

**GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)
KUMBAKONAM(Curriculum – B.Sc., CHEMISTRY – 2021 – 2022
ONWARDS)**

DEPARTMENT : CHEMISTRY

Programme Code: USCH

SEMESTER – I

Part	Course Type	Course Code	Title of the Course	Hrs/ Week	Credits	Exam	Marks		
						Hrs	CIA	ESE	Total
I	Ability Enhancement	U211T1	Tamil	6	3	3	25	75	100
II	Ability Enhancement	U211E1	English	6	3	3	25	75	100
III	Core – I	U21CHC101	General Chemistry -I	6	5	3	25	75	100
III	Core – II	U21CHC102P	Volumetric Analysis Practical	3	2	3	40	60	100
III	Allied - I	U211AM1	MATHS - Calculas fourier series	5	4	3	25	75	100
		U211AZ1	ZOOLOGY -Biology of invertebrates and chordates						
III	Allied – II	U211AM2	MATHS - Algebra, ODE & Trigonometry	2	-	-	-	-	-
		U212AZ2P	ZOOLOGY - Zoology Practical						
IV	Ability Enhancement	U211VE	Value Education	2	2	3	25	75	100
Total				30	19	-	-	-	600

SEMESTER – II

Part	Course Type	Course Code	Title of the Course	Hrs /Week	Credits	Exam Hrs	Marks		
							CIA	ESE	Total
I	Ability Enhancement	U212T2	Tamil	6	3	3	25	75	100
II	Ability Enhancement	U212E2	English	6	3	3	25	75	100
III	Core – III	U21CHC203	General Chemistry -II	6	5	3	25	75	100
III	Core – IV	U21CHC204P	Inorganic Qualitative Analysis Practical	3	2	3	40	60	100
III	Allied -II	U212AM2	MATHS- Algebra, ODE &Trigonometry ZOOLOGY- Zoology Practical Zoology Practical	2	4	3	25	75	100
		U212AZ2P					40	60	
III	Allied - III	U212AM3	MATHS - Laplace transform, calculus and vector calculus ZOOLOGY- General principles of applied zoology	5	4	3	25	75	100
		U212AZ3							
IV	Ability Enhancement	U212ES	Environmental Studies	2	2	3	25	75	100
Total				30	23				700

SEMESTER – III

Part	Course Type	Course Code	Title of the Course	Hrs/ Week	Credits	Exam Hrs	Marks		
							CIA	ESE	Total
I	Ability Enhancement	U213T3	Tamil	6	3	3	25	75	100
II	Ability Enhancement	U213E3	English	6	3	3	25	75	100
III	Core V	U21CHC305	General Chemistry -III	6	5	3	25	75	100
III	Core VI	U21CHC306P	Organic Chemistry Practical	3	2	3	40	60	100
III	Allied – IV	U213APH1	Physics	5	4	3	25	75	100
III	Allied – V	U214APH2P	Physics Practical	2	-	-	-	-	
IV	Non Major Elective – I	U21CH3NME1:1	Agricultural Chemistry (NMEC- I A)	2	2	3	25	75	100
		U21CH3NME1:2	Chemistry of consumer products (NMEC- I B)						
Total				30	19	-	-	-	600
	Self Study Course - I	U213SS1	Mathematical Aptitude for Recruitment Examinations	-	2	2	-	100	100

SEMESTER – IV

Part	Course Type	Course Code	Title of the Course	Hrs/ Week	Credits	Exam Hrs	Marks		
							CIA	ESE	Total
I	Ability Enhancement	U214T4	Tamil	6	3	3	25	75	100
II	Ability Enhancement	U214E4	English	6	3	3	25	75	100
III	Core -VII	U21CHC407	General Chemistry –IV	5	5	3	25	75	100
III	Core – VIII	U21CHC408P	Physical Chemistry Practical - I	3	2	3	40	60	100
III	Allied - V	U214APH2P	Physics Practical	2	4	3	40	60	100
III	Allied - VI	U214APH3	Physics	4	4	3	25	75	100
IV	Non Major Elective– II	U21CH4NME2:1	Industrial Chemistry (NMEC- II A)	2	2	3	25	75	100
		U21CH4NME2:2	Basic Clinical Chemistry(NMEC-II B)						
IV	Skill Enhancement – I Theory	U214CHSE1	Hydrochemistry	2	2	2	25	75	100
Total				30	25				800
	Self Study Course – II	U214SS2	Social Studies for Competitive Examinations		2	2	-	100	100

