPA 3.28) by National Assessment and Accreditation Council (NAAC), Bangalore for a period of five years from 10.12.2014 to 09.12.2019 and further extended for seven (five+two) years i.e. upto 09.12.2021.

Guru Jambheshwar University of Science and Technology has been ranked between 801-1000 world university rankings slot by Times Higher Education in 2021 and also in the NIRF Ranking 2020, GJUST has been placed at Rank 94th and has been included in top-100 institutions.

The Department of Food Technology at the Guru Jambheshwar University Science & Technology, Hisar has been laying emphasis on quality education and training activities to meet growing demand of food processing industries in addition to pioneering the development of innovative technologies for conservation and processing of raw foods with value addition.

Skills and knowledge are the driving forces of economic growth and social development for any country. Presently, the country faces a demand – supply mismatch, as the economy needs more 'skilled' workforce than that is available. In the higher education sphere, knowledge and skills are required for diverse forms of employment in the sector of education, health care manufacturing and other services. Potentially, the target group for skill development comprises all those in the labour force, including those entering the labour market for the first time, those employed in the organized sector and also those working in the unorganized sector.

Government of India, taking note of the requirement for skill development among students launched National Vocational Education Qualification Framework (NVEQF) which was later on assimilated into National Skills Qualifications Framework (NSQF). Various Sector Skill Councils (SSCs) are developing Qualification Packs (QPs), National Occupational Standards (NOSs) and assessment mechanisms in their respective domains in alignment with the needs of the industry.

DEFINITIONS

a. **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.

b. **Course:** Usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise lectures/tutorials/laboratory work/field

work/outreach activities/ project work/vocational training/viva/seminars/term papers /assignments/ presentations/self study etc. or a combination of some of these.

c. **Skill Development Component:** Skill component of the programme/course is employment oriented. The skilled development component curriculum is aligned to Qualification Packs (QPs) / National Occupational Standards (NOSs) of selected job role(s) within the industry sector(s) and it will enable the students to meet the learning outcomes specified in the NOSs.

d. **General Education Component:** The general education component includes the course(s) which are supportive to core trade in addition to soft skills, IT skills, and language proficiency and literature. It emphasizes on holistic development.

e. **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.

f. **Credit(C):** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week. Accordingly, one Credit would mean equivalent of 14-15 periods of 60 minutes each or 28 – 30 hrs of workshops / labs.

g. **Grade Point (G):** It is a numerical weight allotted to each letter grade on a 10 point scale.

h. **Credit Point (CP):** The numerical value obtained by multiplying the grade point (GP) by

the no. of credit(C) of the respective course i.e. CP= G X C.

i. Semester: Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June.

j. Semester Grade point Average (SGPA): It is a measure of performance of work done in a semester. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the course components taken by a student and the sum of the number of credits of all the courses undergone by a student in a semester, *i.e.*

$$\textbf{SGPA } (S_i) = \Sigma(C_i \times G_i) / \Sigma C_i$$

where 'Ci'is the number of credits of the ith course component and 'Gi' is the grade point scored by the student in the ith course component.

k. Cumulative Grade Point Average (CGPA): It is a measure of overall cumulative performance of a student over all semesters. The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, *i.e.*

$$\textbf{CGPA} = \Sigma(C_i \times S_i) / \Sigma C_i$$

where 'Si' is the SGPA of the 'i'th semester and Ci is the total number of credits in that semester. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

l. Letter Grade: It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P ,F and Ab/D.

m. National Skill Development Corporation India (NSDC): It is setup as a Public Private Partnership Company with the primary mandate of catalyzing the skills landscape in India. NSDC has a unique model based on the following pillars such as to Create (Proactively catalyze creation of large, quality vocational training institutions), Fund (Reduce risk by providing patient capital. Including grants and equity) and Enable (the creation and sustainability of support systems required for skill development. This includes the Industry led Sector Skill Councils).

n. Sector Skill Council (SSC): Under the National Skills Development Corporation, many Sector Skill Councils representing respective industries are established. One of the

mandates of Sector Skill Councils is to develop National Occupational Standards (NOSs) for various job roles in their respective industries. SSC embeds the competencies required for specific job roles in the higher education system for creating employable graduates.eg: B.Voc. Food Processing & Engineering has Food Industry Capacity and Skill Initiative (FICSI)

o. **National Skill Qualification Framework (NSQF):** B.Voc. Programme has been designed as per National Skill Qualification Framework (NSQF) emphasizing on skill based education. There are four levels of NSQF in the B.Voc. programme such as Level 4 is certificate, Level 5 is Diploma, Level 6 is Advanced Diploma and Level 7 is B.Voc. Degree.

