



**Symbiosis Institute of Health Sciences, Pune**  
**Bachelor of Science (Radiotherapy)**  
**Programme Structure 2020-23**

1.	<b>OBJECTIVE</b>	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.	<b>DURATION (IN MONTHS)</b>	36 (Full Time)			
3.	<b>INTAKE</b>	6			
4.	<b>RESERVATION</b>	<b>I. Within the sanctioned intake</b>	<b>a) SC (In Percentage)</b>	<b>b) ST (In Percentage)</b>	<b>c) Differently abled (In Percentage)</b>
			15	7.5	3
		<b>II. Over and above the sanctioned intake</b>	<b>a) Kashmiri Migrants (In Seats)</b>	<b>b) International Students (In Percentage)</b>	
			2	15	
5.	<b>ELIGIBILITY</b>	Std. XII Pass with any two of the following subjects: Physics, Chemistry, Biology, Botany, Zoology, Biochemistry, Microbiology, Mathematics OR equivalent as decided by competent authority.			
6.	<b>SELECTION PROCEDURE</b>	Selection based on marks in Qualifying Examination followed by Entrance Examination, Personal Interaction and Written Ability Test.			
7.	<b>MEDIUM OF INSTRUCTION</b>	English			
8.	<b>PROGRAMME PATTERN</b>	Semester			
9.	<b>COURSE &amp; SPECIALIZATION</b>	As per Annexure A			
10.	<b>FEE</b>		<b>Academic Fee p.a</b>	<b>Institute Deposit</b>	<b>Total</b>
		<b>Indian Students</b>	190000	10000	200000
		<b>International Students (USD equivalent to INR)</b>	285000	10000	295000
11.	<b>ASSESSMENT</b>	All internal courses will have 100% component as internal evaluation at the institute level. All external courses will have 40% internal component and 60% external component [University] examination.			
12.	<b>STANDARD OF PASSING</b>	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 internal and external examination separately with a minimum Grade Point of 4 corresponding to Grade P. Students securing less than 40% absolute marks in each 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 maximum of 10 CGPA for the programme.
13.	<b>AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE</b>	Bachelor of Science (Radiotherapy) will be awarded at the end of semester VI examination by taking into consideration the performance of all semester examinations after obtaining 4.000 CGPA out of 10 CGPA.

14. NATURE WISE DISTRIBUTION OF CREDITS							
Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Audit	Total
1	20	1	0	0	0	0	21
2	18	1	0	0	0	0	19
3	20	0	0	0	0	1*	20
4	16	4	0	0	0	1*	20
5	20	0	0	0	0	0	20
6	20	0	0	0	0	0	20
<b>Total</b>	<b>114</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120</b>

\* Satisfactory completion of the letter grade courses 'Integrated Disaster Management' and 'Core Environmental Studies' is mandatory for award of degree.

Satisfactory completion of minimum 1 month observer ship with hospital after completion of semester II examination and 3 months of On Job Training with hospital/industry/Research organization after completion of final year (semester VI) examination is mandatory for award of degree.

Programme Structure is approved by the Academic Council subject to its norms & conditions. Any provision in the Programme Structure which violates the basic rules & regulations is deemed to be termed "Null & Void".

Head-Academics

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**Annexure A**

Catalog Course Code	Course Code	Course Title	Specialization	Credits	Internal Marks	External Mark	Internal Practical Marks	External Practical Marks	Total Marks
<b>Semester : 1</b>									
<b>Generic Core Courses</b>									
T4565	0401220101	Anatomy I		4	40	40	0	20	100
T4429	0401220102	Physiology I		4	40	40	0	20	100
T4948	0401220103	Basic Biochemistry		4	40	40	0	20	100
T4107	0401220104	Basic Pharmacology		2	20	0	0	30	50
T4430	0401220105	Hospital Practices and Patient Care I		2	20	0	0	30	50
T4946	0401220106	Basic Sciences		2	20	0	0	30	50
T4427	0401220107	Medical Ethics and Legal Aspects		1	25	0	0	0	25
T4947	0401220108	Communication Skills for Allied Health Professionals - Foundation		1	25	0	0	0	25
<b>Total</b>				<b>20</b>	<b>230</b>	<b>120</b>	<b>0</b>	<b>150</b>	<b>500</b>
<b>Generic Elective Courses Group</b>									
T4431	0401220109	Sociology		1	25	0	0	0	25
T4432	0401220110	Psychology		1	25	0	0	0	25
T4433	0401220111	Computer Skills		1	25	0	0	0	25
<b>Total Required Credits</b>				<b>1</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>
<b>Semester : 2</b>									
<b>Generic Core Courses</b>									
T4949	0401220201	Basic Microbiology & Parasitology		4	40	40	0	20	100
T4950	0401220202	Pathology		4	40	40	0	20	100
T4566	0401220203	Anatomy II		3	30	0	0	45	75
T4436	0401220204	Physiology II		3	30	0	0	45	75
TH4093	0401220205	Hospital Practices & Patient Care II		2	20	0	0	30	50
T4435	0401220206	Communication Skills for Allied Health Professionals - Advanced		1	25	0	0	0	25
T4499	0401220207	Medical Physics		1	25	0	0	0	25
<b>Total</b>				<b>18</b>	<b>210</b>	<b>80</b>	<b>0</b>	<b>160</b>	<b>450</b>
<b>Generic Elective Courses Group</b>									
T4502	0401220208	Computer Language		1	25	0	0	0	25
T4439	0401220209	Nutrition & Dietetics		1	25	0	0	0	25
T4440	0401220210	Applied Mathematics		1	25	0	0	0	25
<b>Total Required Credits</b>				<b>1</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>
<b>Semester : 3</b>									



