

# **CHOICE BASED CREDIT SYSTEM (CBCS) COURSE TEMPLATE**

**For**

**B.Sc. Catheterization Laboratory Technology (Code BCLT.2.10)**



**Implemented from  
Academic Session 2024-2025**

## CONTENT

### 1. PREAMBLE:

The National Education Policy (NEP) 2020 has been a significant step towards reforming the higher education system in India. Among its key features is the introduction of the Choice Based Credit System (CBCS), which is aligned with the University Grants Commission (UGC) norms. The CBCS provides an opportunity for the students to choose courses from the prescribed courses comprising core, elective/minor or skill based courses. The courses can be evaluated following the grading system, which is considered to be better than the conventional marks system. Therefore, it is necessary to introduce uniform grading system in the entire higher education in India. This will benefit the students to move across institutions within India to begin with and across countries. The uniform grading system will also enable potential employers in assessing the performance of the candidates. In order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations, the UGC has formulated the guidelines to be followed.

The **Choice Based Credit System**, as prescribed by the **UGC**, aims to modernize and diversify the higher education system in India. It empowers students to take ownership of their academic journeys, providing them with greater flexibility, interdisciplinary learning opportunities, and a more comprehensive educational experience. By aligning academic standards with global norms, the CBCS framework also facilitates credit transfer, student mobility, and the development of employable skills, thus enhancing the overall quality and recognition of Indian higher education.

### 2. TITLE AND COMMENCEMENT:

These Regulations shall be called the Sri Guru Ram Das University of Health Sciences, Sri Amritsar regulations for Choice Based Credit System (CBCS) and Continuous Assessment Grading Pattern (CAGP) for Paramedical Under-Graduate (UG) Degree Programmes. These Regulations shall be applicable to all candidates admitted into the full-time under-graduate programmes run under SGRDUHS, from the calendar year 2024.

### 3. OBJECTIVES:

- i. Introduction of Choice Based Credit System has following objectives:
- ii. To make the course curriculum learner centric
- iii. To encourage inter-disciplinary without disturbing the domain centric knowledge
- iv. To promote mobility of students and help in optimizing learning
- v. To allow autonomy to the teachers with built in accountability.
- vi. Continuous evaluation of students to help in optimizing learning
- vii. To introduce transparency in the evaluation system
- viii. To improve employability among students

### 4. DEFINITION:

#### 1. Choice Based Credit System (CBCS):

The CBCS provides choice for students to select from the prescribed courses (core, foundation, elective or minor or soft skill courses). Under the Credit Based Semester System (CBSS), the requirement for awarding a degree or certificate is prescribed in terms of number of credits to be completed by the students.

#### 2. Credit:

A unit by which the course work is interpreted. It functions the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or 2 hours practical work/field work per week.

3. **L+T+P:** The prescribed hours/week during a semester for Lecture-Tutorial-Practical to a particular course, in accordance with curriculum prescriptions based on respective nature.

4. **Semester:**

Each semester will consist of 16-18 weeks of duration which is equivalent to 90 actual teaching days.

Each semester will include – Admission, Course work, Conduct of examinations and declaration of result including semester break.

5. **Academic year:**

Two consecutive (one odd + one even) semesters constitute one academic year. 180 working days from August to July every year. The odd semester may be scheduled from August to January and even semester from February to July.

6. **Types of courses:**

- (i) **Core course:** The course designed for papers under this category aim to cover the basics that a student is expected to imbibe in that particular discipline. A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.
- (ii) **Foundation course:** The Foundation courses may be of two kinds: Compulsory foundation course and elective foundation course. “Compulsory foundation” courses are the courses based upon the content that leads to Knowledge enhancement. These are mandatory for all disciplines.
- (iii) **Interdisciplinary course:** Which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate’s proficiency/skill.
- (iv) **Elective course:** Ability enhancements courses put under elective subjects, which may be very specific or specialized or advanced or supportive to the discipline/subject of study. Elective foundation courses are value-based and are aimed at man-making education.
- (v) **Value added/Skill Enhancement Course:** Value added/Skill Enhancement is leading to adding to the skill/ability enhancement specific to the programme.
- (i) **Practicals:** Hands on training on the techniques and one credit is equivalent to two hours of practical. So, 1 credit referred to as 2 hours practical work.

7. **Cumulative Grade Point Average (CGPA):**

It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the sum total of the credit points obtained by the student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

8. **Grade Point:** It is a numerical marking allotted to each letter grade on a 10-point scale.

9. **Letter Grade:** It is an appreciated point of the student’s performance in a selected course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.

10. **Semester Grade Point Average (SGPA):** It is a measure of performance of work done in a semester. It is ratio of total credit points (CPs) secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed upto two decimal places.

11. **Transcript or Grade Card 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, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

5. **DURATION OF THE PROGRAM**

- a) The program shall be of 3-4 academic years (six-eight semesters) including 1 year of internship (Odd and even semester in one academic year)

- b) The program shall be completed within seven years from the date of admission.
- c) An academic year consists of two semesters, and each semester shall extend over a minimum period of sixteen weeks.
- d) There shall be an examination at the end of each semester.

