



SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under section 3 of the UGC Act, 1956)

Re-accredited by NAAC with 'A++' Grade | Awarded Category - I by UGC

Founder: Prof. Dr. S. B. Mujumdar, M. Sc., Ph. D. (Awarded Padma Bhushan and Padma Shri by President of India)

SIU/ACAD/2024/1021

Date: 27/02/2024

To
The Director
Symbiosis Institute of Health Sciences
Pune

Subject: Approval of the Revised Programme Structure of Bachelor of Science (Radiotherapy) Honours/ Honours with Research Programme for the batch 2023-27

Dear Madam,

Please find attached the Revised Programme Structure of Bachelor of Science (Radiotherapy) Honours/ Honours with Research Programme Structure 2023-27 duly approved by the Academic Council

Sr. No.	Programme	Batch
1	Bachelor of Science (Radiotherapy) Honours/ Honours with Research (Revision 01)	2023-27

The revised programme structure supersedes the previously approved programme structures referred in the above letter

Thanking you.

Sincerely,

Dr. Asmita Dani
Director- Academics

Copy to: Controller of Examinations, SIU



Symbiosis Institute of Health Sciences, Pune
Bachelor of Science (Radiotherapy) Honours/ Honours with Research
Programme Structure 2023-27

1.	OBJECTIVE	To train students in Radiotherapy techniques with specific objective driven learning such as Radiation safety, Special patient preparation before the study to obtain the most accurate result in radiotherapy procedures and handling the machines used for the procedures effectively. These students would be in a position to competently assist the Physician, to cater to the branch of Radiotherapy globally.				
2.	DURATION (IN MONTHS)	48 (Full Time) With Multiple Entry and Multiple Exit Options				
3.	INTAKE	6				
4.	RESERVATION	I. Within the sanctioned intake	a) SC (In Percentage)	b) ST (In Percentage)	c) Differently abled (In Percentage)	d) Defence (In Percentage)
			15	7.5	3	0
		II. Over and above the sanctioned intake	a) Kashmiri Migrants (In Seats)		b) International Students (In Percentage)	
			2		20	
5.	ELIGIBILITY	<p>Passed Standard XII (10+2) or equivalent examination from any recognised Board with any two of the following subjects: Physics, Chemistry, Biology, Botany, Zoology, Biochemistry, Microbiology, Mathematics OR equivalent as decided by competent authority, with a minimum of 50% marks or equivalent grade (45% Marks or equivalent grade for Scheduled Caste / Scheduled Tribes).</p> <p>Students who wish to opt for Honours with Research must earn a 7.5 CGPA and above at the end of Semester-6.</p> <p>Eligibility Criteria for the Multiple entries would be as per University's Lateral Entry Rules for FYUG Programmes.</p>				

6.	SELECTION PROCEDURE	Selection based on marks in Qualifying Examination followed by Entrance Examination, Personal Interaction and Written Ability Test. Selection Procedure for the Multiple Entry would be as per the University's Lateral Entry Rules for FYUG Programmes				
7.	MEDIUM OF INSTRUCTION	English				
8.	PROGRAMME PATTERN	Semester				
9.	COURSE & SPECIALIZATION	<p>As per Annexure A</p> <p>List of Majors Offered- Radiotherapy</p> <p>List of Minors Offered- Healthcare IT & Applied Management</p>				
10.	FEE		Academic Fee p. a.	Institute Deposit	Total	
		Indian Students (Amount in INR)	2,03,000	20,000	2,23,000	
		International Students	NRI/ PIO/ OCI Category (Amount in US\$)	3,970	275	4,245
			Foreign National Category (Amount in US\$)	1,300	275	1575
11.	ASSESSMENT	The courses will have 40% Continuous Assessment and 60% Term End [University] examination however, some courses (not more than 30% of the total programme credits) may have 100% Continuous Assessment.				

12.	STANDARD OF PASSING	The assessment of the student for each examination is done based on relative performance. Maximum Grade Point (GP) is 10 corresponding to O (outstanding). For all courses, a student is required to pass both Continuous Assessment and Term End examinations separately with a minimum Grade Point of 4 corresponding to Grade P. Students securing less than 40% marks in any head of passing will be declared FAIL. The University awards a Degree to the student who has achieved a minimum CGPA of 4 out of a maximum of 10 CGPA for the Programme.
13.	AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE	<p>Bachelor of Science (Radiotherapy) with the applicable Minor will be awarded at the end of the semester-6 by taking into consideration the performance of all semester examinations subject to obtaining a minimum of 4.00 CGPA out of 10 CGPA.</p> <p>Bachelor of Science (Radiotherapy) Honours with the applicable Minor will be awarded at the end of the semester-8 by taking into consideration the performance of all semester examinations subject to obtaining a minimum 4.00 CGPA out of 10 CGPA.</p> <p>Bachelor of Science (Radiotherapy) Honours with Research with the applicable Minor will be awarded at the end of the semester- 8 by taking into consideration</p>