Celebrating 50 Years of Excellence

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<b>Generic Core Courses</b>									
T2208	0401220301	Research Methodology		4	40	40	0	20	100
T2560	0401220302	Principles and Practices of Management		2	20	30	0	0	50
T4375	0401220303	Principles of Radiation Oncology		2	20	30	0	0	50
T4376	0401220304	Radiobiology		2	20	30	0	0	50
T4938	0401220305	Introduction to Medical Imaging		2	20	0	0	30	50
TH4013	0401220306	Radiation protection and safety		2	20	30	0	0	50
TH4014	0401220307	Principles of Practical Radiotherapy		2	20	0	0	30	50
TH4058	0401220308	Applied Clinical Sciences (Radiotherapy)		2	20	30	0	0	50
T4441	0401220309	Personality Development for Allied Health Professionals - I		1	25	0	0	0	25
T4951	0401220310	Basic Patient Assessment		1	25	0	0	0	25
T2883	0401220311	Core Environmental Studies *		0	0	0	0	0	Non Letter Grade
<b>Total</b>				<b>20</b>	<b>230</b>	<b>190</b>	<b>0</b>	<b>80</b>	<b>500</b>
<b>Semester : 4</b>									
<b>Generic Core Courses</b>									
T8000	0401220401	Service Learning		4	100	0	0	0	100
TH4094	0401220402	Practical Brachytherapy and Teletherapy		3	30	0	0	45	75
T4380	0401220403	Principles of Brachytherapy & Teletherapy		2	20	30	0	0	50
TH4015	0401220404	Patient Set-up in Radiotherapy Treatment		2	20	0	0	30	50
T4771	0401220405	Fitness and Lifestyle Management		2	50	0	0	0	50
T4447	0401220406	Personality Development for Allied Health Professionals - II		1	25	0	0	0	25
T4775	0401220407	Self Defence		1	25	0	0	0	25
T4777	0401220408	Yoga		1	25	0	0	0	25
T4005	0401220409	Integrated Disaster Management *		0	0	0	0	0	Non Letter Grade
<b>Total</b>				<b>16</b>	<b>295</b>	<b>30</b>	<b>0</b>	<b>75</b>	<b>400</b>



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<b>Generic Elective Courses Group</b>									
T6507	0401220410	Introduction to Social Justice		2	50	0	0	0	50
T6477	0401220411	Theater		2	50	0	0	0	50
T6284	0401220412	Contemporary India and The World		2	50	0	0	0	50
T6604	0401220413	Political Science		2	50	0	0	0	50
SWM01	0401220414	Swayam Course		2	50	0	0	0	50
T6476	0401220415	World Music		1	25	0	0	0	25
T6475	0401220416	Creative Writing		1	25	0	0	0	25
T6491	0401220417	Cyber Law		1	25	0	0	0	25
T6487	0401220418	Film Appreciation		1	25	0	0	0	25
<b>Total Required Credits</b>				<b>4</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>
<b>Semester : 5</b>									
<b>Generic Core Courses</b>									
T4906	0401220501	Summer Internship Programme		7	70	0	0	105	175
T4383	0401220502	Clinical Oncology- I		4	40	40	0	20	100
TH4016	0401220503	Radiotherapy Dosimetry-I		4	40	40	0	20	100
T4451	0401220504	Basic Life Support		2	25	0	0	25	50
T4939	0401220505	Applied Management in Radiotherapy Unit		2	20	0	0	30	50
T4567	0401220506	Soft Skills for Allied Health Professionals - I		1	25	0	0	0	25
<b>Total</b>				<b>20</b>	<b>220</b>	<b>80</b>	<b>0</b>	<b>200</b>	<b>500</b>
<b>Semester : 6</b>									
<b>Generic Core Courses</b>									
T4806	0401220601	Project		6	60	0	0	90	150
T4996	0401220602	Advanced Cardiac Life Support (ACLS)		4	40	40	0	20	100
TH4018	0401220603	Radiotherapy Machines, Instrumentation and Quality Assurance		4	40	40	0	20	100
TH4017	0401220604	Radiotherapy Dosimetry-II		3	40	0	0	35	75
T4387	0401220605	Clinical Oncology- II		2	30	0	0	20	50
T4568	0401220606	Soft Skills for Allied Health Professionals - II		1	25	0	0	0	25
<b>Total</b>				<b>20</b>	<b>235</b>	<b>80</b>	<b>0</b>	<b>185</b>	<b>500</b>



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Semester	Internal Credits	External Credits	Total Credits	Total Marks
Semester 1	3	18	21	525
Semester 2	3	16	19	475
Semester 3	2	18	20	500
Semester 4	13	7	20	500
Semester 5	1	19	20	500
Semester 6	1	19	20	500
<b>Total</b>	<b>23</b>	<b>97</b>	<b>120</b>	<b>3000</b>