## **6. ADMISSION PROCESS**

- I. Admission to a programme, which shall be made by the Registrar, shall include selection on the basis of merit in the qualifying examination/after entrance test and/or interview/counseling, payment of the prescribed fees and registration for first semester.
- II. A selected candidate shall pay his/her fees for admission and get himself/herself registered within the prescribed date which, normally, shall not be later than seven working days immediately preceding the date of commencement of course work. However, the Registrar may, on the recommendation of the concerned Dean/Principal, permit late admission of a candidate up to another seven working days immediately following the expiry of one week from the date of commencement of the course work.
- III. Registration is the process of recording all the proposed academic activities of a student on the first day of beginning of every semester which will include courses the student will study, the quantum of practical training or any other such activity which the student will undertake during current semester towards completion of programme of study.
- IV. The academic calendar is announced by the Registrar well before the start of the new academic year in which every date for the various time-bound activities required by the students is mentioned. It is compulsory for a student to be personally present on the day of registration. The provision for late registration is only for exceptional circumstances and it is at the discretion of the Principal or Institutional head whether or not to permit a student to register late because every day of delay means loss of lectures and practical exercises which have to be made up by arranging extra classes by the respective teacher.

## **7. REGISTRATION FOR SUBSEQUENT SEMESTERS**

- I. Registration for the first semester of a programme is a part of the admission procedure whereas Registration for the subsequent semesters shall be governed by the following schedule:
- II. Announcement the date of registration
- III. Registration with late fee up to seven working days from the date of registration with payment of late fee to be fixed by the university.
- IV. Under exceptional circumstances, the Registrar on recommendation of the Principal may allow late registration up to seven more working days from the date of registration with payment of fine. Provided that the Registrar, on the recommendation of the Principal, shall not register a student after the last date for adding a course in each semester.
- V. Unauthorized absence from the advisement and registration programme will be treated as a serious lapse and for this lapse, a late fee will be charged. If during the day of registration, a student happens to be outside the University in connection with his/her studies, field work, training or due to other unavoidable and legitimate circumstances, he/she may be permitted to register himself/herself in absentia through his/her coordinator by paying fees with the prior approval of the Dean/Principal concerned.

## **8. THE REGISTRATION PROCESS**

Having obtained general guidance as to the courses which a student should study in that semester, he/she is asked to meet the respective teachers who are to offer the courses.

The courses to be offered in the semester, their codes, titles, credit hours and the name of the teacher (s) are announced by all Heads of Departments and listed before the start of the semester and these lists are available with the Nodal officer/Programme coordinator/IQAC committee members.

## **9. CHANGE OF COURSE**

Unlike the traditional annual system of examination in which each programme has fixed number of courses to be studied, the CBCS allows flexibility in the choice of courses for a programme. Following general guidelines shall be followed for change of courses listed in the Programme of Study:

- I. Application for change of course including any addition and withdrawal shall be made in the prescribed form along with prescribed fee in accordance with the instructions given, however, the exemption from this fee may be granted by the Dean/Principal when the change of course is necessitated by administrative considerations.
- II. The last date for adding a course shall be the working day immediately following the expiry of two weeks in the semester from the date of commencement of the course work.
- III. The last date for withdrawal of a course, shall be the working day immediately following the expiry of six weeks from the date of commencement of the course work for the semester.

**Note: Student who adds a course after the start of the semester will not be allowed to withdraw that course.**

## **10. CHANGE OF PROGRAMME**

- i. The shifting from one programme to another shall be permitted during first year of the programme provided that the eligibility for both the programmes is same.
- ii. Shifting will be allowed against available vacant seats only on recommendation of respective head of the institution(s).
- iii. The students shifting the programme of study will be exempted for courses already cleared by them during earlier study.
- iv. Administrative charges as fixed by the University for shifting the programme shall be charged.

## **11. LATERAL ENTRY**

There will be lateral entry of the students only in semester III. Provided that

- (i) he/she must have cleared all (total) the credits of previous semester,
- (ii) the fulfilment of the UGC regulations/norms concerning lateral entry and
- (iii) the availability of seat(s) in the programme concerned.
- (iv) The material contain of the syllabus must be equivalent and there should not be variation in syllabus more than 30%.

## **12. EXAMINATIONS AND EVALUATION OF STUDENTS UNDER CONTINUED INTERNAL ASSESSMENT**

- During the semester, students will be continuously evaluated for academic performance in each course through surprise test (s), three pre-announced examinations (First, second hourly examinations and sendup/Midterm examinations), tutorials, assignment (s), term paper, field work, class seminar (s) and the End-Semester Examination. The weightage for Continued Internal Assessment and the

End Semester Examination will be equal. The distribution of marks for all the components will be as given below:

- I. The first hourly examination is for 1 hour duration and covers about 20% content – weightage is 10%
- II. The Second hourly examination is again a 1 hour examination covering about 50% content- weightage is 10%
- III. The third examination called Midterm/sendup is of 2 hours duration and covers all content - weightage is 25%
- IV. 5% marks are for attendance or any other evaluations the teacher has done during the semester (5 marks for 100% attendance, no marks for 75% attendance and 1 mark for each 5% increment in attendance beyond 75% and fractions thereof)
- V. The End Semester Examination covers the entire syllabus and Weightage 50%, Duration: 2-3 hours.