SEMESTER – V

Part	Course Type	Course Code	Title of the Course	Hrs/ Week	Credits	Exam Hrs	Marks		
							CIA	ESE	Total
III	Core – IX	U21CHC509	Inorganic Chemistry -I	5	5	3	25	75	100
III	Core – X	U21CHC510	Organic Chemistry –I	5	5	3	25	75	100
III	Core – XI	U21CHC511	Physical Chemistry-I	5	5	3	25	75	100
III	Core – XII	U21CHC512P	Gravimetric Analysis Practical	6	4	6	40	60	100
III	Major Based Elective – I	U21CH5MBE1:1	Analytical Chemistry- (E-IA)	5	5	3	25	75	100
		U21CH5MBE1:2	Water treatment and analysis(E-IB)						
		U21CH5MBE1:3	Organic synthesis- (E-IC)						
IV	Skill Enhancement – II Theory	U215CHSE2	Domestic Chemistry	2	2	2	25	75	100
IV	Skill Enhancement – III Theory	U215CHSE3	Impact of Medicinal Plants on Society	2	2	2	25	75	100
Total				30	28				700

SEMESTER – VI

Part	Course Type	Course Code	Title of the Course	Hrs/ Week	Credits	Exam Hrs	Marks		
							CIA	ESE	Total
III	Core – XIII	U21CHC613	Organic Chemistry –II	6	5	3	25	75	100
III	Core – XIV	U21CHC614	Physical Chemistry-II	6	5	3	25	75	100
III	Core – XV	U21CHC615P	Physical Chemistry Practical - II	6	4	3	40	60	100
III	Major Based Elective – II	U21CH6MBE2:1	Inorganic Chemistry –II (E-IIA)	6	5	3	25	75	100
		U21CH6MBE2:2	Food chemistry - (E -IIB)						
		U21CH6MBE2:3	Role of chemistry in life - (E -IIC)						
III	Major Based Elective – III	U21CH6MBE3:1	Pharmaceutical Chemistry- (E-III A)	5	5	3	25	75	100
		U21CH6MBE3:2	Bio chemistry- (E-III B)						
		U21CH6MBE3:3	Applied chemistry - (E-III C)						
V	Ability Enhancement	U216GS	Gender Studies	1	1	3	25	75	100
V		U21EA	Extension Activities	-	1	-	-	-	-
Total				30	26				600

GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS) KUMBAKONAM

(Curriculum – M.Sc., CHEMISTRY – 2021 – 2022 ONWARDS)

Department : CHEMISTRY

Programme Code: PSCH

SEMESTER – I

Course Type		Course Code	Title of the Course	Hrs/ Week	Credits	Exam Hrs	Marks		
							CIA	ESE	Total
Core I		P21CHC101	INORGANIC CHEMISTRY -I	5	5	3	25	75	100
Core II		P21CHC102	PHYSICAL CHEMISTRY -I	6	5	3	25	75	100
Core III		P21CHC103P	INORGANIC CHEMISTRY PRACTICAL -I	6	5	6	40	60	100
Core IV		P21CHC104P	ORGANIC CHEMISTRY PRACTICAL -I	6	3	6	40	60	100
Major Based Elective - I	Choice I	P21CH1MBE1:1	ORGANIC CHEMISTRY –I (I A)	5	4	3	25	75	100
	Choice II	P21CH1MBE1:2	CHEMISTRY OF NANO SCIENCE (I B)						
	Choice III	P21CH1MBE1:3	SUPRA MOLECULAR CHEMISTRY (I C)						
Skill Enhancement (Theory)		P21CH1SE1	TEXTILE CHEMISTRY	2	2	2	25	75	100
Total				30	24				600

SEMESTER – II

Course Type	Course Code	Title of the Course	Hrs/ Week	Credits	Exam Hrs	Marks			
						CIA	ESE	Total	
Core V	P21CHC205	INORGANIC CHEMISTRY –II	5	5	3	25	75	100	
Core VI	P21CHC206	ORGANIC CHEMISTRY -II	5	5	3	25	75	100	
Core VII	P21CHC207P	INORGANIC CHEMISTRY PRACTICAL -II	5	5	6	40	60	100	
Core VIII	P21CHC208P	ORGANIC CHEMISTRY PRACTICAL -II	6	3	6	40	60	100	
Major Based Elective - II	Choice I	P21CH2MBE2:1	5	4	3	25	75	100	
	Choice II	P21CH2MBE2:2							ANALYTICAL CHEMISTRY (II A)
	Choice III	P21CH2MBE2:3							BIO ORGANIC CHEMISTRY (II C)
Extra Disciplinary (EDC)	P21CH2ED	FOOD & NUTRITION	2	2	2	25	75	100	
Skill Enhancement (Practical)	P21CH2SE2P	TEXTILE CHEMISTRY PRACTICALS	2	1	2	40	60	100	
Total			30	25				700	
Self Study Course -I	P212SS1	GENERAL STUDIES FOR RESEARCH FELLOWSHIP & LECTURERSHIP	-	2	2	-	100	100	
NCGPA (Internship)	INT			2		-	-	-	