14. CLASSIFICATION OF CREDITS AND NUMBER OF NON-CREDIT COURSES											
Semester	Major	Minor	Multi-disciplinary	Ability Enhancement	Skill Enhancement	Common Value Added	Summer Internship	Research Project / Dissertation	Total Credits	No. of Mandatory Non-Credit Course/s	No. of Non-Credit Audit Courses
1	10	5	0	2	3	3	0	0	23	1	As per the Student's Choice
2	7	3	3	3	3	1	0	0	20	1	
3	12	3	3	1	0	2	0	0	21	1	
4	8	4	3	2	4	0	0	0	21	1	
5	12	4	0	0	0	0	4	0	20	1	
6	15	5	0	0	0	0	0	0	20	0	
Total	64	24	9	8	10	6	4	0	125	5	
Honours											
7	14	6	0	0	0	0	0	0	20	0	
8	6	2	0	0	0	0	0	12	20	0	
Total	84	32	9	8	10	6	4	12	165	0	
Honours with Research											
7	14	6	0	0	0	0	0	0	20	0	
8	6	2	0	0	0	0	0	12	20	0	
Total	84	32	9	8	10	6	4	12	165	0	

Note- In the case of missing Catalogue Course Codes in Annexure A, the Course Codes will be incorporated in the revised programme structure subject to the approval of the respective course outlines from the Academic Council.

This Programme Structure is aligned with the norms laid down by the University and is approved by the Academic Council. Hereafter changes (if any) which conform to the policy on "Curriculum Development and Review" would be permissible, subject to revision of the Programme Structure, following the specified processes.


Director - Academics



Symbiosis Institute of Health Sciences, Pune
Bachelor of Science (Radiotherapy) - Honours/ Honours with Research
Programme Structure 2023-27

Annexure A

Catalogue Course Code	Course Code	Course Title	Major / Minor	Credits	Continuous Assessment Marks (Theory)	Term End Examination Marks (Theory)	Continuous Assessment Marks (Practical)	Term End Examination Marks (Practical)	Total Marks
Semester - 1									
Discipline-Specific Courses/Major Courses									
TH4492	0401250101	Anatomy I		3	20	30	0	25	75
TH4491	0401250102	Physiology I		3	20	30	0	25	75
T4946	0401250103	Basic Sciences		2	20	0	0	30	50
TH4497	0401250104	Psychology and Sociology		2	20	30	0	0	50
Minor Courses									
T3755	0401250105	Basics of MS Office		3	75	0	0	0	75
TH4496	0401250106	Medical Physics		2	20	30	0	0	50
Ability Enhancement Course									
T6483	0401250107	Creative Writing		2	20	30	0	0	50
Skill Enhancement Courses									
TH4503	0401250108	Personality Development for Allied Health Professionals		3	30	45	0	0	75
Common Value-Added Course									

Catalogue Course Code	Course Code	Course Title	Major / Minor	Credits	Continuous Assessment Marks (Theory)	Term End Examination Marks (Theory)	Continuous Assessment Marks (Practical)	Term End Examination Marks (Practical)	Total Marks
T6359	0401250109	Introduction to Culture & India		3	30	45	0	0	75
Mandatory Non-Credit Course									
T4005	0401250110	Integrated Disaster Management		0	0	0	0	0	0
Grand Total				23	210	240	0	125	575
Semester – 2									
Major Courses									
TH4504	0401250201	Anatomy II		2	20	0	0	30	50
TH4505	0401250202	Physiology II		2	20	0	0	30	50
TH4506	0401250203	Basics of Epidemiology		3	30	45	0	0	75
Minor Course									
TH4507	0401250204	Hospital Information System		2	50	0	0	0	50
T4440	0401250205	Applied Mathematics		1	25	0	0	0	25
Ability Enhancement Course									
TH4493	0401250206	Communication Skills for Allied Health Professionals I		3	75	0	0	0	75
Skill Enhancement Courses									
TH4494	0401250207	Soft Skills for Allied Health Professionals		3	30	45	0	0	75