**A. CONDUCT OF EXAMINATIONS:**

- I. All the examinations will be conducted by the teacher(s) concerned under the overall supervision of the Head of the Department and Principal.
- II. The End Semester Examinations will be conducted according to the schedule fixed by the COEs.
- III. The answer sheets for First hourly, second hourly examinations and sendup examinations will be marked by the teacher offering a course and shown to the students within one week of holding the examination. The answers to each question will be discussed by the teacher in the class.
- IV. The HOD will report the award list (First, second and Midterm/Sendup examinations and attendance marks) in respect of all courses taken by different students to the Controller of Examinations (COE) through the Principal of College before 15 days of End Semester Examination.
- V. In case a student could not appear in any component of the Continuous Internal Assessment of a course due to medical reasons or under other exceptional circumstances (supported by documentary evidence), a separate examination in that component will be arranged by the concerned teacher with the approval of respective HOD before the beginning of End Semester Examination.
- VI. A student will be permitted to appear in the End-Semester Examination as per the Conduct of Examination Rules after filling up the prescribed examination form, payment of the prescribed examination fee, satisfying the attendance requirement and fulfilling other eligibility criteria.

**B. QUESTION PATTERN AND PAPER SETTING:**

- I. At least two sets of question papers for the examinations will be submitted to COE in the beginning of the semester, one of these sets will be passed on to the concerned in-charge one hour before the Examination. It will be compulsory to pass the End Semester Examination for successful completion of the course.
- II. Question Paper Pattern for End Term Examinations (100 Marks for 3 hours) includes-  
(a). Filling in the blanks 10 marks, (b) Multiple choice questions 10 marks., (c). Short notes  $10 \times 3 = 30$  marks and (d). Essay type questions  $10 \times 5 = 50$  marks

- III. Question Paper Pattern for End Term Examinations (50 Marks for 2 hours) includes-  
(a). Filling in the blanks 5 marks, (b). Multiple choice questions 5 marks, (c). Short notes  $5 \times 2 = 20$  marks and (d). Essay type questions  $3 \times 10 = 30$  marks.
- IV. Similar pattern for first hourly, second hourly and Midterm/sendup examinations should be followed.

#### **C. MINIMUM PASS MARKS**

Unless prescribed in the Regulations and the Scheme of Examination of a particular programme, a candidate will be deemed to have completed his/her course successfully if he/she obtains minimum 50% marks/Grade point of 5.0/ as per the 10 point scale.

#### **D. ATTENDANCE**

Minimum 75% attendance in each course is essential for appearing in the End Term Examinations. However, students having attendance from 65% to 75% may be allowed by a special permission from competent authority after showing the certified proofs with valid reasons for medical, sports, extra-curricular activities etc. Candidates with less than 75% attendance will be detained and have to register again for the course.

The course/s in which the student does not fulfill the minimum attendance requirements, he/she shall not be permitted to appear in the semester examinations of such course/s, and shall be declared as having failed in such course/s. A student who is falling short of attendance in maximum of two courses, he/she shall be required to attend the minimum number of lectures which were falling short, during next year when the course/s is/are offered.

#### **E. APPOINTMENT OF EXAMINERS:**

Head of the department shall normally appoint the examiners for different courses, selecting at least two others than the concerned teachers, randomly for theory courses in each of the semesters.

In case of Lab/Projects/Viva-Voce examinations there shall be one internal and one external examiner (5 years post postgraduate (MD/MS or 2 years post Ph.D.) experience in specialization will be appointed as examiners). A sizable panel of external examiners shall be approved by the BOS on annual basis to facilitate the appointment of external examiners.

#### **F. CRITERIA FOR PASSING:**

The student is required to obtain a minimum of 50% in each of the theory papers, internal assessment, practical and clinical exams for a pass. Students will not be able to appear for university theory exam if they do not pass in their internal assessment.

#### **G. SYLLABI AND MODE OF EVALUATION:**

The syllabi of Programs shall be notified by the University from time to time and shall be deemed to constitute integral part of the Ordinances. Course evaluation under the semester system of evaluation shall be done on marks basis and thereafter will be converted into grades. If a course has both the theory and practical components, the student will be required to pass both the components, separately. However, if the student fails in theory, but is passing in practical of that course, he/she will be required to clear the theory course only, and vice-versa.

A candidate who does not pass in any course in the University examination shall be provided an opportunity to improve his/her internal marks (theory or practical only) this will be called "Improvement I.A."

If such a candidate does not appear for such “Improvement I.A. ” for internal marks in the said course(s), the internal marks (both theory, practical, lab, clinical) already secured by him/her shall be carried over for his/her subsequent appearance(s)

#### **H. CARRY ON SYSTEM FOR VARIOUS SEMESTER EXAMINATIONS.**

Each course should be successfully completed within 3 attempts including the first one. Students can start internship after the 6<sup>th</sup> semester exams (if there). However, students who fail in their practical/clinical exam of 6<sup>th</sup> semester will have to discontinue internship. The candidates are permitted to carry over the theory courses until the end of the program.

