

**B.Tech. (Cosmetics)  
Semester-VII & VIII  
Examination**

**Prospectus No.20161913**

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**संत गाडगे बाबा अमरावती विद्यापीठ  
SANT GADGE BABA AMRAVATI UNIVERSITY**

**गृहविज्ञान विद्याशाखा  
(FACULTY OF HOME SCIENCE)**

**PROSPECTUS  
OF  
B.Tech (Cosmetics)  
Semester-VII, Winter-2015  
Semester-VIII, Summer-2016  
Examinations  
(Eight Semester Degree Course)**



2015

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**Semester-VII & VIII**  
**Prospectus No. 20161913**

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**SANT GADGE BABA AMRAVATI UNIVERSITY**

**SPECIAL NOTE FOR INFORMATION OF THE STUDENTS**

- (1) Notwithstanding anything to the contrary, it is notified for general information and guidance of all concerned that a person, who has passed the qualifying examination and is eligible for admission only to the corresponding next higher examination as an ex-student or an external candidate, shall be examined in accordance with the syllabus of such next higher examination in force at the time of such examination in such subjects papers or combination of papers in which students from University Departments or Colleges are to be examined by the University.
- (2) Be it known to all the students desirous to take examination/s for which this prospectus has been prescribed should, if found necessary for any other information regarding examinations etc., refer the University Ordinance Booklet the various conditions/provisions pertaining to examination as prescribed in the following Ordinances.

- Ordinance No. 1 : Enrolment of Students.
- Ordinance No. 2 : Admission of Students
- Ordinance No. 4 : National cadet corps
- Ordinance No. 6 : Examinations in General (relevent extracts)
- Ordinance No. 18/2001 : An Ordinance to provide grace marks for passing in a Head of passing and Improvement of Division (Higher Class) and getting Distinction in the subject and condonation of defficiency of marks in a subject in all the faculties prescribed by the Statute No.18, Ordinance 2001.
- Ordinance No. 9 : Conduct of Examinations (relevent extracts)
- Ordinance No. 10 : Providing for Exemptions and Compartments
- Ordinance No. 19 : Admission of Candidates to Degrees.

- Ordinance No. 109 : Recording of a change of name of a University student in the records of the University.
- Ordinance No. 6 of 2008 : For improvement of Division/Grade.
- Ordinance No.19/2001 : An Ordinance for Central Assessment Programme, Scheme of Evaluation and Moderation of answerbooks and preparation of results of the examinations, conducted by the University, Ordinance 2001.

Registrar  
Sant Gadge Baba Amravati University

**Subject : Examinations Leading to the Degree of Bachelor of Technology (Cosmetics) in the Faculty of Home Science (Eight Semester – Credit Grade Based System Course) Direction, 2012**

Whereas, the Degree of Bachelor of Technology (Cosmetics) in the Faculty of Home Science is in existence in the University under Ordinance No.15 of 1998 and Regulation No.43 of 1998 respectively as per annual pattern.

AND

Whereas, the Academic Council in its meeting held on 5.5.2012 while considering item No.53 (3) A) R-1 has resolved to accept the Draft Schemes of Teaching and Examinations, Draft Syllabus and Draft Ordinances for B.Tech. (Cosmetics) alongwith other details as per semester system and credit grade based system, and further resolved to refer the Draft Scheme of Teaching and Examination and Draft Ordinances to the Ordinance Committee for making Ordinances and Regulations.

AND

Whereas, the Hon'ble Vice-Chancellor has accepted the corrections recommended by Chairman, Ad-hoc Committee in Cos.Tech. & Dean, faculty of Home Science u/s 14(7) of the Maharashtra Universities Act, 1994 on 25.6.2012 on behalf of the authorities of the University.

AND

Whereas, it is necessary to frame an Ordinance/Regulation for B.Tech. (Cosmetics) as per semester pattern and credit grade system.

AND

Whereas, the making of Ordinance/Regulation for B.Tech.(Cosmetics) Semester-I to VIII as per semester pattern and credit grade system, is a time consuming process.

AND

Whereas, the Academic Session is commencing from June 2012 and it is necessary to provide the Schemes of examinations, eligibility criteria along with other details for admission of students in the above pattern.

Now, therefore, I, Dr. Mohan K.Khedkar, Vice Chancellor of Sant Gadge Baba Amravati University, in exercise of powers conferred upon me under sub-section (8) of section 14 of the Maharashtra Universities Act., 1994, do hereby direct as under:

- 6) Subject to his/her compliance with the provisions of this Direction & other Ordinances pertaining to Examination in force from time to time, the applicant for admission, at the end of the course of study of a

- 1) This Direction may be called Examinations Leading to the Degree of Bachelor of Technology (Cosmetics) in the Faculty of Home Science (Eight Semester Credit Grade Based System Course) Direction, 2012.
- 2) This direction shall come into force from the date of its issuance.
- 3) (a) The following shall be the examinations leading to the Degree of Bachelor of Technology (Cosmetics) in the faculty of Home science.
 