p. **Qualification Pack (QP):** A set of National Occupational Standards aligned to a specific job role.

q. **National Occupational Standards (NOS):** They describe what individuals need to do, know and understand in order to carry out a particular job role or function. They are the performance standards which an individual must achieve when carrying out function in a workplace together with specifications of the underpinning knowledge and understanding.

r. **Programme:** An educational programme leading to award of a degree, advance diploma, diploma, certificate.

s. **Practical/tutorials:** The practicals/tutorials will be conducted keeping in view the spirit of UGC guidelines as per the needs and requirements of the concerned subject.

t. **Transcript or Grade Card (GC) or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, no. of credits, grades secured) along with SGPA of that semester and CGPA earned till date semester.

u. **Semester Examinations:** The comprehensive examinations conducted for summative evaluation of course. The duration of these examinations shall be 3 hours for theory and as per requirement for practical courses and the weight shall be as per the ordinance of relevant programme.

ORDINANCE FOR BACHELOR OF VOCATION (B.VOC.)

Bachelor of Vocation (B. Voc.) is launched under the scheme of University Grants Commission for skill development based on higher education leading to Bachelor of Vocation (B. Voc.) Degree, with multiple exits as Certificate/Diploma /Advanced

Diploma/Degree under the National Skill Qualification framework (NSQF).The B. Voc. Programme incorporate specific job roles and their National Occupational Standards along broad based general education. B.Voc. Programme has been designed as per National Skill Qualification Framework (NSQF) emphasizing on skill based education.

There may be three types of learners getting admission to first semester of B.Voc courses under NSQF:

- **Category – 1**: Students who have already acquired NSQF certification Level 4 in a particular industry sector and opted for admission in the B.Voc degree courses under NSQF in same sector for which he / she was previously certified at school level.
- **Category – 2**: Students who have acquired NSQF certification Level 4 but may like to change their sector and may enter in B.Voc course in a different sector.
- **Category – 3**: Students who have passed 10+2 examination with conventional schooling without any background of vocational training.

The candidates who have acquired vocational Certificate / Diploma or Advanced Diploma from UGC recognized Community Colleges / B.Voc institutions or DDU KAUSHAL KENDRAS in a specific sector with certified skills on a particular job role will be eligible for admission through lateral entry to next higher level on same sector. The lateral entry candidates will be over and above the sanctioned intake.

The institution has developed curriculum and has arrangement for skill intensive training / teaching for the learners belonging to the category-2 and 3 as above during the first six months who will be assessed and certified for NSQF Level 4 of skill competency by concerned Sector Skill Council at the end of first semester.

However, learners belonging to category-1 will not require such certification as they were already having NSQF level 4 certificates in same industry sector / job role required for specified skill credits. All the learners continuing for Diploma courses or further will be treated at par from second semester onwards. Students may exit after six months with a Certificate (NSQF Level 4) or may continue for diploma or advanced diploma or B.Voc degree level course(s). An academic progression for the students in vocational stream is illustrated below:
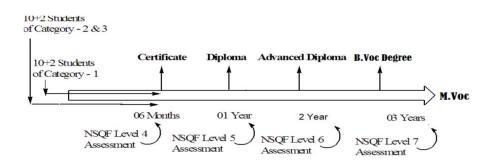
Fig. 1: Assessment of Skill Component under NSQF in Vocational Courses

1.   LEVELS OF AWARD:

As an illustration, awards could be given at each stage as per table below for cumulative credits awarded to the learners in skill based vocational courses.

NSQF Level	Skill Component Credits	General Education Credits	Total Credits for Award	Normal Duration	Exit Points / Awards
4	18	12	30	One semester	Certificate
5	36	24	60	Two semester	Diploma
6	72	48	120	Four semester	Advanced Diploma
7	108	72	180	Six semester	B.Voc Degree

The NSQF Levels in above illustrations indicate that there is at least one job role at the concerned NSQF Level and the skill component of the curriculum will be assessed and certified for level by respective sector skill council. The normal training hours for skilling should be proportionate to the weight age for skill credits and an appropriate component of skill training may be imparted as on-site training at actual work place.