##### **I. Programme having two semester duration:**

- a) There shall be no condition for promoting a student from first semester to second semester provided that he/she fulfills all requirements under the prevailing ordinances and has been issued Roll number for first semester examination.
- b) For certificate courses/UG/PG Diploma - In case a student fails to pass all the courses/papers within a period of two semesters (One Year), he/she shall be given two consecutive semesters (one year) more to pass.
- c) For one year degree course- In case a student fails to pass all the courses/papers within a period of two semesters (One Year), he/she shall be given two years more to pass.

##### **II. Programme having four semester duration:**

- a) There shall be no condition for promoting a student from first semester to second semester provided that he/she fulfills all requirements under the prevailing ordinances and has been issued Roll number for first semester examination.
- b) However, the student shall be promoted to the third semester only if he/she has passed at least 50% courses/papers of the first two semesters.
- c) There shall be no condition for promoting a student from third semester to fourth semester.
- d) In case a student fails to pass all the courses/papers within a period of four semesters (Two Years), he/ she shall be given four consecutive semesters (Two Years) more to pass.

##### **III. Programme having six semester duration:**

- a) There shall be no condition for promoting a student from first semester to second semester provided that he/she fulfills all requirements under the prevailing ordinances and has been issued Roll number for first semester examination.
- b) However, the student shall be promoted to the third semester only if he/she has passed atleast 50% courses/papers of the first two semesters.
- c) There shall be no condition for promoting a student from third semester to fourth semester.
- d) d. However, a student shall be promoted to fifth semester only if he/she has passed atleast 50% courses/ papers of the first four semesters.
- e) There shall be no condition for promoting a student from fifth semester to sixth semester. After a period of six semesters the student shall be given a period of two consecutive years to pass.

##### **IV. Programme having eight semester duration:**

- a) There shall be no condition for promoting a student from first semester to second semester provided that he/she fulfills all requirements under the prevailing ordinances and has been issued Roll number for first semester examination.
- b) A student shall be promoted to the third semester only if he/she has passed atleast 50% courses/papers of the first two semesters, but there will be no condition for promoting a student from third semester to fourth semester.
- c) A student shall be promoted to fifth semester only if he/she has passed at least 50% courses/papers of the first four semesters.
- d) There shall be no condition for promoting a student from fifth semester to sixth semester.
- e) A student shall be promoted to seventh semester only if he/she has passed at least 50% courses/ papers of the first six semesters.
- f) There will be no condition for promoting a student from seventh semester to eight semester and after a period of eight semesters, the student shall be given a period of two consecutive years to pass.

### **13. SUPPLEMENTARY EXAMINATION**

- I. If a student fails in the End Semester Examination, a supplementary examination will be conducted with next semester examinations. The marks for all other components as applicable will however, be carried forward in such cases. Whereas shortfall in attendance will be covered by assignments or lecture attendance.
- II. In case the course comprises only practical (say 0+2) no supplementary examination will be given for such courses and student will be registered again for the practical course.
- III. Supplementary examination can be given for maximum of three courses or 50% courses (core & foundation courses).
- IV. After declaration of result the Principal concerned shall display the list of students eligible to take supplementary examinations.
- V. The eligible students shall apply for the examination within three days of display of this list after paying the fee and filling the prescribed application form.
- VI. The students who fail to get pass marks shall have to register the course again and no more chance to appear in the supplementary examination shall be permitted until or unless some serious circumstances.

### **14. RE-EVALUATION**

- I. The re-evaluation is applicable only for final theory examinations conducted under External Examination System. If the student is eligible for supplementary examination, he/she can either opt for re-evaluation of the final paper or request for supplementary examination.
- II. Only one of these two options shall be considered by the Controller of Examinations. Once the student appears in the supplementary examination then only, the paper of supplementary examination can be considered for re-evaluation if desired by the student.
- III. The number of courses for re-evaluation in a semester can be availed up to 50% of the number of courses registered or three, whichever is less, even if a candidate has passed the course in the final examination while considering eligibility for re-evaluation, based on 50% of registered courses, the fraction of 0.5 and above will be rounded off upwards.
- IV. The student may apply for re-evaluation with prescribed fee within fifteen working days of declaration of the result in a prescribed performa. The re-evaluation will be

done by an examiner other than the one who has earlier marked the answer book. The re-evaluation result will be submitted to the Controller of Examinations through the teacher concerned for revision of the result, if need be.

### 15. Tenure of a Degree Programme

- The successful candidate shall be awarded the degree in the subject of his/her study indicating the CGPA on the basis of the result of all the semester examinations. A student who does not complete the programme of study within the minimum duration of the course of his/her study, or gets 'F' grade shall not be eligible for any merit position/medal/award of the University.
- He/She shall have to complete his/her degree within N+2 rules, where 'N' stands for the Normal or minimum duration prescribed for completion of the programme and '+2' stands for the extra period of 2 years immediately after completion of the normal duration of the course.

