DEVI AHILYA VISHWAVIDYALAYA, INDORE

School of Chemical Sciences

1.1.2
Minutes of the Meetings and Changes in Syllabus

SCHOOL OF CHEMICAL SCIENCES
DEVI AHILYA VISHWAVIDYALAYA, INDORE

Date: 01/07/2014

Minutes of IQAC Meeting

A meeting of faculty members was held on 01/07/2014 to discuss and finalize the following issues –

1. Preparation of M. Sc. I & III semesters teaching Time Table for the period : July - Dec., 2014
2. Teaching time table for Ph. D. Course work
3. It was decided to hold the Ph.D. course work classes w.e.f. 11/07/2014
4. Review and revision of Syllabus. Details of syllabus revision are as follows:
   - (i) Nomenclature of Paper MCH 104 is changed to Group theory and Vibrational spectroscopy.
   - (ii) Credits of papers of M. Sc. Chemistry and M. Sc. Pharmaceutical Chemistry have been changed to 3 credits for each paper.
   - (iii) A new paper of 3 credits MCH 106 (M.Sc. Chemistry) & MPC 106 (M.Sc. Pharmaceutical Chemistry) with corresponding nomenclature – Atomic Structure and Chemical Bonding is introduced.
   - (iv) Allocation of credits : Papers 201,202, 203 are also revised to 3 credits.
   - (v) Instead of paper MCH 204 Group Theory and Spectroscopy II , a new paper MCH 204 with title "Magnetic Resonance and Mossbauer Spectroscopy" – 3 Credits is introduced.
   - (vi) In addition new papers MCH 205 –Organomatellic Chemistry and MCH 206- Computational Methods in Chemistry are introduced for M.Sc. II semester students.
   - (vii) Syllabus of M.Sc. III semester and IV semester are thoroughly revised and nomenclatures of introduced papers are as follows:

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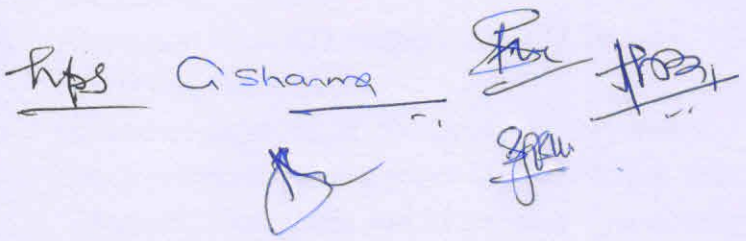
III Semester:

Code	Course	Credits (Revised)
301	Molecular Spectroscopy (Organic Chemistry)	3
302	Photochemistry	3
303	Diffraction Techniques and ESCA	3
304	Bioinorganic Chemistry	3
305	Organic Synthesis	3
306	Advanced Medicinal Chemistry	3
307	Practical (Interpretation of Spectra)	8

IV Semester:

Code	Course	Credits (Revised)
401	Solid State Chemistry	3
403	Analytical Chemistry	3
404	Bioorganic Chemistry	3
405	Heterocyclic Chemistry	3
406	Chemistry of Natural Products	3
407	Practical	8



SCHOOL OF CHEMICAL SCIENCES
DEVI AHILYA VISHWAVIDYALAYA, INDORE

Date: 28/06/2016

Minutes of IQAC Meeting

An important meeting of faculty members was called to discuss following academic issues -

Agenda:

1. New admission in M.Sc. courses
2. Preparation of time table for semester commencing from July, 2016
3. Revision and restructuring of M.Sc. syllabi as per CBCS.
4. Review and revision of Ph.D. course work curriculum

Accordingly, following actions were taken:

1. Students will be admitted as per the M. P. Govt. Rules of admissions for academic year 2016-17. Due consideration will be there in maintaining students diversity.
2. In view of emerging requirement of Choice-Based Credit System (CBCS), it was resolved to restructure the curriculum of M.Sc. I semester onwards. It was further resolved to allocate 20 credits per semester. Contents of the syllabus were discussed at length and in view of current needs, distribution of Elective – generic courses and Elective –discipline centric was worked out.
3. Further, considering this newly implemented CBCS based curriculum, time- table was discussed pertaining to the teaching assignments in Core Courses, Elective Courses-Discipline Centric, and Elective Course – Generic. Also, all faculty members are assigned to take tutorials of 2 hours per week to assist weak students and to help good students for NET/ GATE preparation.
4. Keeping in view CBCS as well as academic flexibility, it is decided that students can choose an Elective Course/ a

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Generic Course or any other P.G. Level Generic Course of 3 Credits being run at other School / Institute.