The curriculum in each of the years of the programme is a suitable mix of general education and skill development components. The General Education has 40 % of the total credits and balance 60% credits are of Skill Component. The skill component will conform to the Qualification Packs/National Occupational Standards and the general education component will provide holistic development.

1.1 SKILL DEVELOPMENT COMPONENTS:

1.1.1. Skill component of the programmes/courses is employment oriented.

1.1.2. The curriculum has been aligned to Qualification Packs (QPs) / National Occupational Standards (NOSs) of selected job role(s) within the industry sector(s). This will enable the students to meet the learning outcomes specified in the NOSs.

1.1.3. The curricula and system of certification for the skill component are as per the National Occupational Standards defined by respective Sector Skills Council(s).

1.1.4. For skills, the model curriculum is developed by the concerned Sector Skill Council. This will promote national and global mobility of the learners, as well as higher acceptability by the industry for employment purposes.

1.1.5. The overall design of the skill development component along with the job roles selected is such that it leads to a comprehensive specialization in one or two domains.

1.1.6. The curriculum is focused on work-readiness in terms of skills in each of the three years.

1.1.7. There has been at least one job role which is related to qualification pack at the concerned NSQF Level in the curriculum to be assessed for level by respective SSC. The normal training hours for skilling will be proportionate to the weightage for skill credits and an appropriate component of skill training may be imparted as on-site training at actual work place.

1.1.8. The institution provides Recognition of Prior Learning (RPL) framework for job roles at NSQF Level 4 onwards by conducting assessment and certification through respective SSC(s) / Directorate General of Employment and Training (DGET).

1.1.9. The Skill component of the course will be assessed and certified for NSQF level by the respective Sector Skill Councils. In case, there is no Sector Skill Council for a specific trade, the assessment may be done by an allied Sector Council or the Industry partner.

1.1.10. Industrial Visits, Industrial Trainings and Project work regarding Skill Education Component will mandatory part of the curriculum.

1.1.11. The credits regarding *skill component* is awarded in terms of NSQF level certification and the total credits of the course will be in following manner.

Name of the Course	NSQF Level Certificate	Cumulative Credits
Certificate	Level – 4	18 credits
Diploma	Level – 5	36 credits
Advanced Diploma	Level – 6	72 credits
B.Voc Degree	Level – 7	108 credits

The skill credits indicated above at a particular level is cumulative to the level concerned *i.e.* a candidate in advanced diploma level will be assessed for NSQF level – 6 to acquire 72 credits of skill component will be considered for overall 72 credits only.

Similarly for B.Voc degree, the 108 credits of NSQF level 7 will be inclusive of the credits awarded at NSQF level 4, 5 and 6 for the skill competence of candidate assessed at different stages before he/she has acquired the skill competence at NSQF level 7.

1.2. GENERAL EDUCATION COMPONENTS:

The general education component adheres to the normal university standards. The general education component of the curriculum will be decided by the Board of Studies of the College. This may also include the course(s) which are supportive to core trade in addition to soft skills, IT skills, and language proficiency and literature. B.Voc Course will be run on Credit Based Semester System as described in the Introduction.

2. ELIGIBILTY FOR ADMISSION IN B.VOC.

2.1 The minimum educational qualification for admission into B.Voc degree course will be class XII pass (Any stream) or vocational from any recognized board or university. The applicants must have scored at least 50% marks (passing marks in case of candidate belonging to SC category).

2.2 Equal weightage, at par with other subjects, should be given to vocational subjects at +2 level while considering the students for admission into B.Voc.

2.3 Admission in to programme will be given on the basis of entrance test which will consists of general aptitude and reasoning questions. The Selection of a candidate for admission to a programme will be based on the merit list drawn on the basis of the score in the Entrance Test. The entrance test will be applicable to category-1, category-2 and category-3 candidates. All other regulations such as seat matrix and distribution will be applicable as per university rules.

2.4 The candidate should have good moral character.

2.5 Reservation to SC, ST, OBC and PwD categories will be available as per state policy.

2.6 There shall be no age bar for admission in such courses.

2.7 Candidate placed under reappear in one or more subjects in 10+2 examination of Haryana School Education Board or any other board examination, recognized as equivalent thereto shall not be eligible for admission to B.Voc. Programme.