**Maximum time allowed to pass a degree programme is given below in the table.**

| Course duration | Maximum time to complete a degree |
|-----------------|-----------------------------------|
| Five years      | Seven years                       |
| Four years      | Six years                         |
| Three years     | Five years                        |
| Two years       | Four years                        |
| One year*       | Three years                       |

\*For certificate course/UG/PG Diploma maximum time limit is N+1.

- The Course credits for each course shall be given as L-T-P. For example, 3-1-0 will mean that it is a lecture-based course and has 3 lectures, 1 tutorial, and no practical assigned to it. Similarly, a course with 0-0-2 means that it is a practical course with 4 hours of class work.
- Credit will be assigned to seminar, dissertation, project etc. under the practical component. Generally, the course work per semester will be 20 to 30 credits. A student shall register for a minimum of 20 credits in a semester. Syllabi will be designed with minimum credits required to complete a degree as follows:

| Duration of Degree Programme | Minimum Credits |
|------------------------------|-----------------|
| One year                     | 40              |
| Two year                     | 80              |
| Three year                   | 120             |
| Four year                    | 160             |
| Five year                    | 200             |

### 16. GRADING SYSTEM:

#### A. Award of Grades and Credit points

- Adopted the UGC recommended 10-point grading system of awarding grades and CGPA under ChoiceBased Credit Semester System.
- Grading of Performance Based on the performance, each student shall be awarded a final grade at the end of the semester for each course. Absolute grading is used by converting the marks to grade, based on predetermined class intervals.
- UGC 10 point grading system is used with pass grade modified.

**Table 1: CBCS Grading System and Marks Equivalence**

| Percentage Marks | Letter Grade    | Grade Points |
|------------------|-----------------|--------------|
| >90 to ≤100      | O (Outstanding) | 9.1-10       |
| >80 to 90        | A+ (Excellent)  | 8.1-9.0      |
| >70 to ≤80       | A (Very Good)   | 7.1-8.0      |

|             |                   |                |
|-------------|-------------------|----------------|
| >60 to ≤70  | B+ (Good)         | <b>6.1-7.0</b> |
| >50 to ≤60  | B (Above Average) | <b>5.1-6.0</b> |
| >40 to ≤50  | C (Average)       | <b>4.1-5.0</b> |
| ≥35 to ≤40  | F (Fail)          | <b>3.5-4.0</b> |
| Below 40    | F (Fail)          | <b>0</b>       |
| Absent (Ab) | F (Fail)          | <b>0</b>       |

For Paramedical Programme – Pass is at C Grade (5.0 grade point) 50% and above  
Computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA). SPGA is the weighted average of the grade points obtained in all courses by the student during the semester.

- I. A student obtaining Grade F shall be considered failed and will be required to reappear in the examination. Registrations of such students for the respective courses shall be treated as cancelled and the candidate has to re-register and repeat the course when it is offered next time.
- II. For non-credit courses ‘Satisfactory’ or ‘Unsatisfactory’ shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.

### SGPA Computation

| Course Number | Credits | Letter grade | Grade point | Credit point (Credit × grade) |
|---------------|---------|--------------|-------------|-------------------------------|
| 1             | 3 (C1)  | A            | 8 (G1)      | $3 \times 8 = 24$             |
| 2             | 4(C2)   | B+           | 7(G2)       | $4 \times 7 = 28$             |
| 3             | 3(C3)   | B            | 6(G3)       | $3 \times 6 = 18$             |

|       |                  |    |    |
|-------|------------------|----|----|
| SGPA= | $C1G1+C2G2+C3G3$ | 70 | =7 |
|       | $C1+C2+C3$       | 10 |    |

**Table 2. Illustration of Computation of SGPA and CGPA**

| Course                                                                         | Credit | GradeLetter | Grade Point | Credit Point<br>(Credit x Grade) |
|--------------------------------------------------------------------------------|--------|-------------|-------------|----------------------------------|
| Course 1                                                                       | 3      | A           | 8           | $3 \times 8 = 24$                |
| Course 2                                                                       | 4      | B+          | 7           | $4 \times 7 = 28$                |
| Course 3                                                                       | 3      | B           | 6           | $3 \times 6 = 18$                |
| Course 4                                                                       | 3      | O           | 10          | $3 \times 10 = 30$               |
| Course 5                                                                       | 3      | C           | 5           | $3 \times 5 = 15$                |
| Course 6                                                                       | 4      | B           | 6           | $4 \times 6 = 24$                |
|                                                                                | 20     |             |             | 139                              |
| <b>Illustration for SGPA</b><br><b>Thus, SGPA = <math>139/20 = 6.95</math></b> |        |             |             |                                  |

**Table 3: Total SGPA**

| Semester 1  | Semester 2  | Semester 3  | Semester 4  |
|-------------|-------------|-------------|-------------|
| Credit : 20 | Credit : 22 | Credit : 25 | Credit : 26 |
| SGPA : 6.9  | SGPA : 6.8  | SGPA : 6.6  | SGPA : 6.0  |

| Semester 5                   | Semester 6                |  |  |
|------------------------------|---------------------------|--|--|
| Credit : 26<br>SGPA : 6.3    | Credit : 25<br>SGPA : 8.0 |  |  |
| <b>Illustration for CGPA</b> |                           |  |  |

Thus,

$$\text{CGPA} = \frac{20 \times 6.9 + 22 \times 6.8 + 25 \times 6.6 + 26 \times 6.0 + 26 \times 6.3 + 25 \times 8.0}{144} = 6.75/\text{B+}$$

### **B. Transcript Format**

Based on the above recommendation on letter grades, grade points, SPGA and CGPA, the transcript shall be issued for one semester with a consolidated transcript indicating the performance of all the courses.