1.	Bachelor of Technology	Semester-I
2.	Bachelor of Technology	Semester-II
3.	Bachelor of Technology	Semester-III
4.	Bachelor of Technology	Semester-IV
5.	Bachelor of Technology	Semester-V
6.	Bachelor of Technology	Semester-VI
7.	Bachelor of Technology	Semester - VII
8.	Bachelor of Technology	Semester-VIII
- (b) The duration of the Degree Course under this Direction shall be of Eight Semester in four academic years (i.e. two semester per year)
  - 1) B.Tech I & II Semester in First Academic Year
  - 2) B.Tech III & IV Semester in Second Academic Year
  - 3) B.Tech V & VI Semester in Third Academic Year
  - 4) B.Tech VII & VIII Semester in Fourth Academic Year
- (c) The examination specified in the preceding paragraph shall be held twice a year at such places and on such dates as may be appointed by the Board of Examinations.
- 4) Supplementary examinations shall be held for all semesters of B.Tech.(Cosmetics)
- 5) Subject to her/his compliance with the provisions of this Direction and other ordinance in force from time to time, a candidate for admission :-
  - a) To the Bachelor of Technology, Ist Semester Examination, shall have passed twelfth standard examinations of Maharashtra State Board of Secondary & Higher Secondary Education or examination recognised as equivalent thereto with the subjects English, Physics, Chemistry, Biology or Maths or Diploma in Pharmacy.

particular semester/session, to an Examination specified in column (1) of the table below, shall be eligible to appear if-

- i) he/she satisfies with the conditions in the table and the provisions thereunder.
- ii) he/she complies with the provisions of the ordinance pertaining to the Examination in general from time to time.
- iii) he/she has prosecuted a regular course of study in a college affiliated to the University.
- iv) he/she has in the opinion of the Principal shown satisfactory progress in his/her studies.

**TABLE**

Name of the Exam.	The student should have passed the exam. of	The student should have satisfactorily completed the following session/semester	The student should have passed the following examination
B. Tech. Semester-I	As mentioned in Para 5(a)	ô	ô
B. Tech. Semester-II	ô	B. Tech. Semester-I	ô
B. Tech. Semester-III	ô	B. Tech. Semester-II	2/3 <sup>rd</sup> Heads of I & II Semester combined together
B. Tech. Semester-IV	ô	B. Tech. Semester-III	-do-
B. Tech. Semester-V	B. Tech. I & II Semester	B. Tech. Semester-IV	2/3 <sup>rd</sup> Heads of III & IV Semester combined together
B. Tech. Semester-VI	ô	B. Tech. Semester-V	-do-
B. Tech. Semester-VII	B. Tech. III & IV Semester	B. Tech. Semester-VI	2/3 <sup>rd</sup> Heads of V & VI Semester combined together
B. Tech. Semester-VIII	ô	B. Tech. Semester-VII	-do-

**Explanation :**

- i) While calculating 2/3 rd heads of passing, fraction if any shall be ignored
  - ii) For considering the heads of passing, every theory and every practical shall be considered as separate head of passing.
  - iii) An examinee who has passed 2/3rd heads of passing shall be allowed to keep term in the next higher class.ö
- 7) Without prejudice to the other provision of the Ordinance No. 6 relating to the Examination in General, the provisions of paragraph 5,7,8,10 and 31 of the said ordinance shall apply to every college candidate.
  - 8) The fees for the examinations shall be as prescribed by the Management Council from time to time whenever any change is made in the fees prescribed for any particular examination that shall be notified through a notification for information of the examinees concerned.
  - 9) (i) The scope of the subjects shall be as indicated in the respective syllabus in force from time to time.  
(ii) Medium of instruction and examination shall be English.
  - 10) The schemes of teaching & credit system, scheme of examination along with other details & features of credit system shall be as given in **Appendices-I to V**.
  - 11) There shall be no classification of examinees successful at the I to VII semester examination.
  - 12) Incentive marks for each semester of B. Tech. examinations shall be as per Ordinance no.1 of 1985 in respect of Ordinance to provide for incentive marks for NSS, NCC, games & sports & other extra-curricular activities.
  - 13) Every student has to undergo Industrial Training for one month after Sixth Semester in any Cosmetic Industry which shall be essential for fulfilment of Degree course.
  - 14) Provision of Ordinance No.18 of 2001 relating to the condonation of Deficiency of marks for passing an Examination and of Ordinance No. 10 relating to Exemptions and Compartments as amended up to date shall apply to the Examinations under this Direction.
  - 15) Cummulative Grade Point Average shall be calculated on the basis of performance of a candidate from Semester-V to VIII.
  - 16) As soon as possible after the examinations, the Board of Examinations shall publish a list of successful examinees and the Merit list shall be prepared as per provision of Ordinance No.6.

- 17) Notwithstanding anything to the contrary in this Direction no person shall be admitted to this examination, if he/she has already passed the same examination or an equivalent examination of other statutory University.
- 18) Successful examinees at the I,II,III,IV, V,VI,VII & VIII semester examination shall be entitled to receive a certificate signed by the Registrar and successful Examinees at the VIII semester examination shall on payment of the prescribed fees receive a Degree in the prescribed form signed by the Honøble Vice-Chancellor.