2.8 To qualify for admission to 3rd semester of the course, the candidate must have passed 50% of total papers of the two semesters of the 1st year. In case, the result of 2nd semester is not declared at the time of admission to 3rd semester, the student may be admitted provisionally and will be allowed to take examination of 3rd semester if he/she has passed in 50% of the total papers of first year (i.e. 1st and 2nd Semesters). Similarly, to qualify for admission to 5th semester of the course, the student may be admitted provisionally if the result of previous semester has not been declared and will be allowed to take examination of 5th semester, if he/she has passed 50% of the total papers of previous semesters.

2.9   Semester examination will be open to regular candidates who have been on the rolls of the university and meet the attendance and other requirements as prescribed in the ordinance of the course.

3. EXAMINATION RULES

3.1 Paper Setting/Evaluation will be done by an External Examiner or as decided by the University.

3.2 Viva Voce/ Practical examination shall be conducted by a Committee consisting of the following:

  (i) One external examiner
  (ii) One internal examiner

3.3 The supplementary examination will be held along with the routine End Semester Examinations. The supplementary paper would be from the syllabi prescribed for that session in which the candidate is appearing. The students who have reappear in the 5th semester only of three year degree course at undergraduate level will be allowed to appear in their Reappear examination along with the Final Semester Examinations of their respective courses. The student can appear in the theory/practical paper on the payment of the required fee. The candidate will have consecutive two attempts to clear the Supplementary Examination marks of practical and internal assessment will be carried forward as original. If the candidate does not clear the lower examination within stipulated period the higher result of the candidate will stand automatically cancelled.

3.4 Re-evaluation of answer sheet in two subjects is allowed after paying the requisite fee. The application for Re-evaluation should be submitted within 15 days of the declaration of the results. In case there is a difference of more than 10% between the marking of the first evaluator and the second evaluator, then the paper would be sent to a third evaluator. The mean of the marks of the second and third evaluators is then considered as the final marks. The re-evaluated marks will be considered final irrespective of the increase or decrease in marks.

3.5 A Candidate placed under reappear in any paper, will be allowed two chances to clear the reappear, which should be availed within consecutive two year/chances i.e. to pass in a paper the candidate will have a total of three chances, one as regular student and two as reappear candidate.

3.6 The examination of reappear papers of odd semester will be held with regular examination of the odd semester and reappear examination in even semester with the even semester. But if a candidate is placed under reappear in the last semester of the course, he/she will be provided chance to pass the reappear with the examination of the next semester, provided his/her reappear of lower semester does not go beyond next semester.

3.7 The Vice chancellor can provide Golden Chance (with special chance fee) to students who have been unable to clear their exams even after two attempts.

3.8. IMPROVEMENT EXAMINATIONS:

i.   A student who has been declared 'pass' in the Undergraduate course he/she was admitted to, may apply for improvement within a year from the declaration of the result of the final semester and he/she can take maximum of 50% of the total papers for that course for improvement.

ii. A student shall have to appear in End semester examination of the paper chosen for improvement along with the regular students. No special exam shall be held for him/her.

iii. If a student fails to improve upon the original marks obtained in the paper chosen for improvement, his/her original marks shall be retained and he/she shall not get a second chance for improvement.

iv. Improvement examination in practical exam shall not be allowed.

v.   A student taking improvement examination shall have to pay a fee decided by the college.

3.9. GRADING SYSTEM:

The grades and their description, along with equivalent numerical grade points are listed in the Grading Assignment Table as follows:

Grade Assignment Table

Range of Marks	Description	Grade	Grade Point
91-100	Outstanding	O	10
81-90	Excellent	A+	9
71-80	Very Good	A	8

61-70	Good	B+	7
51-60	Above Average	B	6
46-50	Average	C	5
41-45	Pass/Fair	P	4
0-40	Fail	F	0
Otherwise	Absent/Detained	Ab/D	0

a) A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.

b) For non-credit courses (if any) **'Satisfactory' or 'Unsatisfactory'** shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.