5. Faculty members are supposed to keep record of attendance of Theory, Practical, Tutorials and Seminars with them.
6. Mentors for each course are assigned for assessment and evaluation of all round performance of students.
7. Rigorous review and restructuring of course to adopt CBCS in true spirit is carried out. Scheme of proposed CBCS based course curriculum is attached.
8. A brief and summarized overview of revision/modification/ updation in course structure is as follows:
   Each semester course will be of 20 valid credits and 4 virtual credits for Comprehensive Viva-voce. Semester wise distribution of course contents are as follows:

Semester	Core Courses	Elective Course-Generic	Elective Course-Discipline Centric	Laboratory / Practical
I	Four	One	-	Lab. I
II	Three	One	One	Lab. II
III	One	One	Three	Lab. III
IV	One	-	Three	Project

- Curriculum of Core course code 104 is revised with new nomenclature- Group Theory and Spectroscopy.
- Students with biology in B.Sc. are offered Elective Course – Generic (Concepts of Mathematics). Likewise students with mathematics in B.Sc. are offered General Biology as Elective Course –Generic.
- A new paper Code -204 Elective Course –Discipline Centric entitled "Chemistry of Drugs" has been introduced in M.Sc. II semester curriculum.
- Two new papers in M.Sc. II semester are introduced as Elective Course - Generic. Students can opt any one of them. These are -
  - Computer Applications
  - Computer Programming

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- In M. Sc. III and M.Sc. IV semesters revision / new addition in the course contents of following courses is considered
  - Molecular Spectroscopy (Revised)
  - Diffraction Methods and Photoelectron Spectroscopy (New)
  - Advanced Medicinal Chemistry (Revised)
  - Organic Synthesis (New)
  - Solid State Chemistry and Materials Science (Revised).

9. In compliance to the instructions received from Ph.D. Cell , thorough revision and restructuring of Ph.D. Course work curriculum has been carried out for implementation in teaching schedule commencing from July 2016. The curriculum is spread over to the following components:
   a) Research Methodology : 4 credits
   b) Review of published research work : 3 credits
   c) Computer applications : 3 credits
   d) Advance course : 3 credits
   e) Comprehensive viva voce : 3 credits

   A detailed curriculum is prepared in consultation with the faculty members of the department.

SCHOOL OF CHEMICAL SCIENCES
DEVI AHILYA VISHWAVIDYALAYA, INDORE

Date: 29/06/2018

Minutes of IQAC Meeting

An important meeting of IQAC members was held on 29/06/2018 at 4:30 pm to discuss and finalize the following issues:

(i) Time- table of M.Sc. I and M.Sc.III semesters commencing from July 1, 2018 was worked out.

(ii) In view of preparation of CBCS in true sense to offer academic flexibility, thorough revision in the course contents of M.Sc. I and M.Sc. III semesters was proposed. It was also decided to carry out revision in the curriculum of M.Sc. II and IV semesters along with the development of course contents to be carried out in Dec. 2018 for the semester commencing from Jan., 2019.

(iii) The chief focus of changes in curriculum was on development / modification of following specific aspects:

(a) Curriculum for Core Course: Code-102 Organic Chemistry – I, has been modified in view of NET/ GATE examination syllabus.

(b) Curriculum of Core Course: Code- 104 Group Theory and Spectroscopy has been renamed as 'Symmetry, Group theory and Spectroscopy' and its contents have been reframed to add new topics.

(c) Curriculum for Code-203 will be revised in the context of current needs to qualify national level examinations. This will be developed in the month of Dec., 2018 for its implementation in the semester starting from January 2019.

(d) Elective Course- Generic: Code 205- Computer Applications will be restructured with a new nomenclature 'Computers for Chemists'. The contents will have enhanced focus on ground realities so as to meet the desired objectives in a better way. This task will be carried out in the month of Dec., 2018.