Amravati  
Dated : 28/06/2012

Sd/-  
(Dr. M.K. Khedkar)  
Vice-Chancellor

\*\*\*\*\*

**Appendix-I**  
**Scheme of teaching & Credit System for B.Tech (Semester wise)**  
**First to Eight Semester**

Sub. Code	Subject	Scheme of teaching & Credit System	
		Theory (Credits)	Practical (Credits)
<b>Semester-I</b>			
1.1	Cosmetic Technology I	03 (03)	03 (1.5)
1.2	Cosmetic Chemistry I	03 (03)	03 (1.5)
1.3	Herbal Cosmetics I	03 (03)	03 (1.5)
1.4	Dermatology I	03 (03)	03 (1.5)
1.5	Computer Application	03 (03)	1 hr. demo
1.6	Mathematics & Statistics-I	03 (03)	ø
	<b>Total</b>	<b>18 (18)</b>	<b>12 (06)</b>
<b>Semester-II</b>			
2.1	Cosmetic Technology II	03 (03)	03 (1.5)
2.2	Cosmetic Chemistry II	03 (03)	03 (1.5)
2.3	Herbal Cosmetics II	03 (03)	03 (1.5)
2.4	Dermatology II	03 (03)	03 (1.5)
2.5	Perfume & Colours I	03 (03)	03 (1.5)
2.6	Mathematics & Statistics-II	03 (03)	ø
	<b>Total</b>	<b>18 (18)</b>	<b>15 (7.5)</b>
<b>Semester-III</b>			
3.1	Cosmetic Technology III	03 (03)	03 (1.5)
3.2	Cosmetic Chemistry III	03 (03)	03 (1.5)
3.3	Beauty Culture & Clinical Cosmetic-I	03 (03)	03 (1.5)
3.4	Perfume & Colours II	03 (03)	03 (1.5)
3.5	Cosmetic Engineering-I	03 (03)	03 (1.5)
3.6	Dermatology III	03 (03)	ø
	<b>Total</b>	<b>18 (18)</b>	<b>15 (7.5)</b>
<b>Semester-IV</b>			
4.1	Cosmetic Technology IV	03 (03)	03 (1.5)
4.2	Cosmetic Chemistry IV	03 (03)	03 (1.5)
4.3	Beauty Culture & Clinical Cosmetic-II	03 (03)	03 (1.5)
4.4	Cosmetic Analysis I	03 (03)	03 (1.5)
4.5	Cosmetic Engineering II	03 (03)	03 (1.5)
4.6	Dermatology IV	03 (03)	ø
	<b>Total</b>	<b>18 (18)</b>	<b>15 (7.5)</b>

<b>Semester-V</b>			
5.1	Cosmetic Technology V	03 (03)	03 (1.5)
5.2	Perfume & Colour III	03 (03)	03 (1.5)
5.3	Herbal Cosmetics III	03 (03)	03 (1.5)
5.4	Physical Cosmetics I	03 (03)	03 (1.5)
5.5	Cosmetic Analysis-II	03 (03)	03 (1.5)
5.6	Cosmetic Management -I	03 (03)	δ
	<b>Total</b>	<b>18 (18)</b>	<b>15 (7.5)</b>
<b>Semester-VI</b>			
6.1	Cosmetic Technology VI	03 (03)	03 (1.5)
6.2	Perfume & Colour IV	03 (03)	03 (1.5)
6.3	Herbal Cosmetics IV	03 (03)	03 (1.5)
6.4	Physical Cosmetics II	03 (03)	03 (1.5)
6.5	Cosmetic Analysis III	03 (03)	03 (1.5)
6.6	Cosmetic Management II	03 (03)	δ
	<b>Total</b>	<b>18 (18)</b>	<b>15 (7.5)</b>
<b>Semester-VII</b>			
7.1	Cosmetic Technology VII	03 (03)	03 (1.5)
7.2	Perfume & Colour V	03 (03)	03 (1.5)
7.3	Herbal Cosmetics V	03 (03)	03 (1.5)
7.4	Cosmetic Analysis IV	03 (03)	03 (1.5)
7.5	Cosmetic Engineering-III	03 (03)	03 (1.5)
7.6	Seminar	δ	03 (1.5)
	<b>Total</b>	<b>15 (15)</b>	<b>18 (9)</b>
<b>Semester-VIII</b>			
8.1	Cosmetic Technology VIII	03 (03)	03 (1.5)
8.2	Perfume & Colour VI	03 (03)	03 (1.5)
8.3	Herbal Cosmetics VI	03 (03)	03 (1.5)
8.4	Cosmetic Jurisprudence	03 (03)	δ
8.5	Cosmetic Engineering-IV	03 (03)	03 (1.5)
8.6	Project	δ	03 (1.5)
	<b>Total</b>	<b>15 (15)</b>	<b>15 (7.5)</b>

**Appendix-II**  
**Scheme of Examination for B. Tech. (Semester wise)**  
**First to Eight semester**

Sub. Code	Subject	Scheme of Examination						Minimum Marks for passing		Total Marks in theory/practical
		Theory		Practical		Theory Int. Marks	Pract. Int. Marks	Theory	Pract.	
		Hrs	Marks	Hrs	Marks					
<b>Semester-I</b>										
1.1	Cosmetic I Technology	03	60	04	50	20	30	36	40	80+80
1.2	Cosmetic Chemistry I	03	60	04	50	20	30	36	40	80+80
1.3	Herbal Cosmetics I	03	60	04	50	20	30	36	40	80+80
1.4	Dermatology I	03	60	04	50	20	30	36	40	80+80
1.5	Computer Application	03	60	-	-	20	-	36	-	80
1.6	Mathematics & Statistics-I	03	60	-	-	20	-	36	-	80
Total Marks for the semester									800	
<b>Semester-II</b>										
2.1	Cosmetic Technology II	03	60	04	50	20	30	36	40	80+80
2.2	Cosmetic Chemistry II	03	60	04	50	20	30	36	40	80+80
2.3	Herbal Cosmetics II	03	60	04	50	20	30	36	40	80+80
2.4	Dermatology II	03	60	04	50	20	30	36	40	80+80
2.5	Perfume & Colours I	03	60	04	50	20	30	36	40	80+80
2.6	Mathematics & Statistics-II	03	60	-	-	20	-	36	-	80
Total Marks for the semester									880	
<b>Semester-III</b>										
3.1	Cosmetic Technology III	03	60	04	50	20	30	36	40	80+80
3.2	Cosmetic Chemistry III	03	60	04	50	20	30	36	40	80+80
3.3	Beauty Culture & Clinical Cosmetic-I	03	60	04	50	20	30	36	40	80+80
3.4	Perfume & Colours II	03	60	04	50	20	30	36	40	80+80
3.5	Cosmetic Engineering-I	03	60	04	50	20	30	36	40	80+80
3.6	Dermatology-III	03	60	-	-	20	-	36	-	80
Total Marks for the semester									880	