SEMESTER – III

Course Type	Course Code	Title of the Course	Hrs/Week	Credits	Exam Hrs	Marks			
						CIA	ESE	Total	
Core – IX	P21CHC309	INORGANIC CHEMISTRY -III	6	5	3	25	75	100	
Core – X	P21CHC310	ORGANIC CHEMISTRY-III	6	5	3	25	75	100	
Core – XI	P21CHC311	PHYSICAL CHEMISTRY-II	6	5	3	25	75	100	
Core – XII	P21CHC312P	PHYSICAL CHEMISTRY PRACTICAL-I	6	3	6	40	60	100	
Major Based Elective – III	Choice I	P21CH3MBE3:1	MEDICINAL CHEMISTRY (III A)	6	4	3	25	75	100
	Choice II	P21CH3MBE3:2	CHEMISTRY IN EVERYDAY LIFE (III B)						
	Choice III	P21CH3MBE3:3	SOLID STATE CHEMISTRY (III C)						
Total			30	22				500	
Self Study Course- II	P21CH3SS2	CHEMISTRY FOR COMPETITIVE EXAMINATIONS		2	2	-	100	100	

SEMESTER – IV

Course Type	Course Code	Title of the Course	Hrs/Week	Credits	Exam Hrs	Marks			
						CIA	ESE	Total	
Core – XIII	P21CHC413	PHYSICAL CHEMISTRY -III	6	5	3	25	75	100	
Core – XIV	P21CHC414P	PHYSICAL CHEMISTRY PRACTICAL-II	6	4	6	40	60	100	
Core – XV (Project)	P21CHPW415	PROJECT	12	6	-	-	100	100	
Major Based Elective – IV	Choice I	P21CH4MBE4:1	6	4	3	25	75	100	
	Choice II	P21CH4MBE4:2							RECENT TRENDS IN CHEMISTRY (IV A)
	Choice III	P21CH4MBE4:3							EXPERIMENTAL METHODS IN CHEMISTRY (IVB)
Total			30	19				400	

**SEMESTER – IV
VALUE ADDED COURSE**

Course Type	Course Code	Title of the Course	Hrs/Week	Credits	Exam Hrs	Marks		
						CIA	ESE	Total
		APPLIED CHEMISTRY		2				100

GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS), KUMBAKONAM

**DEPARTMENT OF CHEMISTRY
UG CBCS 140 CREDITS
2018-19 ONWARDS
SEMESTER -I**

SEM	COURSE STRUCTURE	COURSE CODE	TITLE OF THE PAPER	INSTRUCTION HOURS	CREDIT	EXAM HOURS	MARKS		TOTAL
							Int	Ext	
I	Part- I Language Tamil	17GT1	Cheyyul Ikkala Ilakkiyam,Urainadai, Surukathai,Ilakkiya varalaru	6	3	3	25	75	100
	Part-II Language English	17GE1	Communication Skills	6	3	3	25	75	100
	Part-III Core Course-I	18CHC101	General Chemistry-I	6	5	3	25	75	100
	Part-III Core Course-II	18CHC20P1	Inorganic qualitative analysis practical	3	-	-	-	-	-
	Part-III Allied Course-I	181ACH1	Allied Chemistry-I	6	4	3	25	75	100
	Part-III Allied Course-II	182ACH2P	Allied Chemistry Practical	3	-	-	-	-	-
			Total	30	15				400