### **C. Re-Entry after Break of Study:**

- I. The University regulations for readmission are applicable for a candidate seeking re-entry to a program.
- II. Students admitted the program and absented for more than 3 months must seek readmission into the appropriate semester as per university norms.
- III. The student shall follow the syllabus in vogue (currently approved/is being followed) for the program.
- IV. All re-admissions of students are subject to the approval of the Vice-Chancellor/Dean.
- V. All dropped students with CGPA of 4.00 in UG programmes, have right to petition for readmission to first year class against vacant seats.
- VI. The student shall apply to the Registrar within seven days of his/her dropping from the university.
- VII. The case will be reviewed by a petition committee.
- VIII. Readmission shall be permitted only once.

### **D. Ranking**

The Merit List and Ranking there upon shall be prepared only for Regular Examinees, who passed the Examination in single attempt.

- i. The first two ranks of the programme will be decided on the basis of grades of CGPA in the courses.
- ii. In case of a tie, marks % of core and foundation courses only will be taken into account.

### **E. Normal, Maximum and Minimum Credit Load in a Semester**

- i. In an undergraduate programme, the normal full-time programme of work in a semester shall be 24 credit hours.
  - ii. A maximum of 30 and a minimum of 15 credit hours may be taken by a student.
  - iii. The undergraduate students on 'Good Standing' may be allowed to register a maximum of 34 credit hours (4 extra credit hours) during their last two semesters by the Dean, provided these courses registered have been offered on regular basis.
- 17. PROGRAMME CONTINUATION/DISCONTINUATION:**
- The continuation/discontinuation and Exit with Degree shall be governed as follows:
- I. A candidate shall be allowed to continue the programme provided he/she maintains a CGPA of 5.0 both in all theory and lab courses at the end of the even semesters (e.g.

- 2nd, 4th and 6th etc. for the academic programmes). Otherwise, the candidate shall remain in the same year till he/she maintains the required CGPA as 5.0.
- II. A candidate shall have to re-appear in semester examination of the courses with Fail/Absent grade (as per Grade Assignment Table), as and when the same course is offered during regular course of study. Such students shall retain their internal/sessional marks.
  - III. Attendance requirement for appearing in End Semester Examination of each of the semesters shall be 75%.
  - IV. A student who has been detained due to shortage of attendance shall not be allowed to be promoted to next semester and he/she will be required to repeat only those courses where the student could not make up required 75% attendance in a semester. That is, attendance of a student shall be considered course-wise and if any student fails to maintain minimum criteria of 75% attendance in a course then he/she will be detained in that particular course only and all such students will have to reappear for that course(s) and also attend the class of that particular course with the next batch of students of said semester.
  - V. Further, if a student who has been detained due to shortage of attendance in more than 50% course in a semester and due to that he/she is not able to maintain minimum criteria of required CGPA 5.0, then such student will be detained in entire semester and shall have to attend regular classes of all courses in next academic year of said semester.
  - VI. Maximum three attempts including main exam (main exam + two backlogs) shall be provided to all students to clear his/her backlogs/arrear in order to get promoted in next year/semester. That is, maximum two academic years are permissible for a student for the completion of the academic programme/course. In no situation a student will be allowed to take more than two academic years, for any reason whatsoever, including for the reasons of detention for shortage of attendance or deficiency of CGPA during the whole term of completion of the course/programme.
  - VII. A student who has already availed two additional academic years to clear his/her backlogs/arrears in order to be eligible for the Degree in stipulated time period, will not get any further chance and therefore admission of such student(s) would be automatically stand cancelled.

## **18. ASSIGNMENTS**

In programs involving project report/ dissertation/thesis/case study/ status report/training report/term report or any other such assignment, the candidate shall be required to submit any such assignment, required in the partial fulfillment of the degree, by the end of the last semester of the program or unless otherwise specified in the syllabus of the respective examination, in which he/ she is registered. The Principal/Head of the Institution may, however, give an extension of one month after this date. Grant of further Extension/Condonation of delay in receipt of such an assignment will be made and governed as per rules of SGRDUHS. Assignments shall be evaluated by a board of two examiners consisting of Principal/HOD

## **19. CORRECTION OF ERRORS**

In case of any error is detected in the marks recorded on the award list, the examiner(s) concerned shall make a request to correct the mistake to the Principal through the Head of the department, and shall attach relevant documentary evidence. A committee consisting of the following members shall take suitable remedial measures depending upon the merit of the case.