Semester-IV										
4.1	Cosmetic Technology IV	03	60	04	50	20	30	36	40	80+80
4.2	Cosmetic Chemistry IV	03	60	04	50	20	30	36	40	80+80
4.3	Beauty Culture & Clinical Cosmetic-II	03	60	04	50	20	30	36	40	80+80
4.4	Cosmetic Analysis I	03	60	04	50	20	30	36	40	80+80
4.5	Cosmetic Engineering-II	03	60	04	50	20	30	36	40	80+80
4.6	Dermatology-IV	03	60	-	-	20	-	36	-	80
Total Marks for the semester										880
Semester-V										
5.1	Cosmetic Technology V	03	60	04	50	20	30	36	40	80+80
5.2	Perfume & Colour III	03	60	04	50	20	30	36	40	80+80
5.3	Herbal Cosmetics III	03	60	04	50	20	30	36	40	80+80
5.4	Physical Cosmetics I	03	60	04	50	20	30	36	40	80+80
5.5	Cosmetic Analysis II	03	60	04	50	20	30	36	40	80+80
5.6	Cosmetic Management I	03	60	-	-	20	-	36	-	80
Total Marks for the semester										880
Semester-VI										
6.1	Cosmetic Technology VI	03	60	04	50	20	30	36	40	80+80
6.2	Perfume & Colour IV	03	60	04	50	20	30	36	40	80+80
6.3	Herbal Cosmetics IV	03	60	04	50	20	30	36	40	80+80
6.4	Physical Cosmetics II	03	60	04	50	20	30	36	40	80+80
6.5	Cosmetic Analysis III	03	60	04	50	20	30	36	40	80+80
6.6	Cosmetic Management II	03	60	-	-	20	-	36	-	80
Total Marks for the semester										880
Semester-VII										
7.1	Cosmetic Technology-VII	03	60	04	50	20	30	36	40	80+80
7.2	Perfume & Colour V	03	60	04	50	20	30	36	40	80+80
7.3	Herbal Cosmetics V	03	60	04	50	20	30	36	40	80+80
7.4	Cosmetic Analysis IV	03	60	04	50	20	30	36	40	80+80
7.5	Cosmetic Engineering-III	03	60	04	50	20	30	36	40	80+80
7.6	Seminar	-	-	-	-	-	80	-	40	80
Total Marks for the semester										880

Semester-VIII										
8.1	Cosmetic Technology VIII	03	60	04	50	20	30	36	40	80+80
8.2	Perfume & Colour VI	03	60	04	50	20	30	36	40	80+80
8.3	Herbal Cosmetics VI	03	60	04	50	20	30	36	40	80+80
8.4	Cosmetic Jurisprudence	03	60	6	6	20	6	36	6	80
8.5	Cosmetic Engineering-IV	03	60	04	50	20	30	36	40	80+80
8.6	Project	6	6	-	6	6	80	6	40	80
Total Marks for the semester										800

**Seminar :-**

The topic for the seminar shall be assigned to him/her by the faculty members of Seventh semester & topic should be decided from the syllabus of same semester, with immediate from the date of the commencement of the seventh semester. Evaluation of seminar shall be based on the communication, representation and skill in oral presentation.

**Project Report :-**

The topic for the project shall be based on the practical work / theoretical/review oriented any topic from current Pharmaceutical development and shall be assigned to him/her by the respective guide from faculty members immediate from the date of the commencement of the sixth semester. Report to be submitted in the institute and examination (seminars on the project report) shall be conducted at the college level. Examination/ Evaluation of the project shall be based on Introduction and information retrieval systems, Organization of material and references in the project report, Representation, Skill in oral presentation, Questioning and defending, and finally on the report.

**Appendix – III****Scheme of Marks and Credits subject wise for B. Tech. (Semester wise) First to Eight Semester****Semester-I**

Subject Code	Subject	Maximum Marks (Credits)		Total Marks (Credits)
		Theory	Practical	
1.1	Cosmetic Technology I	80 (03)	80(1.5)	160 (4.5)
1.2	Cosmetic Chemistry I	80 (03)	80(1.5)	160 (4.5)
1.3	Herbal Cosmetics I	80 (03)	80(1.5)	160 (4.5)
1.4	Dermatology I	80 (03)	80(1.5)	160 (4.5)
1.5	Computer Application	80 (03)	-	80 (03)
1.6	Mathematics & Statistics-I	80 (03)	-	80 (03)
Total				800 (24)



**Semester-II**

Subject Code	Subject	Maximum Marks (Credits)		Total Marks (Credits)
		Theory	Practical	
2.1	Cosmetic Technology II	80 (03)	80(1.5)	160 (4.5)
2.2	Cosmetic Chemistry II	80 (03)	80(1.5)	160 (4.5)
2.3	Herbal Cosmetics II	80 (03)	80(1.5)	160 (4.5)
2.4	Dermatology II	80 (03)	80(1.5)	160 (4.5)
2.5	Perfume & Colours I	80 (03)	80(1.5)	160 (4.5)
2.6	Mathematics & Statistics-II	80 (03)	-	80 (03)
Total				880 (25.5)

**Semester-III**

Subject Code	Subject	Maximum Marks (Credits)		Total Marks (Credits)
		Theory	Practical	
3.1	Cosmetic Technology III	80 (03)	80(1.5)	160 (4.5)
3.2	Cosmetic Chemistry III	80 (03)	80(1.5)	160 (4.5)
3.3	Beauty Culture & Clinical Cosmetic-I	80 (03)	80(1.5)	160 (4.5)
3.4	Perfume & Colours II	80 (03)	80(1.5)	160 (4.5)
3.5	Cosmetic Engineering-I	80 (03)	80(1.5)	160 (4.5)
3.6	Dermatology III	80 (03)	-	80 (03)
Total				880 (25.5)