3.10. COMPUTATION OF SGPA & CGPA

The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

a) The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the course components taken by a student and the sum of the number of credits of all the courses undergone by a student in a semester, *i.e.*

   SGPA (Si) = $\sum$ (Earned Credits Ci x Grade Point Gi)/$\sum$Earned Credits Ci;

   where 'Ci'is the number of credits of the ith course component and 'Gi' is the grade point scored by the student in the ith course component.

b) The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, *i.e.*

   CGPA (Ci) = $\sum$ (Earned Credits Ci x SGPA Si)/$\sum$Ci);

   where 'Si' is the SGPA of the 'i'th semester and Ci is the total number of credits in that semester.

c) The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

   Illustration of the computation of SGPA and CGPA

i. Illustration for SGPA

Course	Credits	Grade Letter	Grade Point	Credit Point (Credit x Grade)
Course 1	4	A	8	4X8=32
Course 2	4	B+	7	4X7=28
Course 3	4	B	6	4X6=24
Course 4	4	O	10	4X10=40
Course 5	4	C	5	4X5=20
Course 6	5	B	6	5X6=30
Course 7	5	B	6	5X6=30
	30			204

Thus, **SGPA** $= \Sigma(C_i \times G_i) / \Sigma C_i$

i.e. **SGPA = 204/30 = 6.8**

ii Illustration for CGPA

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
Credit : 30	Credit : 30	Credit : 30	Credit : 30	Credit : 30	Credit : 30
SGPA : 6.9	SGPA : 7.8	SGPA : 5.6	SGPA : 6.0	SGPA : 6.3	SGPA : 8.0

Thus, **CGPA** $= \Sigma (C_i \times S_i) / \Sigma C_i$

i.e. CGPA $= \dfrac{30 \times 6.9 + 30 \times 7.8 + 30 \times 5.6 + 30 \times 6.0 + 30 \times 6.3 + 30 \times 8.0}{180} = 6.76$

3.11. TRANSCRIPTS (FORMAT):

a) Based on the above recommendations on Letter grades, grade points, SGPA and CGPA, the university may issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

b) Award of B.Voc degree or Advanced Diploma / Diploma / Certificate as the case may be, would depend on acquisition of requisite credits as prescribed in the guidelines and not on the duration of the calendar time spent in pursuing the course.

13

c) The certificate for level would be awarded by the Sector Skill Council in terms of NSQF Level in addition to evaluation by the institute. The evaluation of each level by SSC is mandatory for each student. i.e. for award of B.Voc. degree or Advanced Diploma / Diploma / Certificate.

d) In case, there is no Sector Skill Council for a specific trade, the assessment may be done by an allied Sector Council or the Industry partner

e) Each of the awards shall specify within parenthesis, the Skill(s) specialization, such as:
   - B. Voc. (Food Processing and Engineering)
   - Advanced Diploma (Food Processing and Engineering)
   - Diploma (Food Processing and Engineering)
   - Certificate (Food Processing and Engineering)

3.13. GRADE CARD:

At the end of each semester, a student will be given a 'Grade Card' which will contain Course Code, Title, Credits, Grades Awarded, Earned Credits and Earned Point secured by him/her in each course, together with his/her SGPA in that semester. On the completion of the programme, a Final Grade Card will be issued to the student, giving full semester-wise details about the absolute marks and grades obtained by him/her in each course together with his/her SGPA and also the CGPA and Division awarded to him/her.

3.14. EQUIVALENCE:

Percentage (P) equivalent to CGPA earned by a candidate may be calculated using the following formula:

$$P = CGPA \times 10$$

4. ATTENDANCE REGULATIONS & CONDONATION:

4.1 A student shall be eligible for end semester examinations, if he/she acquires a minimum of 75% of attendance in each subject.

4.2 Request to the Vice chancellor for condonation of shortage of attendance after the recommendation of the chairperson will be forwarded to the lecture shortage condonation committee. The committee can finally condone the shortage in aggregate up to 15% on medical grounds in each semester.

4.3 Any student representing the Institute/ University/ State/ Nation in any Academic/ Sports/ Cultural/Extra Co-curricular/ NSS/NCC or any other event shall be considered on duty.

His/Her shortage of lectures shall be condoned, provided that the student is permitted in writing by the Vice-chancellor and a certificate to this effect signed by the competent authority where the student attended the event is taken.

4.4 Students whose shortage of attendance is not condoned in any semester are not eligible to take their end semester examination of that particular semester and their registration for examination shall stand cancelled and no fee shall be refunded.

5. Late University students: A candidate, who has completed the prescribed course of instructions for a semester but has not appeared in the examination or having appeared, has failed in the examination, may appear as a late university student within the prescribed period.

6. Applications for admission to the examination shall be made on the prescribed form attested by the competent authority as per the university rules.

7. The minimum number of marks required to pass each semester examination will be 40% in each paper and 40% in the aggregate of the semester examination.