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(e) Elective Course- Discipline- Centric: Code 304 – Diffraction Methods and Photoelectron Spectroscopy has been given a new nomenclature "Diffraction Technique and Spectroscopy" in order to give the coverage to the more advanced topic such as Infra-red Spectroscopy etc.

(f) Also, Elective Course – Discipline Centric : Code – 302 Photochemistry has been given a new name as Organic Photochemistry and has been rigorously updated in view of high relevance of the contents with NET.

(g) In context of industrial relevance of a Course Code- 306 Polymers, the contents have been thoroughly revisited so as to incorporate topics of latest importance.

(h) Course- 401 Analytical Chemistry will be changed to incorporate new Analytical Techniques.

(i) Elective course – Discipline Centric 403- Solid State Chemistry and Materials Science will be given new nomenclature as Solid State Chemistry and Nanotechnology to incorporate new topics on Nano - technology, Nano-materials and Super conductivity.

(j) Elective Course – Discipline Centric 404 Chemistry of Natural Products will be modified so as to incorporate topics of latest relevance in natural products domain.

(iv) Students will be motivated to carry out their internship / projects in M.Sc. IV semester from the institutions of national importance such as IITs, IISER, CSIR labs and leading Pharmaceutical industries.

(v) With a view to honour the academic flexibility in the curriculum, students are encouraged to opt Elective Course-Generic being run at School of Mathematics and School of Statistics.

(vi) Curriculum of Ph.D. course work has been rigorously elaborated to incorporate in-depth coverage of topics of current interest.

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SCHOOL OF CHEMICAL SCIENCES
DEVI AHILYA VISHWAVIDYALAYA, INDORE

COURSE STRUCTURE
M.Sc. Chemistry Syllabus Revision/Modified : 2013 *Vs.* 2014

2013				2014			
Semester	**Code**	**Title of the Paper**	**Credit**	**Code**	**Title of the Paper**	**Credit**	Change (%)
I	CHEM -101	Inorganic Chemistry – I	4	MCH-101	Inorganic Chemistry – I	3	
	CHEM-102	Organic Chemistry - I	4	MCH-102	Organic Chemistry - I	3	
	CHEM-103	Physical Chemistry - I	4	MCH-103	Physical Chemistry - I	3	
	CHEM-104	Group Theory and Spectroscopy-I	3	MCH-104	Group Theory and Vibrational Spectroscopy	3	
	CHEM-105	(a) Mathematics for Chemists (b) Biology for Chemists	3	MCH-105	(a) Mathematics for Chemists (b) Biology for Chemists	3	
				MCH-106	Atomic Structure and Chemical Bonding	3	100
	CHEM-106	Practical	8	MCH-107	Practical	8	
		Comprehensive Viva- Voce	4		Comprehensive Viva- Voce	4	
		Total Credits	**30**		**Total Credits**	**30**	
II	CHEM-201	Inorganic Chemistry - II	4	MCH-201	Inorganic Chemistry - II	3	
	CHEM -202	Organic Chemistry - II	4	MCH-202	Organic Chemistry - II	3	
	CHEM -203	Physical Chemistry-II	4	MCH-203	Physical Chemistry-II	3	
	CHEM -204	Group Theory and Spectroscopy-II	3	MCH-204	Magnetic Resonance and Mossbauer Spectroscopy	3	100
				MCH-205	Organometallic Chemistry	3	100
	CHEM--205	Computers for Chemists	3	MCH-206	Computational Methods in Chemistry	3	50
	CHEM- 206	Practical	8	MCH 207	Practical	5	
		Comprehensive Viva-Voce	4		Comprehensive Viva-Voce	4	
		Total Credits	**30**		**Total Credits**	**24**	