**Semester-IV**

Subject Code	Subject	Maximum Marks (Credits)		Total Marks (Credits)
		Theory	Practical	
4.1	Cosmetic Technology IV	80 (03)	80(1.5)	160 (4.5)
4.2	Cosmetic Chemistry IV	80 (03)	80(1.5)	160 (4.5)
4.3	Beauty Culture & Clinical Cosmetic-II	80 (03)	80(1.5)	160 (4.5)
4.4	Cosmetic Analysis I	80 (03)	80(1.5)	160 (4.5)
4.5	Cosmetic Engineering-II	80 (03)	80(1.5)	160 (4.5)
4.6	Dermatology IV	80 (03)	-	80 (03)
Total				880 (25.5)

**Semester-V**

Subject Code	Subject	Maximum Marks (Credits)		Total Marks (Credits)
		Theory	Practical	
5.1	Cosmetic Technology V	80 (03)	80(1.5)	160 (4.5)
5.2	Perfume & Colour III	80 (03)	80(1.5)	160 (4.5)
5.3	Herbal Cosmetics III	80 (03)	80(1.5)	160 (4.5)
5.4	Physical Cosmetics I	80 (03)	80(1.5)	160 (4.5)
5.5	Cosmetic Analysis II	80 (03)	80(1.5)	160 (4.5)
5.6	Cosmetic Management -I	80 (03)	-	80 (03)
Total				880 (25.5)

**Semester-VI**

Subject Code	Subject	Maximum Marks (Credits)		Total Marks (Credits)
		Theory	Practical	
6.1	Cosmetic Technology VI	80 (03)	80(1.5)	160 (4.5)
6.2	Perfume & Colour IV	80 (03)	80(1.5)	160 (4.5)
6.3	Herbal Cosmetics IV	80 (03)	80(1.5)	160 (4.5)
6.4	Physical Cosmetics II	80 (03)	80(1.5)	160 (4.5)
6.5	Cosmetic Analysis III	80 (03)	80(1.5)	160 (4.5)
6.6	Cosmetic Management II	80 (03)	-	80 (03)
Total				880 (25.5)

**Semester-VII**

Subject Code	Subject	Maximum Marks (Credits)		Total Marks (Credits)
		Theory	Practical	
7.1	Cosmetic Technology VII	80 (03)	80(1.5)	160 (4.5)
7.2	Perfume & Colour V	80 (03)	80(1.5)	160 (4.5)
7.3	Herbal Cosmetics V	80 (03)	80(1.5)	160 (4.5)
7.4	Cosmetic Analysis IV	80 (03)	80(1.5)	160 (4.5)
7.5	Cosmetic Engineering-III	80 (03)	80(1.5)	160 (4.5)
7.6	Seminar	0	80(1.5) (Internal)	80 (1.5)
Total				880 (24)

**Semester-VIII**

Subject Code	Subject	Maximum Marks (Credits)		Total Marks (Credits)
		Theory	Practical	
8.1	Cosmetic Technology VIII	80 (03)	80(1.5)	160 (4.5)
8.2	Perfume & Colour VI	80 (03)	80(1.5)	160 (4.5)
8.3	Herbal Cosmetics VI	80 (03)	80(1.5)	160 (4.5)
8.4	Cosmetic Jurisprudence	80 (03)	-	80 (3)
8.5	Cosmetic Engineering-IV	80 (03)	80(1.5)	160 (4.5)
8.6	Project	-	80(1.5)	80 (1.5)
Total				800(22.5)



he is mutually permitted on terms mutually agreed to complete the same and be eligible to appear for term end examination.

- 5) Seminar and the project shall be compulsory to each student at the end semester of VIIth and VIIIth Semester.
- 6) Paper setting and assessment for a particular course would be the responsibility of the course In-charge.
- 7) A student who passes the internal tests but fails in Term End Examination of a course shall be given FF grade.
- 8) Student with FF grade in a course would be granted credit for that course but not the grade for that course and shall have to clear the concerned course.
- 9) The evaluation is based on average weightage system. Every subject has credit point based system. Every student is awarded grade point out of maximum 10 points in each subject (based on 10 point scale).
- 10) Grades-Marks for each course would be converted to grades as shown in following Table 1 for theory and table 2 for practical.

**Table 1: Final Grade point for Theory**

Final grade	Range of Marks obtained out of 100 or equivalent fraction	Grade point
AA	90-100	10
AB	80-89	9
BB	70-79	8
BC	60-69	7
CC	55-59	6
CD	45-54	5
FF	Below 45	0
ZZ	Absent in Examination	

**Table 2: Final Grade point for Practical**

Final grade	Range of Marks obtained out of 100 or equivalent fraction	Grade point
AA	90-100	10
AB	80-89	9
BB	70-79	8
BC	60-69	7
CC	55-59	6
CD	50-54	5
FF	Below 50	0
ZZ	Absent in Examination	

- 11) Equivalence of the conventional division/class with the CGPA in final semester is in accordance with the following table 3 and Grade Points for SGPA and CGPA of B.Tech. Table-4.

**Table-3: Equivalence of Class/Division to CGPA**

Sr.No.	CGPA	Class/Division
1.	7.5 or more than 7.5	First Class with Distinction
2.	6.00 or more but less than or equal to 7.49	First Class
3.	5.50 or more but less than or equal to 5.99	Higher Second Class
4.	5.00 or more but less than or equal to 5.49	Second Class

**Table-4 : Grade Points for SGPA and CGPA of B. Tech.**

Grade Point	Final Grade
9 - 10	AA
8 - 8.99	AB
7 - 7.99	BB
6 - 6.99	BC
5.5 - 5.99	CC
4.5 - 5.49	CD
0 - 4.49	FF
Absent in Examination	ZZ

- 12) Based on the grade point obtained in each subject, Semester Grade Point Average (SGPA) and then Cumulative Grade Point Average (CGPA) are computed as follows.

**13) Computation of SGPA and CGPA**

Every student is awarded point out of maximum out of 10 point in each subject (Based on 10 point scale). Based on the Grade point obtained in subject the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are computed. The computation of SGPA and CGPA is as under.