- a) Dean/Principal (Chairman)
- b) Head of the departments.
- c) Two Faculty Member nominated by the Dean

**PROGRAMS CODES**

| Sr. No. | Program                                                   | Alphabetic Code | Number code |
|---------|-----------------------------------------------------------|-----------------|-------------|
| 1.      | Diploma in Dialysis Technology                            | DDT             | 1.1         |
| 2.      | Diploma in Medical Laboratory Technology                  | DMLT            | 1.2         |
| 3.      | Diploma in Medical Radiology & Imaging Technology         | DMRIT           | 1.3         |
| 4.      | Diploma in Operation Theatre Technology                   | DOTT            | 1.4         |
| 5.      | Diploma in Cath Lab Technology                            | DCLT            | 1.5         |
| 6.      | B.Sc. in Anaesthesia Technology                           | BAT             | 2.1         |
| 7.      | B.Sc. in Anatomy, Physiology & Biochemistry               | BAPB            | 2.2         |
| 8.      | B.Sc. in Medical Laboratory Technology                    | BMLT            | 2.3         |
| 9.      | B.Sc. in Medical Radiology & Imaging Technology           | BMRIT           | 2.4         |
| 10.     | B.Sc. in Operation Theatre Technology                     | BOTT            | 2.5         |
| 11.     | B.Sc. in Optometry                                        | BOM             | 2.6         |
| 12.     | B.Sc. in Radiotherapy Technology                          | BRT             | 2.7         |
| 13.     | Bachelor of Physiotherapy                                 | BPT             | 2.8         |
| 14.     | Bachelor of Audiology & Speech Language Pathology (BASLP) | BASLP           | 2.9         |
| 15.     | B.Sc. in Cath Lab Technology                              | BCLT            | 2.10        |
| 16.     | B.Sc. Perfusion Technology                                | BPRT            | 2.13        |

**COURSE CODES**

|                      | Courses                                    | Alphabetic code and Numbers code            | LEVELS            |
|----------------------|--------------------------------------------|---------------------------------------------|-------------------|
| <b>Diploma Level</b> | Human Anatomy                              | DDT-ANT.101<br>DMLT-ANT.101<br>DCLT-ANT.101 |                   |
|                      | Biochemistry                               | DDT-BIC.101                                 |                   |
| <b>UG Level</b>      | Human Anatomy                              | BMLT-ANT.201                                | Semester I & II   |
|                      | Biochemistry                               | BMLT-BIC.201                                |                   |
| First Year           | Physiology                                 | BMLT-PHY.201                                |                   |
|                      | Practical                                  | BMLT.ANT.225                                |                   |
| Second Year          | Microbiology                               | BAT-MIC.301                                 | Semester III & IV |
|                      | Pharmacology                               | BAT-PHA.301                                 |                   |
|                      | Practical Microbiology                     | BAT-MIC.325                                 |                   |
| Third Year           | Applied Anaesthesia Technology             | BAT.401                                     | Semester V & VI   |
|                      | Clinical Anaesthesia Technology            | BAT.402                                     |                   |
|                      | Research Methodology & Biostatistics       | RMB.401                                     |                   |
|                      | Practical in Applied Anesthesia Technology | BAT.425                                     |                   |
| Fourth Year          | INTERNSHIP                                 | 499                                         | INTERNSHIP        |