Catalogue Course Code	Course Code	Course Title	Major / Minor	Credits	Continuous Assessment Marks (Theory)	Term End Examination Marks (Theory)	Continuous Assessment Marks (Practical)	Term End Examination Marks (Practical)	Total Marks
Common Value-Added Courses									
T4439	0401250208	Nutrition and Dietetics		1	25	0	0	0	25
Mandatory Non-Credit Courses									
TH4095	0401250209	Fitness for Life		0	0	0	0	0	0
Multidisciplinary Courses									
(Choose Any One Course from the University Basket of Multidisciplinary Courses given in Annexure B)									
-	-	MD1		3	75	0	0	0	75
Grand Total				20	275	135	0	90	500
Semester – 3									
Discipline-Specific Courses/Major Courses									
T4948	0401250301	Basic Biochemistry		4	40	40	0	20	100
T4107	0401250302	Basic Pharmacology		2	20	0	0	30	50
Major Courses									
TH4058	0401250303	Applied Clinical Sciences (Radiotherapy)		2	20	30	0	0	50
TH4014	0401250304	Principles of Practical Radiotherapy		2	20	0	0	30	50
TH4013	0401250305	Radiation Protection and Safety		2	20	30	0	0	50
Minor Courses									
F0002	0401250306	Flexi Credit Course		2	50	0	0	0	50

Catalogue Course Code	Course Code	Course Title	Major / Minor	Credits	Continuous Assessment Marks (Theory)	Term End Examination Marks (Theory)	Continuous Assessment Marks (Practical)	Term End Examination Marks (Practical)	Total Marks
T4427	0401250307	Medical Ethics and Legal Aspects		1	25	0	0	0	25
Ability Enhancement Courses									
	0401250308	Communication Skills for Allied Health Professionals- II		1	25	0	0	0	25
Common Value-Added Course									
T6284	0401250309	Contemporary India and The World		2	50	0	0	0	50
Mandatory Non-Credit Course									
TH4535	0401250310	Emotional Well-being		0	0	0	0	0	0
Multidisciplinary Courses									
(Choose Any One Course from the University Basket of Multidisciplinary Courses given in Annexure B)									
-	-	MD2		3	75	0	0	0	75
Grand Total				21	345	100	0	80	525
Semester - 4									
Discipline-Specific Courses/Major Courses									
T4950	0401250401	Pathology		4	40	40	0	20	100
Major Courses									
T4938	0401250402	Introduction to Medical Imaging		2	20	30	0	0	50

Catalogue Course Code	Course Code	Course Title	Major / Minor	Credits	Continuous Assessment Marks (Theory)	Term End Examination Marks (Theory)	Continuous Assessment Marks (Practical)	Term End Examination Marks (Practical)	Total Marks
T4380	0401250403	Principles of Brachytherapy & Teletherapy		2	20	30	0	0	50
Minor Courses									
T8000	0401250404	Service Learning		4	100	0	0	0	100
Ability Enhancement Course (Choose Any One from the Following Courses)									
T6399	0401250405	Basic Marathi I		2	20	0	0	30	50
T6521	0401250406	Basic German I		2	20	0	0	30	50
T6523	0401250407	Basic French I		2	20	0	0	30	50
Total Required Credits				2	20	0	0	30	50
Skill Enhancement Course									
TH4514	0401250408	Hospital Practices and Patient Care		4	40	40	0	20	100
Mandatory Non-Credit Course									
	0401250409	Vasudhaiva Kutumbakam		0	0	0	0	0	0
Multidisciplinary Course (Choose Any One Course from the University Basket of Multidisciplinary Courses given in Annexure B)									
	-	MD3		3	75	0	0	0	75
Grand Total				21	315	140	0	70	525
Semester - 5									

Catalogue Course Code	Course Code	Course Title	Major / Minor	Credits	Continuous Assessment Marks (Theory)	Term End Examination Marks (Theory)	Continuous Assessment Marks (Practical)	Term End Examination Marks (Practical)	Total Marks
Discipline-Specific Courses/Major Courses									
T4949	0401250501	Basic Microbiology & Parasitology		4	40	40	0	20	100
Major Courses									
T4375	0401250502	Principles of Radiation Oncology		2	20	30	0	0	50
TH4094	0401250503	Practical Brachytherapy and Teletherapy		4	40	40	0	20	100
	0401250504	Radiotherapy Dosimetry-I		2	20	30	0	0	50
Minor Course									
TH4018	0401250505	Radiotherapy Machines, Instrumentation and Quality Assurance		4	40	40	0	20	100
Summer Internship									
T4904	0401250506	Internship		4	100	0	0	0	100
Mandatory Non-Credit Course									
T2883	0401250507	Core Environmental Studies		0	0	0			0
Grand Total				20	260	180	0	60	500
Semester – 6									