Semester Grade Point Average (SGPA) is the weightage average of point obtained by a student in a semester and computed as follows.

$$SGPA = \frac{U_1 \times M_1 + U_2 \times M_2 + \dots + U_n \times M_n}{U_1 + U_2 + \dots + U_n}$$

Where  $U_1, U_2, \dots, U_n$  are subject credit of the respective course and  $M_1, M_2, \dots, M_n$  are the Grade point obtained in the respective subject (out of 10).

The Semester Grade Point Average (SGPA) for all the four semester is also mentioned at the end of every semester.

The Cumulative Point Average (CGPA) is used to describe the overall performance of a student in the course and is computed as under. CGPA shall be calculated on semester V, VI, VII & VIII.

$$CGPA = \frac{\sum_{n=5}^{n=8} SGPA(n)C(n)}{\sum_{n=5}^{n=8} C(n)}$$

Where SGPA (n) is the  $n^{\text{th}}$  semester SGPA of the student and  $C_n$  is the  $n^{\text{th}}$  semester total credit. The SGPA and CGPA are rounded off to the second place of decimal.

- 14) Degree will be awarded on the basis of the performance of credits from the Semester-V to VIII.

#### ACADEMIC CALENDAR AND TERMS

The terms and academic activities of the Sant Gadge Baba Amravati University under CGPA shall be as per the dates given below, only the years shall be changed i.e. the dates shall remain same as given below irrespective of the year.

Beginning of First Term : (Semester I, III, V and VII)	As per University academic calendar
Beginning of Second Term : (Semester II, IV, VI and VIII)	As per University academic calendar
Vacation :	As per University academic calendar

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### Syllabus Prescribed for B.Tech (Cosmetics) Semester-VII & VIII (Implemented from the Academic Session 2015-16)

#### B.Tech. (Cosmetics) VII<sup>th</sup> Semester

##### 7.1 Cosmetic Technology- VII

##### Theory

- 1) Microencapsulation :** Introduction, some Historical and other consideration, Reasons for microencapsulations pharmacological and physicochemical consideration.
- 2) Core and coating properties :** Introduction, Core properties, coating properties- Film formers, solvents Plasticizers. Surfactants, Channeling agents, waxy sealants & crosslinking agents.
- 3) Various methods employed for microencapsulation processes.
- 4) Liposomes : Introduction, Classification Various method employed to Prepare Liposomes using phosphatidylcholine. Future of liposomal preparation.
- 5) Skin care cosmetics :-** Shaving preparation wet shaving preparation. Introduction Beard softening cream. Lather shaving creams, lather shaving sticks, aerosoles shaving foams Brushless or non-lathering creams, brushless shaving stick, Dry shaving preparation  
Introduction, pre-electric shave lotion, collapsible foam, pre-electric shave gel stick, Talc stick, pre-electric shave powder

##### Practical :

- 1) Shaving preparation : Lather shaving cream, Brushless shaving cream, brushless shaving stick.
- 2) Stability studies on lather shaving cream, foot powder sunscreen cream & Lotions.
- 3) Loading of core material (Active) in microcapsule / Sphere core i.e. liquid or solids atleast three formulations
- 4) Preparation of liposome for Novel Cosmetics at least 3 formulations
- 5) Aerosol Preparation :
  - (a) Aerosol Shaving products Aerosol shampoo, Aerosol product that combine sunscreen & sunburn sunscreen acidity preparation sunscreen cream.
  - (b) Clear suntan lotion, sunscreen lotion, aqueous suntan anti sunburn lotion, lotion suntan cream (Vanishing cream base) suntan cream ( cold cream)

**References :**

- 1) Microencapsulation & related drug processes by Patrick B. Deasy
- 2) Cosmetics Science & Technology by Sagrin.
- 3) Novel Cosmetic Delivery system.
- 4) Harry's cosmetology.

**7.2 Perfume & Colour - V****Theory**

- 1) Sources of Raw material and their use in formulation of perfumes.
  - a. Essential Oils
  - b. Flavour oils
  - c. Resins
  - d. Fixatives
- 2) General formulations of perfumes- Building of perfumes & body of the perfumes synthetic substance used to formulate different perfume adaptation and incorporation of perfumes in cosmetic products.
- 3) Specially perfumed products : Formulation and processing of
  - a. Alcoholic fragrance solution. Manufacture of ethanol , purification of ethanol deodorization of ethanol
  - b. Emulsified and solid fragrances.
  - c. Solubilised perfumes.

**Practicals :**

- 1) Preparation of
  - a. Emulsified fragrances
  - b. Solid fragrances
  - c. Simple Floral fragrances
  - d. Alcoholic fragrances solution
  - e. Cologens & Toilet waters
- 2) Perfuming of powders

**Reference Books**

- 1) Perfume flowers & essential oil industries by S.B. Srivastva
- 2) Manufacture of perfumes, cosmetics, & Dekigents by Giriraj prasad
- 3) Cosmetics ó Science & Technology By Sagarin.
- 4) Industrial pharmacy- By leon Lachman

**7.3 Herbal Cosmetics- V****Theory**

- 1) Evaluation of Natural Products :- A study of exogenous & endogenous factors detecting quality & purity of drugs by special emphasis on 1) Morphological or organoleptic evolution 2) Microscopy evaluation 3) Chemical Evaluation 4) Physical Evaluation 5) Biological Evaluation.
- 2) GLPs regulatory requirements for pre/non clinical & clinical studies to produce standard herbal products. Introduction, Regulatory requirements ethical considerations, good laboratory practices for non-clinical laboratory studies.
- 3) Systematic examination of powdered drugs ó Examination of organized & unorganized drugs
- 4) Extraction of Medicinal plants- Types of Herbal extracts processing, quality, assurance choice of solvents, instructions prior to extraction, Drying of extracts & some special considerations.