**Sri Guru Ram Das University of Health Sciences, Amritsar**

**Course Structure for the B.Sc. Catheterization Laboratory Technology (code-BCLT.2.10)**

| Course No.    | Course Title                                                                     | Course Type              | L+T+P  | Credits /week | Weightage   |
|---------------|----------------------------------------------------------------------------------|--------------------------|--------|---------------|-------------|
| Semester-I    |                                                                                  |                          |        |               |             |
| BCLT-ANT.201  | Anatomy-I                                                                        | Foundation course        | 3+0+0  | 3             | 50          |
| BCLT-PHY.201  | Physiology-I                                                                     | Foundation course        | 3+0+0  | 3             | 50          |
| BCLT-BIC.201  | Biochemistry                                                                     | Foundation course        | 3+0+0  | 3             | 100         |
| BCLT.201      | Medical Electronics                                                              | Interdisciplinary course | 3+0+0  | 3             | 100         |
| ECO.250       | English/Communication skills                                                     | Elective course          | 2+0+0  | 2             | Only grade  |
| BCLT-ANT.225  | Practical in Anatomy                                                             | Practical                | 0+0+2  | 2             | 50          |
| BCLT.225      | Practical in Catheterization                                                     |                          | 0+0+2  | 2             | 50          |
| BCLT-PHY.225  | Practical in Physiology                                                          |                          | 0+0+2  | 2             | 50          |
| Total Credits |                                                                                  |                          | 14+0+6 | 20            | 300/150=450 |
| Semester-II   |                                                                                  |                          |        |               |             |
| BCLT-ANT.201  | Anatomy-II                                                                       | Foundation course        | 3+0+0  | 3             | 50          |
| BCLT-PHY.201  | Physiology-II                                                                    | Foundation course        | 3+0+0  | 3             | 50          |
| BCLT-MIC.201  | Microbiology                                                                     | Foundation course        | 2+1+0  | 3             | 100         |
| BCLT.202      | Biophysics                                                                       | Interdisciplinary course | 2+1+0  | 3             | 100         |
| COM.250       | Computer Applications                                                            | Elective course          | 2+0+0  | 2             | Only grade  |
| BCLT-ANT.226  | Practical in Anatomy                                                             | Practical                | 0+0+1  | 1             | 50          |
| BCLT-PHY.226  | Practical in Physiology                                                          |                          | 0+0+1  | 1             | 50          |
| BCLT-MIC.225  | Practical in Microbiology                                                        |                          | 0+0+1  | 1             | 50          |
| BCLT.226      | Practical in Catheterization                                                     |                          | 0+0+3  | 3             | 50          |
| Total Credits |                                                                                  |                          | 12+2+6 | 20            | 300/200=500 |
| Semester-III  |                                                                                  |                          |        |               |             |
| BCLT-PHA.301  | Pharmacology                                                                     | Foundation course        | 3+0+0  | 3             | 100         |
| BCLT.301      | Basic Electrocardiography                                                        | Core course              | 3+1+0  | 4             | 100         |
| BCLT.302      | Basic Echocardiography                                                           | Core course              | 3+1+0  | 4             | 100         |
| HVE.350       | Human Values & Ethics                                                            | Value added course       | 3+0+0  | 3             | Only grade  |
| BCLT-PAT.325  | Practical in Pathology                                                           | Practical                | 0+0+2  | 2             | 50          |
| BCLT.325      | Practical in Basic Electrocardiography                                           |                          | 0+0+3  | 3             | 50          |
| BCLT.326      | Practical in Basic Echocardiography                                              |                          | 0+0+3  | 3             | 50          |
| Total Credits |                                                                                  |                          | 12+2+8 | 22            | 300/150=450 |
| Semester-IV   |                                                                                  |                          |        |               |             |
| BCLT-PAT.301  | Pathology                                                                        | Foundation course        | 3+0+0  | 3             | 100         |
| BCLT.303      | Basic Cardiac catheterization                                                    | Core course              | 3+1+0  | 4             | 100         |
| BCLT.304      | Treadmill exercise stress testing                                                | Core course              | 3+1+0  | 4             | 100         |
| BCLT.350      | First Aid/BLS                                                                    | Elective                 | 2+0+1  | 3             | Only grade  |
| BCLT-PHA.327  | Practical in Pharmacology                                                        | Practical                | 0+0+3  | 3             | 50          |
| BCLT.328      | Practical in Basic Cardiac catheterization and Treadmill exercise stress testing |                          | 0+0+3  | 3             | 100         |
| Total Credits |                                                                                  |                          | 11+2+7 | 20            | 300/150=450 |
| Semester-V    |                                                                                  |                          |        |               |             |
| BCLT.401      | Advanced Electrocardiography                                                     | Core course              | 4+0+0  | 4             | 100         |
| BCLT.402      | Advanced Echocardiography                                                        | Core course              | 4+0+0  | 4             | 100         |
| RMB.401       | Research Methodology and Biostatistics                                           | Elective                 | 4+0+0  | 4             | 100         |
| BCLT.425      | Practical in Advanced Electrocardiography                                        | Practical                | 0+1+4  | 5             | 100         |
| BCLT.426      | Practical in Advanced Echocardiography                                           |                          | 0+1+4  | 5             | 100         |

|                            |                                               |                      |                 |            |                       |
|----------------------------|-----------------------------------------------|----------------------|-----------------|------------|-----------------------|
|                            |                                               | <b>Total Credits</b> | <b>12+2+8</b>   | <b>22</b>  | <b>300/200=500</b>    |
| <b>Semester VI</b>         |                                               |                      |                 |            |                       |
| BCLT.403                   | Advanced Cardiac Catheterization              | Core course          | 4+1+0           | 5          | 100                   |
| BCLT.404                   | Cardiology                                    | Core course          | 4+1+0           | 5          | 100                   |
| EVS.450                    | Environment studies                           | Elective course      | 3+0+0           | 3          | Only grade            |
| BCLT.427                   | Practical in Advanced Cardiac Catheterization | Practical            | 0+1+4           | 5          | 100                   |
| BCLT.428                   | Practical in Cardiology                       |                      | 0+1+4           | 5          | 100                   |
| <b>Total Credits</b>       |                                               |                      | <b>11+4+8</b>   | <b>23</b>  | <b>200/200=400</b>    |
| <b>Grand Total Credits</b> |                                               |                      | <b>70+12+44</b> | <b>126</b> | <b>1700/1000=2700</b> |

**ANT**-Anatomy, **PHY**-Physiology, **BIC**-Biochemistry, **BCL**-B.Sc. Catheterization Laboratory, **MIC**-Microbiology, **PAT**-Pathology, **PHA**-Pharmacology. **Course code**-201 onwards for B.Sc. First and Second Semesters; 301 onwards for B.Sc. Third and Fourth semesters and 401 onwards for B.Sc. Fifth and Sixth semesters.