Catalogue Course Code	Course Code	Course Title	Major / Minor	Credits	Continuous Assessment Marks (Theory)	Term End Examination Marks (Theory)	Continuous Assessment Marks (Practical)	Term End Examination Marks (Practical)	Total Marks
Discipline-Specific Courses/Major Courses									
T2225	0401250601	Research Methodology		2	20	30	0	0	50
T4451	0401250602	Basic Life Support		2	20	0	0	30	50
Major Courses									
T4383	0401250603	Clinical Oncology I		4	40	40	0	20	100
TH4017	0401250604	Radiotherapy Dosimetry-II		3	20	30	0	25	75
T4376	0401250605	Radiobiology		2	20	0	0	30	50
TH4015	0401250606	Patient Set-up in Radiotherapy Treatment		2	20	30	0	0	50
Minor Courses									
T2560	0401250607	Principles and Practices of Management		2	20	30	0	0	50
	0401250608	Quality in Healthcare		3	30	45	0	0	75
Grand Total				20	190	205	0	105	500
Note: Students exiting at the end of the sixth semester and earning 125 credits will be awarded a "Bachelor of Science (Radiotherapy)" degree. Total Credits at the end of the Third year (Major 64, Minor 24, Multidisciplinary 9, Ability Enhancement Courses 8, Skill Enhancement Courses 10, Summer Internship 4, Common Value-Added Courses 6).									
Semester – 7									
(Honours/ Honours with Research)									
Major Course									

Catalogue Course Code	Course Code	Course Title	Major / Minor	Credits	Continuous Assessment Marks (Theory)	Term End Examination Marks (Theory)	Continuous Assessment Marks (Practical)	Term End Examination Marks (Practical)	Total Marks
	0401250701	Entrepreneurship in Healthcare		2	20	0	0	30	50
T4874	0401250702	Review of Literature -II		2	50	0	0	0	50
T4004	0401250703	Biostatistics & Basic Epidemiology		2	20	30	0	0	50
	0401250704	Research Proposal Writing		2	20	0	0	30	50
T4996	0401250705	Advanced Cardiac Life Support (ACLS)		4	40	40	0	20	100
	0401250706	Recent Advances In Radiotherapy		2	20	30	0	0	50
Minor Courses									
TH4163	0401250707	Telemedicine Technology		2	50	0	0	0	50
	0401250708	Artificial Intelligence in Healthcare		2	50	0	0	0	50
T4939	0401250709	Applied Management in Radiotherapy Unit		2	20	30	0	0	50
Grand Total				20	290	130	0	80	500
Semester - 8									
(Honours)									
Major Courses									
	0401250801	Research Grant Writing		2	50	0	0	0	50
F0002	0401250802	Flexi Credit Course		2	50	0	0	0	50

Catalogue Course Code	Course Code	Course Title	Major / Minor	Credits	Continuous Assessment Marks (Theory)	Term End Examination Marks (Theory)	Continuous Assessment Marks (Practical)	Term End Examination Marks (Practical)	Total Marks
	0401250803	Emerging Trends in Allied Health Care		2	50	0	0	0	50
Minor Courses									
	0401250804	Patent & Intellectual Property Rights		2	20	30	0	0	50
Research Project									
T4812	0401250805	Research Project		12	120	0	0	180	300
(Honours with Research)									
Major Courses									
	0401250801	Research Grant Writing		2	50	0	0	0	50
F0002	0401250802	Flexi Credit Course		2	50	0	0	0	50
	0401250803	Emerging Trends in Allied Health Care		2	50	0	0	0	50
Minor Courses									
	0401250804	Patent & Intellectual Property Rights		2	20	30	0	0	50
Research Project									
T4712	0401250806	Dissertation		12	120	0	0	180	300
Grand Total				20	290	30	0	180	500
Note:									
Total Credits at the end of Fourth year for "Bachelor of Science (Radiotherapy) – Honours" – 165 (Major 84, Minor 32, Multidisciplinary 9, Ability Enhancement Courses 8, Skill Enhancement Courses 10, Summer Internship 4, Research Project 12, Common Value-Added Courses 6).									
Total Credits at the end of Fourth year for "Bachelor of Science (Radiotherapy) – Honours with Research" – 165 (Major 84, Minor 32, Multidisciplinary 9, Ability Enhancement Courses 8, Skill Enhancement Courses 10, Summer Internship 4, Dissertation 12, Common Value-Added Courses 6).									