**Practical**

- 1) Estimation of the parameters limit used for standardisation :-
  - a. Determination of Foreign matter
  - b. Thin layer chromatography
  - c. Determination of Ash Values.
    - i. Total Ash
    - ii. Acid in soluble ash
    - iii. Water soluble ash
    - iv. Sulphated Ash
- 2) Determination of extractable matter
  - i. Alcohol soluble extractive value.
  - ii. Determination of water-soluble extractive value
  - iii. Determination of Moisture content
  - iv. Determination of volatile oils in drugs.

**References :-**

- 1) Herbal drug Technology, By S.S. Agrawal & M. Paridavi.
- 2) Natural excipients ó By Dr. R.S. Gaud, Dr. S.J. Surana, Dr. G.S. Table, Mrs. S.G. Talele, S.B. Gokhale

- 3) Trease & Evans ó Text Book of Pharmacognosy.
- 4) Pharmacognosy & Phytochemistry Vol I & II, Mommed Ali.
- 5) Herbal drug technology, by S.S. Agrawal, M. Paridhavi?

#### 7.4 Cosmetic Analysis - IV

##### Theory

- 1) Importance of quality control in cosmetic preparations and guidelines for hygienic manufacture of cosmetics.
- 2) Evaluation of active ingredients in finished products.
- 3) Tanning and whitening agents , Hair Dyes, Preservatives, Sunscreen preparation, shampoo, tooth pastes, powders, lipsticks & common cosmetics and toiletry products.
- 4) General concept of microbial analysis classification, nutritional requirements of microbes, factors influencing antimicrobial activity, physical and chemical control and antimicrobial assay.

##### Practicals

- 1) Staining techniques, preparation of media. Isolation of culture.
- 2) Aseptic transfer
- 3) Antimicrobial assay & MIC determination of antibacterial agents used in cosmetics.
- 4) Experiments based on various chromatographic techniques e.g. TLC, Paper, Column, ion exchange chromatography etc.
- 5) Evaluation of active ingredients from finished products (at least 5 products)

##### Reference Book

- 1) Chattan, Text Book of Pharmaceutical Chemistry.
- 2) Connors K.A.A. Text Book of Pharmaceutical Analysis
- 3) Vogel
- 4) Bentley and Drivers Text Book of Pharmaceutical Chemistry

#### 7.5 Cosmetic Engineering- III

##### Theory

- 1) Design consideration : Different materials of construction, material selection corrosion, physical & mechanical, Iron, steel Aluminium & their alloys.
- 2) Process Hazards & Safety measures in Equipments design : Introduction, hazards in process Industries, analysis of hazards, safety measures, safety measures in equipment designs.
- 3) Centrifuging : Introduction, general principles, theoretical aspects, classification, laboratory equipment, large scale equipments, semicontinue cetrifuge.
- 4) Reaction vessel : Material of construction, agitation, classification of reaction vessels, heating system design considerations.
- 5) Pressure vessel : Introduction, operating conditions, selection of a material, vessel operating at low temperature, vessels operating at elevated temperature, design consideration. Design of shell & its components.
- 6) Corrosion :- Definition, types, mechanism. Prevention of corrosion.

##### Reference

- 1) Introduction to chemical engineering Badger & Benchro.
- 2) Pharmaceutical Engineering by A.R. Paradkar
- 3) Pharmaceutical Engineering by Sanba Murthi
- 4) Chemical Engineers Hand book by Ferry & Chilton
- 5) Carrosion:- Mechanism, Types, factors inflencing corresion methods to combut corresion.
- 6) Unit operation of chemical engineering by W. Mccab, J.C. Smith, P.Harriot McGraw hills (1993)

##### Practical :

- 1) Use of instruments, practice of lettering.
- 2) Elementary ideas of first angle & third angle projections. Top view, front view & Sections.
- 3) Projections of simple solids as cone, cylinder, prism
- 4) Section of solids
- 5) Various machine elements like screw threads, nuts & bolts rivets, shafts keys, coupling & joints.

**References Books**

- 1) Engineering Drawing by N.D.Bhat.
- 2) Introduction chemical Engineering by Badger & Benchro
- 3) Pharmaceutical Engineering by Paradkar

**7.6 Seminar**

As given in Appendix-II.

**B.Tech. (Cosmetics) VIII<sup>th</sup> Semester****8.1 Cosmetic Technology- VIII****Theory**

- 1) **Hair care cosmetics** : Hair colorants Introduction hair, colouring systems. Characteristics of ideal hair colourants. Toxicity & dangers of para dyes formulation of permanent hair dyes. other dyes for hair aromatic polyhydroxy compounds, Vegetable hair dyes, metallic hair dyes.
- 2) **Hair straighteners** : Introduction, hot comb method, caustic preparation, chemical hair reducing preparations.
- 3) **Oral Care cosmetics** : Dentifrices ó Basic requirement of dentifrices. Basic structure of tooth, tooth paste ingredients. formulations of tooth paste, manufacturing of tooth paste, tooth powders, manufacturing of tooth powder.
- 4) **Mouthwashes** : Introduction choice of antibacterial agents, flavouring of mouthwashes, aerosol mouth freshener.
- 5) Current trends in cosmetics formulations use of nutraceuticals & cosmeceuticals in cosmetics with examples.

**Practicals**

- 1) Development & Formulation of hair dye formulations
- 2) Preparation based on nutraceuticals & cosmeceuticals
- 3) Study of rheological properties of some creams wing brook field viscometer a practical demonstration.
- 4) Dentifrices ó Preparation of
  - i) Tooth paste ó Simple , Gel type & Astringent type.
  - ii) Tooth Powders
  - iii) Mouth Washes ó Preparation & Evaluation of Antibacterial & Astringent

**References :**

- 1) Microencapsulation & related drug processes by Patrick B. Deasy
- 2) Cosmetics Science & Technology by Sagrin.
- 3) Novel Cosmetic Delivery system.
- 4) Harrø cosmetology.

