Semester wise Course Structure

B. Tech Chemical Technology-Oil Technology Degree

FOR THE STUDENTS ADMITTED FROM THE ACADEMIC YEAR 2017-2018 ONWARDS

Year I, Semester-I, Applicable from Session 2017-2018						
		Total Number of contact hours				**Credits**
Course Code	**Course Title**	**Lecture (L)**	**Tutorial (T)**	**Practical# (P)**	**Total Hours**	
BCY 101	Chemistry	3	0	2	5	4
BMA 101	Mathematics I	3	1	0	4	4
EET 101	Electronics Engineering	3	0	0	3	3
ECE 101	Engineering Graphics	0	0	6	6	3
ECS 101	Computer Concept & Programming	3	0	2	5	4
EWS 101	Workshop Practice	0	0	4	4	2
ECE 103	Environment & Ecology	2	0	0	2	0
Year I, Semester-II, Applicable from Session 2017-2018						
Course Code	**Course Title**	**Total Number of contact hours**				**Credits**
		Lecture (L)	**Tutorial (T)**	**Practical# (P)**	**Total Hours**	
BPH 102	Physics	3	0	2	5	4
BMA 102	Mathematics II	3	1	0	4	4
EEE 102	Electrical Engineering	3	0	2	5	4
EME 102	Engineering Mechanics	3	0	0	3	3
HHS 102	English Language & Composition	2	0	0	2	2
HHS 104	Professional Communication	2	0	2	4	3
Year II, Semester-III, Applicable from Session 2018-2019						
Course	**Course**	**Total Number of contact hours**				

Code	Title	Lecture (L)	Tutorial (T)	Practical# (P)	Total Hours	Credits
BMA 201	Mathematics III	3	1	0	4	4
TCH 201	Materials & Energy Balance	3	2	0	5	5
TCH 203	Fluid Flow & Unit operation	3	1	3	7	5
TOT 201	Chemistry of Oils & Allied Products	3	0	6	9	5
HHS 203	Organizational Behavior	3	0	0	3	3
ECS 205	Cyber Security (Audit course)	2	0	0	2	0

Year II, Semester-IV, Applicable from Session 2018-2019

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture (L)	Tutorial (T)	Practical# (P)	Total Hours	
BCY 202	Modern Analytical Techniques	3	0	3	6	4
BMA 206	Computer Oriented Numerical Methods	3	1	3	7	5
TCH 202	Heat Transfer Operations	3	0	0	3	3
TCH 204	Chemical Engineering Thermodynamics	3	0	0	3	3
TOT 202	Sources, Composition, Characterization of Oils, Fats & Waxes	3	0	3	6	4
HHS 202	Engineering Economics & Management	3	0	0	3	3
HHS 206	Indian Constitution (Audit course)	2	0	0	2	0

Year III, Semester-V, Applicable from Session 2019-2020

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture (L)	Tutorial (T)	Practical# (P)	Total Hours	
TCH 301	Mass Transfer Operations	3	1	0	4	4

TCH 303	Chemical Reaction Engineering	3	1	0	4	4
TOT 301	Expression & Extraction Techniques of Oil bearing materials	3	0	0	3	3
TOT303	Technology of Soaps & Fat splitting	3	0	6	9	5
EME 325	Energy Conversion Systems and Devices	3	0	0	3	3
HHS 341	Entrepreneurship Development	3	0	0	3	3

Year III, Semester-VI, Applicable from Session 2019-2020

Course Code	**Course Title**	**Total Number of contact hours**				**Credits**
		Lecture (L)	**Tutorial (T)**	**Practical# (P)**	**Total Hours**	
TCH 302	Instrumentation & Process Control	3	1	3	7	5
TOT 302	Refining of Oils	3	1	0	4	4
TOT 304	Quality assurance of Oils & Allied Products	3	0	6	9	5
TOT 306	Essential Oils & Cosmetics	3	0	6	9	5
BMA 302	Operations Research	3	0	0	3	3

Year IV, Semester-VII, Applicable from Session 2020-2021

Course Code	**Course Title**	**Total Number of contact hours**				**Credits**
		Lecture (L)	**Tutorial (T)**	**Practical# (P)**	**Total Hours**	
TOT 401	Hydrogenation & Modification of Oils	3	0	3	6	4
TOT 403	Technology of Surfactants & Synthetic Detergents	3	0	0	3	3
TOT 405	Advance Oil Chemistry & Oleo Chemicals	2	0	0	2	2
TOT 407	Commerce & process economics, Food safety & environmental aspects of Oil Industry	2	0	0	2	2

TOT 415 (OEC)	Technology of Oil, Oil seeds & Surfactants	3	0	0	3	3
TOT 461	Industrial Training	0	0	4	4	2
TOT 471	Seminar	0	0	4	4	2
TOT 497	Project	0	0	8	8	4
TOT 417	Educational Tour	0	0	0	0	0

Year IV, Semester-VIII, Applicable from Session 2020-2021

Course Code	**Course Title**	**Total Number of contact hours**				**Credits**
		Lecture (L)	**Tutorial (T)**	**Practical # (P)**	**Total Hours**	
TCH 402	Transport Phenomenon*	3	0	0	3	3
	Programme Elective Course IV*	3	0	0	3	3
TCH 404	Process Modeling & Simulation					
TCH 406	Process Equipment Design					
	Programme Elective Course V*	3	1	0	4	4
TOT 402	Bio Technology of Oil seeds & Oils					
TOT 404	Packaging of Oils, Fats & Allied Industries*					
	Programme Elective Course VI*	3	1	0	4	4
TOT 406	Environmental Aspects of Oils & Allied Industries					
TOT 408	Petroleum Products & Petrochemicals					
TOT 498	Project**	0	0	16	16	8
Total						

Seminars, project works may be considered as practical. ***These courses are either MOOC/Neptal online courses of equal weight age and similar title available at the start of the semester OR regular courses in case students do not opt industry based project. **Project Viva-Voice will be conducted by External Examiner.**

Seminars, project works may be considered as practical