Symbiosis Institute of Health Sciences, Pune
Bachelor of Science (Radiotherapy) - Honours/ Honours with Research
Programme Structure 2023-27

SUMMARY

Semester	100% Continuous Assessment Credits	Term End (University) Examination Credits	Total Credits	Total Marks
1	3	20	23	575
2	10	10	20	500
3	9	12	21	525
4	7	14	21	525
5	4	16	20	500
6	0	20	20	500
Total	33	92	125	3125
Honours				
7	6	14	20	500
8	6	14	20	500
Total	45	120	165	4125
Honours with Research				
7	6	14	20	500
8	6	14	20	500
Total	45	120	165	4125



Symbiosis Institute of Health Sciences, Pune
Bachelor of Science (Radiotherapy) - Honours/ Honours with Research
Programme Structure 2023-27

Annexure B

List of Multidisciplinary Courses

S. No.	Catalogue Course Code	Course Code			Course Title	Credit
		Semester 2	Semester 3	Semester 4		
1	THM6037	0401250210	0401250311	0401250410	Statistics of Nature	3
2	T1454	0401250211	0401250312	0401250411	Constitutional Law I	3
3	T2119	0401250212	0401250313	0401250412	Consumer Behaviour and Insights	3
4	TH4542	0401250213	0401250314	0401250413	Dancercise	3
5	T3499	0401250214	0401250315	0401250414	Data Analysis Using Python	3
6	TH4541	0401250215	0401250316	0401250415	Data Analytics in Sports	3
7	T5787	0401250216	0401250317	0401250416	Digital Design Tools – Visual Media	3
8	TH4539	0401250217	0401250318	0401250417	Fitness and Sports	3
9	T2467	0401250218	0401250319	0401250418	Fundamentals of Brand Management	3
10	T3754	0401250219	0401250320	0401250419	Fundamentals of Cloud Computing	3
11	TE7456	0401250220	0401250321	0401250420	Fundamentals of Cyber Security	3
12	TM2055	0401250221	0401250322	0401250421	Fundamentals of Marketing Research	3
13	THM6023	0401250222	0401250323	0401250422	Games of Uncertainty	3
14	T4729	0401250223	0401250324	0401250423	Intellectual Property Rights	3
15	T1471	0401250224	0401250325	0401250424	Law of Contracts	3
16	T3741	0401250225	0401250326	0401250425	Web Development using CMS	3
17	T5953	0401250226	0401250327	0401250426	Public Relations and Corporate Communication	3
18	T6767	0401250227	0401250328	0401250427	Public Policy in India	3
19	T2489	0401250228	0401250329	0401250428	Renewable Energy Sources	3
20	TE7223	0401250229	0401250330	0401250429	Smart Urban Planning	3
21	T2701	0401250230	0401250331	0401250430	Social Entrepreneurship	3

22	TH4569	0401250231	0401250332	0401250431	Brain Fit Body Fit	3
23	TM2154	0401250232	0401250333	0401250432	Personal Financial Planning and Wellbeing	3
24	T2016	0401250233	0401250334	0401250433	Financial Market and Institutions	3
25	T2273	0401250234	0401250335	0401250434	Emotional Intelligence for Personal Growth	3
26	T2276	0401250235	0401250336	0401250435	Cross Cultural Management	3
27	T2471	0401250236	0401250337	0401250436	Introduction to Digital Marketing	3
28	T3698	0401250237	0401250338	0401250437	Introduction to Python	3
29	T3757	0401250238	0401250339	0401250438	Applications of Spreadsheets in Business Statistics	3
30	T6002	0401250239	0401250340	0401250439	Communication Theories	3
31	T6008	0401250240	0401250341	0401250440	Communication for Creative Industry	3
32	T6023	0401250241	0401250342	0401250441	Film, Documentary & TV Appreciation	3
33	T6306	0401250242	0401250343	0401250442	Consumer Behavior	3
34	T6614	0401250243	0401250344	0401250443	Voice and Accent Neutralization	3
35	T6736	0401250244	0401240345	0401250444	Economic Journalism	3
36	T6756	0401250245	0401250346	0401250445	Economics	3
37	T6763	0401250246	0401250347	0401250446	Political Science I	3
38	T6768	0401250247	0401250348	0401250447	India's Political Economy and Development	3
39	T8461	0401250248	0401250349	0401250448	Introduction to User Experience	3
40	TH4363	0401250249	0401240350	0401250449	Cognitive Psychology	3
41	TH4536	0401250250	0401250351	0401250450	Yoga and Stress Management	3
42	TH4537	0401250251	0401250352	0401250451	Well for Life	3
43	TH4538	0401250252	0401250353	0401250452	Weight Training and Conditioning	3
44	TH4540	0401250253	0401250354	0401250453	Self Defence	3
45	THM6015	0401250254	0401250355	0401250454	Principles of Economics	3
46	THM6017	0401250255	0401250356	0401250455	Macroeconomics for Business	3