**8.2 Perfume & Colour - VI****Theory**

- 1) Packaging of perfumes with special emphases on aerosol products. Principle and mechanism, method of preparation , cold fill method and press fill method and packaging.
- 2) Classification of colours : Colours, obtained from natural sources and synthetic colours and its application in cosmetic.
- 3) Dyes :- Nomenclature and classification. Study of natural & synthetic dyes.

**Practicals :**

- 1) Synthesis of colours
- 2) Incorporation of colours in various cosmetics preparations.
- 1) Preparation of hair dyes.

**Reference Book**

- 1) Perfume flowers & essential oil industries by S.B. Srivastva
- 2) Manufacture of perfumes, cosmetics, & Detergents by Giriraj Prasad
- 3) Cosmetics ó Science & Technology By Sagarin.
- 4) Industrial pharmacy- By Leon Lachman

**8.3 Herbal Cosmetics- VI****Theory**

- 1) Evaluation of Extract ó Plants of equipment for processing herbal extracts its introduction process and equipments utilities & equipments.
- 2) Standardization of Herbal Drugs :- Importance of Standardization & problems involved in the standardization of herbs, standardization of single drugs and compounds formulation, WHO Guidelines for quality standardized herbal formulation, estimation of the parameter limits used for standardisation herbal extracts.

- 3) Applications of chromatography and spectroscopy in plants drugs analysis .
- 4) Antioxidant approach with special emphasis on Herbal Drugs :- Introduction, free radicals and their role, antioxidant defence, some plants with reports on antioxidants, activity, Dietary- Antioxidants.

#### Practicals :

- 1) Evaluation of Herbal Extract.
  - i) Colour of the extract
  - ii) Smell of the extract
  - iii) pH of the extract
  - iv) U.V. & visible spectrophotometry
  - v) Colorimetry assays
  - vi) Thin layer chromatography
  - vii) Densitometry
  - viii) HPLC Technique
  - ix) Infrared spectroscopy

#### References :-

- 1) Herbal drug Technology, by S.S. Agrawal & M. Paridavi.
- 2) Natural excipients ó by Dr. R.S. Gaud, Dr. S.J. Surana, Dr. G.S. Table, Mrs. S.G. Talele S.B. Gokhale
- 3) Trease & Evans ó Text Book of Pharmacognosy.
- 4) Pharmacognosy & Phytochemistry Vol I & II, Mommed Ali.
- 5) Herbal drug technology, by S.S. Agrawal, M. Paridhavi

### 8.4 Cosmetic Jurisprudence

#### Theory

##### 1) Drug & Cosmetics Acts & Rules

Objectives & introduction, definitions, drug technical advisory board, drug consultative committee, central drug laboratory, Government analyst, drug inspector, custom collector import of drugs , classes of drugs prohibited to import. Packing & labelling of imported drugs.

Scheduled M. (ii) Requirement of factory premises for manufacturing of cosmetics. General requirement. Requirements of plant and equipment. Good manufacturing practice related to cosmetics.

- 2) **Factory Act :-** Introduction, provision regarding health & workers, provision regarding safety of workers provisions regarding welfare or workers medical examination.
- 3) **Contract Act :-** Essential element of contact agreement to control, types of contract objective of contract act, Indian contract Act (1872).
- 4) **Sales Promotion Employees Act :-** Application power of central Government to declare certain industries to be notified industries. Issues of appointment letter, application of certain act to sales promotion employees maintenance of register inspector & penalty offences companies.
- 5) **Medicinal & Toilet preparation Act & Rules :-** Objective, definition bonded laboratory bonded manufacturing, non-bonded laboratory exemption from duty.
- 6) **Introduction to regulatory agencies :** U.S. FDA, UKMCA, TGA guidelines etc for cosmetics.

#### Reference Books

- 1) Forensic Pharmacy by B.S. Kuchekar & A.M. Khadatare
- 2) Drugs and cosmetics act 1940 Govt. of India Publication.
- 3) Text Book of Forensic Pharmacy by B.M. Mittal
- 4) IP, BP, NF, USP

### 8.5 Cosmetic Engineering- IV

#### Theory

- 1) Design of machine element : Shafts, Keys, pins couplings. Belt and pulleys, Chain Drives, Gear Drivers, revetted joints, welded joints, Threaded fasteners.
- 2) Storage vessels : Storage vessel for fluids non volatile fluids, volatile liquids gases desing of tanks, Nozzle & mountings
- 3) Distillation : Roults law & Henrys law theory of distillation of Binary mixtures of miscible immiscible & practically immiscible liquids, study of distillation equipments used for simple, vacuum, steam distillation. Reflux & molecular distillation, separation of Azeotropes (Binary & Ternary) & liquids of similar volatility rectification & fractionation.
- 4) Crushing and Grinding : Introduction, classification of crushing & grinding machinery, Theory of crushing Rittingers law, crushing operation, closed circuit grinding .
- 5) Refrigeration : Introduction , Refrigeration equipment, Brine systems, Refrigeration load absorption systems.



- 6) Agitators : Introduction, Types power, requirement design of agitation systems Components. Drive for agitators.
- 7) Heat Exchangers : Introduction types , design of shell & tube heat exchanger.

**Practicals**

- 1) Design of reaction vessel.
- 2) Design of pressure vessel
- 3) Design of heat exchanges
- 4) Design of agitator
- 5) Design of dryer
- 6) Separation of azeotropic mixture
- 7) Determination of boiling point of a pure volatile liquid & mixture of volatile liquids using boiling point diagram.

**References Books**

- 1) Engineering Drawing by N.D.Bhat.
- 2) Introduction chemical Engineering by Badger & Benchro
- 3) Pharmaceutical Engineering by Paradkar

**8.6 Project**

As given in Appendix-II.

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