SEMESTER -II

SEM	COURSE STRUCTURE	COURSE CODE	TITLE OF THE PAPER	INSTRUCTION HOURS	CREDITS	EXAM HOURS	MARKS		TOTAL
							Int	Ext	
II	Part- I Language Tamil	17GT2	Cheyyl Idaikala Ilakkiyam,Naval ,Illakkiya varalaru,Payanmurai Tamil	6	3	3	25	75	100
	Part-II Language English	17GE2	Communication Skills-II	6	3	3	25	75	100
	Part-III Core Course-II	18CHC20P1	Inorganic qualitative analysis practical	5	5	3	40	60	100
	Part-III Core Course-III	18CHC203	General Chemistry-II	3	5	3	25	75	100
	Part-III Allied Course-I	182ACH2P	Allied Chemistry Practical	2	3	3	40	60	100
	Part-III Allied Course-III	183ACH1	Allied Chemistry -III	4	3	3	25	75	100
	Part IV	18UVE	Value Education (Yoga)	2	2	3	25	75	100
	Part IV	UGCES	Environmental Studies	2	2	3	25	75	100
		Total	30	26				800	

SEMESTER -III

III	Part- I Language Tamil	17GT3	Cheyyul ,(Kappiyangal)Nadagam, Illakkiya varalaru	6	3	3	25	75	100
	Part-II Language English	17GE3	Poetry and Drama for Communication	6	3	3	25	75	100
	Part-III Core Course-IV	18CHC304	General Chemistry-III	6	5	3	25	75	100
	Part-III Core Course-V	18CHC405P2	Volumetric analysis Practical	3	-	-	-	-	-
	Part-III Allied Course-IV	183ACH1	Allied Chemistry	5	4	3	25	75	100
	Part-III Allied Course-V	184ACH2P	Allied Chemistry Practical	2	-	-	-	-	-
	Part-IV Non Major Elective Course-I	18CH3NMEC1:1	NMEC IA-Agricultural Chemistry	2	2	-	-	-	-
18CH3NMEC1:2		NMEC IB- Chemistry of Consumer products							
			Total	30	17	-	-	-	500

SEMESTER -IV

SEM	COURSE STRUCTURE	COURSE CODE	TITLE OF THE PAPER	INSTRUCTION HOURS	CREDIT	EXAM HOURS	MARKS		TOTAL
							Int	Ext	
IV	Part- I Language Tamil	17GT4	Cheyyul Sanga Ilakkiyam,Naval ,Illakkiya varalaru, Pothukatturai	6	3	3	25	75	100
	Part-II Language English	17GE4	English For Competitive Examination	6	3	3	25	75	100
	Part-III Core Course-V	18CHC405P2	Volumetric analysis Practical	2	5	3	40	60	100
	Part-III Core Course-VI	18CHC406	General Chemistry-IV	5	4	3	25	75	100
	Part-III Allied Course-V	184ACH2P	Allied Chemistry Practical	3	4	3	40	60	100
	Part-III Allied Course-VI	184ACH3	Allied Chemistry	4	3	3	25	75	100
	Part IV Non Major Elective Course	18CH4NMEC2:1	NMEC –II A- Industrial Chemistry	2	2	3	25	75	100
		18CH4NMEC2:2	NMEC IIB –Basic Clinical Chemistry						
Part IV Skill based	SBEC1	Interpersonal Skills	2	2	3	25	75	100	
			Total	30	26			800	

SEMESTER -V

SEM	COURSE STRUCTURE	COURSE CODE	TITLE OF THE PAPER	INSTRUCTION HOURS	CREDIT	EXAM HOURS	MARKS		TOTAL
							Int	Ext	
V	Part-III Core Course-VII	18CHC507	Inorganic Chemistry-I	5	6	3	25	75	100
	Part-III Core Course-VIII	18CHC508	Organic Chemistry-I	5	5	3	25	75	100
	Part-III Core Course-IX	18CHC509	Physical Chemistry-I	5	5	3	25	75	100
	Part-III Core Course-X	18CHC510P3	Organic & Gravimetric Analysis Practical	6	5	3	40	60	100
	Part-III Major Based Elective Course I	18CHC5EC3:1	MBEC IA-Analytical Chemistry	5	5	3	25	75	100
		18CHC5EC3:2	MBEC IB –Water Treatment & Analysis						
		18CHC5EC3:3	MBEC I C-Organic Synthesis						
	Part-IV Skill Based Elective Course-I	SBEC2	Office Management	2	2	3	25	75	100
	Part-IV Skill Based Elective Course-I	SBEC3	Office Communication	2	2	3	25	75	100
				30	30				700