III	CHEM-301	Molecular Spectroscopy	3	MCH-301	Molecular Spectroscopy (Organic)	3	
	CHEM-302	Photochemistry	3	MCH-302	Photochemistry	3	
	CHEM-303	Diffraction Techniques and ESCA	3	MCH-303	Diffraction Techniques and ESCA	3	
	CHEM-304	Bio-inorganic Chemistry	3	MCH-304	Bio-inorganic Chemistry	3	
	CHEM-305 CHEM-306	Medicinal Chemistry Organic Synthesis	3 3	MCH-305 MCH-306	Organic Synthesis Advanced Medicinal Chemistry	3 3	20
	CHEM-307	Practical (Spectral Interpretation)	8	MCH-307	Practical (Interpretation of Spectra)	8	
		Comprehensive Viva-Voce	4		Comprehensive Viva-Voce	4	
			30			**30**	
IV	CHEM-401	Solid State Chemistry	3	MCH-401	Solid State Chemistry	3	
	CHEM-402	Environmental Chemistry	3	MCH-402	Environmental Chemistry	3	
	CHEM-403	Analytical Chemistry	3	MCH-403	Analytical Chemistry	3	
	CHEM-404 CHEM-405 CHEM-406	Bio-organic Chemistry Heterocyclic Chemistry Chemistry of Natural Products	3 3 3	MCH-404 MCH-405 MCH-406	Bio-organic Chemistry Heterocyclic Chemistry Chemistry of Natural Products	3 3 3	
	CHEM-408	Practical	8	MCH-408	Practical	8	
		Comprehensive Viva-Voce	**4**		Comprehensive Viva-Voce	**4**	
			30			**30**	
					Average Change (%) (Total percent Change in 2014 / Number of Papers in 2013)		16.8

SCHOOL OF CHEMICAL SCIENCES
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COURSE STRUCTURE
M.Sc. Chemistry Syllabus Revision/Modified : 2014 *Vs.* 2016
(CBCS Adopted w.e.f. 2016)

2014				2016			
Semester	**Code**	**Title of the Paper**	**Credit**	**Code**	**Title of the Paper**	**Credit**	Change (%)
I	MCH-101	Inorganic Chemistry – I	3	MCH-101	Core Course Inorganic Chemistry – I	3	
	MCH-102	Organic Chemistry - I	3	MCH-102	Core Course Organic Chemistry - I	3	
	MCH-103	Physical Chemistry - I	3	MCH-103	Core Course Physical Chemistry - I	3	
	MCH-104	Group Theory and Vibrational Spectroscopy	3	MCH-104	Core Course Group Theory and Spectroscopy	3	25
	MCH-105	(a) Mathematics for Chemists (b) Biology for Chemists	3	MCH-105 MCH-106	Elective Course –Generic* (Any One) Concepts of Mathematics General Biology	3	20
	MCH-106	Atomic Structure and Chemical Bonding	3				
	MCH-107	Practical	8	MCH-107	Practical	5	20
		Comprehensive Viva- Voce	4		Comprehensive Viva- Voce	4	
		Total Credits	**30**		**Total Credits**	**24**	
II	MCH-201	Inorganic Chemistry - II	3	MCH-201	Core Course Inorganic Chemistry - II	3	
	MCH-202	Organic Chemistry - II	3	MCH-202	Core Course Organic Chemistry - II	3	-
	MCH-203	Physical Chemistry-II	3	MCH-203	Core Course Physical Chemistry-II	3	
	MCH-204	Magnetic Resonance and Mossbauer Spectroscopy	3	MCH-204	Elective Course-Discipline Centric: Chemistry of Drugs	3	100

	MCH-205	Organometallic Chemistry	3				
	MCH-206	Computational Methods in Chemistry	3	MCH-205 MCH-206	Elective Course –Generic* (Any One) Computer Applications Computer Programming	3	100
	MCH 207	Practical	5	MCH 207	Practical	5	
		Comprehensive Viva-Voce	4		Comprehensive Viva-Voce	4	
		Total Credits	**24**		**Total Credits**	**24**	
III	MCH-301	Molecular Spectroscopy (Organic)	3	MCH-301	Core Course Molecular Spectroscopy	3	
	MCH-302	Photochemistry	3	MCH-302	Elective Course -Discipline Centric Photochemistry	3	5
	MCH-303	Diffraction Techniques and ESCA	3	MCH-303	Elective Course-Discipline Centric Bio-inorganic Chemistry	3	
	MCH-304	Bio-inorganic Chemistry	3	MCH-304	Elective Course-Discipline Centric Diffraction Methods and Photoelectron Spectroscopy	3	20
	MCH-305 MCH-306	Organic Synthesis Advanced Medicinal Chemistry	3	MCH-305 MCH-306 MCH-307	Elective Course –Generic* (Any One) Advanced Medicinal Chemistry Polymers Organic Synthesis	3	
	MCH-307	Practical (Interpretation of Spectral)	8	MCH-308	Practical & Spectral Interpretation / Seminar	5	20
		Comprehensive Viva-Voce	4		Comprehensive Viva-Voce	4	
			30			**24**	
IV	MCH-401	Solid State Chemistry	3	MCH-401	Core Course Analytical Chemistry	4	
	MCH-402	Environmental Chemistry	3	MCH-402	Elective Course-Discipline Centric	4	

					Environmental Chemistry		
	MCH-403	Analytical Chemistry	3	MCH-403	Elective Course-Discipline Centric Solid State Chemistry and Materials Science	4	25
	MCH-404 MCH-405 MCH-406	Bio-organic Chemistry Heterocyclic Chemisty Chemistry of Natural Products	3 3 3	MCH-404 MCH-405 MCH-406 MCH-407	Elective Course-Discipline Centric (Any one) Bio-organic Chemistry Organometallic Chemistry Chemistry of Natural Products Heterocyclic Chemistry	4	100
	MCH-408	Practical	8	MCH-408	Dissertation/ Project	4	100
		Comprehensive Viva-Voce	**4**		Comprehensive Viva-Voce	**4**	
			30				
					Average Change (%) (Total percent Change in 2016 / Number of Papers in 2014)		22.3

SCHOOL OF CHEMICAL SCIENCES
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COURSE STRUCTURE
M.Sc. Chemistry Revision/Modified: 2016 *Vs.* 2018
(Four Semester Course Based on Choice Based Credit System)

2016				2018			
Semester	**Code**	**Title of the Paper**	**Credit**	**Code**	**Title of the Paper**	**Credit**	**Change (%)**
I	MCH-101	Core Course Inorganic Chemistry – I	3	MCH-101	Core Course Inorganic Chemistry – I	**3**	**20**
	MCH-102	Core Course Organic Chemistry - I	3	MCH-102	Core Course Organic Chemistry - I	**3**	
	MCH-103	Core Course Physical Chemistry - I	3	MCH-103	Core Course Physical Chemistry - I	**3**	**20**
	MCH-104	Core Course Group Theory and Spectroscopy	3	MCH-104	Core Course Symmetry, Group Theory and Spectroscopy	**3**	**25**
	MCH-105 MCH-106	Elective Course –Generic* (Any One) Concepts of Mathematics General Biology	3	MCH-105 MCH-106	Elective Course –Generic* (Any One) Concepts of Mathematics General Biology	**3**	**-**
	MCH-107	Practical	5	MCH-107	Practical	**5**	
		Comprehensive Viva- Voce	4		Comprehensive Viva- Voce	4	
		Total Credits	**24**		**Total Credits**	**24**	
II	MCH-201	Core Course Inorganic Chemistry - II	3	MCH-201	Core Course Inorganic Chemistry - II	**3**	**20**
	MCH-202	Core Course Organic Chemistry - II	3	MCH-202	Core Course Organic Chemistry - II	**3**	**-**
	MCH-203	Core Course Physical Chemistry-II	3	MCH-203	Core Course Physical Chemistry-II	**3**	**20**
	MCH-204	Elective Course-Discipline Centric: Chemistry of Drugs	3	MCH-204	Elective Course-Discipline Centric: Chemistry of Drugs	**3**	