SEMESTER -VI

SEM	COURSE STRUCTURE	COURSE CODE	TITLE OF THE PAPER	INSTRUCTION HOURS	CREDIT	EXAM HOURS	MARKS		TOTAL
							Int	Ext	
VI	Part-III Core Course-XI	18CHC611	Organic Chemistry-II	6	5	3	25	75	100
	Part-III Core Course-XII	18CHC612	Physical Chemistry-II	6	5	3	25	75	100
	Part-III Core Course-XIII	18CHC613P4	Physical Chemistry Practical	6	5	3	25	75	100
	Part-III Major Based Elective Course II	18CH6EC4:1	MBEC II A-Inorganic chemistry	5	5	3	40	60	100
		18CH6EC4:2	MBEC II B- Food chemistry						
		18CH6EC4:3	MBEC II C- Role of chemistry in Life						
	Part-III Major Based Elective Course III	18CH6EC5:1	MBEC III A- Pharmaceutical Chemistry	6	4	3	25	75	100
		18CH6EC5:2	MBEC III B –Bio Chemistry						
		18CH6EC5:3	MBEC III C- APPLIED CHEMISTRY						
	Extension Activities			-	1				
	Part-IV Skill Based Course-I	GS	Gender Studies	1	1	3	25	75	100
		Total	30	26				600	

DEPARTMENT OF CHEMISTRY
PG REVISED COURSE STRUCTURE UNDER CBCS
(For the candidates admitted from the academic year 2018-19)

SEMESTER –I

Sem	Course structure	Course code	Title of the paper	INS. Hrs /week	CREDIT	Exam hours	Marks		Total
							Int	Ext	
I	Core course I (CC)	P18CHC101	Inorganic chemistry – I	6	5	3	25	75	100
	Core course II (CC)	P18CHC102	Physical chemistry – I	6	5	3	25	75	100
	Core course III(CC)	P18CHC103P1	Inorganic chemistry Practical – I	6	4	6	40	60	100
	Core course IV (CC)	P18CHC104P2	Organic chemistry Practical – I	6	4	6	40	60	100
	Elective Course (EC) I A	P18CHC1EC1:1	Organic chemistry	6	5	3	25	75	100
	I B	P18CHC1EC1:2	Solid state Chemistry						
	I C	P18CHC1EC1:3	Green Chemistry						
			Total	30	23				500

SEMESTER –II

Sem	Course structure	Course code	Title of the paper	INS. Hrs /week	CREDIT	Exam hours	Marks		Total
							Int	Ext	
II	Core course IV(CC)	P18CHC205	Inorganic chemistry – II	6	5	3	25	75	100
	Core course VI (CC)	P18CHC206	Organic chemistry – II	6	5	3	25	75	100
	Core course VII(CC)	P18CHC207P3	Inorganic chemistry Practical – II	6	4	6	40	60	100
	Core course VIII (CC)	P18CHC208P4	Organic chemistry Practical – II	6	4	6	40	60	100
	Elective Course (EC) II A	P18CHC309	Analytical chemistry	6	5	3	25	75	100
	II B	P18CHC310	Supra molecular Chemistry						
II C	P18CHC311	Textile Chemistry							
			Total	30	23			500	

SEMESTER –III

Sem	Course structure	Course code	Title of the paper	INS. Hrs /week	CREDIT	Exam hours	Marks		Total
							Int	Ext	
III	Core course IX(CC)	P18CHC309	Inorganic chemistry – III	6	5	3	25	75	100
	Core course X(CC)	P18CHC310	Organic Spectroscopy	6	5	3	25	75	100
	Core course XI (CC)	P18CHC311	Physical chemistry - II	6	5	3	40	60	100
	Core course XII (CC)	P18CHC312P5	Physical chemistry Practical – I	6	4	6	40	60	100
	Elective Course (EC) III A	P18CHC3EC3:1	Medicinal chemistry	6	5	3	25	75	100
	III B	P18CHC3EC3:2	Bio Organic Chemistry						
	III C	P18CHC3EC3:3	Chemistry of Nano Science						
			Total	30	24				500

SEMESTER –IV

Sem	Course structure	Course code	Title of the paper	INS. Hrs /week	CREDIT	Exam hours	Marks		Total
							Int	Ext	
IV	Core course XIII(CC)	P18CHC413	Physical chemistry - III	6	5	3	25	75	100
	Core course XIV (CC)	P18CHC414P6	Physical chemistry Practical – II	6	4	3	40	60	100
	Core course XV (CC)	P18CHPW415	Project	12	6	-	-	-	100
	Elective Course (EC) IVA	P18CHCEC4:1	Recent trends in chemistry	6	5	3	25	75	100
	IV B	P18CHCEC4:2	Industrial Chemistry						
	IV C	P18CHCEC4:3	Experimental methods in Chemistry						
			Total	30	20				400
				120	90				1900