	MCH-205 MCH-206	Elective Course –Generic* (Any One) Computer Applications Computer Programming	3	MCH-205 MCH-206	Elective Course –Generic* (Any One) Computer Applications in Chemistry Computer Programming	**3**	
	MCH 207	Practical	5	MCH 207	Practical	**5**	
		Comprehensive Viva-Voce	4		Comprehensive Viva-Voce	4	
		Total Credits	**24**		**Total Credits**	**24**	
III	MCH-301	Core Course Molecular Spectroscopy	3	MCH-301	Core Course Molecular Spectroscopy	3	
	MCH-302	Elective Course -Discipline Centric Photochemistry	3	MCH-302	Elective Course-Discipline Centric Organic Photochemistry	3	**20**
	MCH-303	Elective Course-Discipline Centric Bio-inorganic Chemistry	3	MCH-303	Elective Course-Discipline Centric Bio-inorganic Chemistry	3	
	MCH-304	Elective Course-Discipline Centric Diffraction Methods and Photoelectron Spectroscopy	3	MCH-304	Elective Course-Discipline Centric Diffraction Techniques and Spectroscopy	3	**20**
	MCH-305 MCH-306 MCH-307	Elective Course –Generic* (Any One) Advanced Medicinal Chemistry Polymers Organic Synthesis	3	MCH-305 MCH-306 MCH-307	Elective Course –Generic* (Any One) Advanced Medicinal Chemistry Chemistry of Polymers Organic Synthesis	3	
	MCH-308	Practical & Spectral Interpretation / Seminar	5	MCH-308	Practical & Spectral Interpretation / Seminar	5	
		Comprehensive Viva-Voce	4		Comprehensive Viva-Voce	4	
			24		**Total Credits**	**24**	
IV	MCH-401	Core Course Analytical Chemistry	4	MCH-401	Core Course Advances in Analytical Chemistry	4	**20**
	MCH-402	Elective Course-Discipline Centric Environmental Chemistry	4	MCH-402	Elective Course-Discipline Centric Environmental Chemistry	3	

	MCH-403	Elective Course-Discipline Centric Solid State Chemistry and Materials Science	4	MCH-403	Elective Course-Discipline Centric Solid State Chemistry and Nanomaterials	3	**25**
	MCH-404 MCH-405 MCH-406 MCH-407	Elective Course-Discipline Centric (Any one) Bio-organic Chemistry Organometallic Chemistry Chemistry of Natural Products Heterocyclic Chemistr	4	MCH-404 MCH-405 MCH-406 MCH-407	Elective Course-Discipline Centric (Any one) Bio-organic Chemistry Organometallic Chemistry Chemistry of Natural Products Heterocyclic Chemistry	3	
	MCH-408	Dissertation/ Project	4	MCH-408	Dissertation/ Project	7	
		Comprehensive Viva-Voce	**4**		Comprehensive Viva-Voce	**4**	
		Total Credits	**24**		**Total Credits**	**24**	
					Average Change (%) (Total percent Change in 2018 / Number of Papers in 2016)		**10%**

SCHOOL OF CHEMICAL SCIENCES
DEVI AHILYA VISHWAVIDYALAYA, INDORE

COURSE STRUCTURE

Ph.D. Chemistry Syllabus Revision / Modified : 2013*Vs.* 2016

2013				2016			
Semester	**Code**	**Title of the Paper**	**Credit**	**Code**	**Title of the Paper**	**Credit**	Change (%)
I	CHEM -101	Research Methodology	5	CHEM-101	Research Methodology	4	50
	CHEM-102	Computer Applications	3	CHEM-102	Computer Applications (Theory & Practical)	3	50
	CHEM-103	Review of Literature	3	CHEM-103	Advanced Course:Interpretation of Spectra (Theory & P ractice)	3	100
				CHEM-104	Literature Survey	3	
		Comprehensive Viva- Voce	4		Comprehensive Viva- Voce	4	
		Total Credits	**15**		**Total Credits**	**14**	
					Average Change (%) (Total percent Change in 2013 / Number of Papers in 2016)		67

SCHOOL OF CHEMICAL SCIENCES
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COURSE STRUCTURE

Ph.D. Chemistry Syllabus Revision/Modified : 2016 *Vs.* 2018

2016				2018			
Semester	**Code**	**Title of the Paper**	**Credit**	**Code**	**Title of the Paper**	**Credit**	Change (%)
I	CHEM-101	Research Methodology	4	CHEM-101	Research Methodology	4	50
	CHEM-102	Computer Applications (Theory & Practical)	3	CHEM-102	Computer Applications (Theory & Practical)	3	20
	CHEM-103	Advanced Course:Interpretation of Spectra (Theory & P ractice)	3	CHEM-103	Advanced Course:Interpretation of Spectra (Theory & P ractice)	3	20
	CHEM-104	Literature Survey	3	CHEM-104	Review of Published Research in the relavant field	3	
		Comprehensive Viva- Voce	4		Comprehensive Viva- Voce	3	
		Total Credits	**14**		**Total Credits**	**16**	
					Average Change (%) (Total percent Change in 2016 / Number of Papers in 2018)		30