North Maharashtra University

'A' Grade NAAC Re-Accredited (3rd Cycle)

Jalgaon-425001, Maharashtra, (India)

B.O.S. in Chemistry

M.Sc. Second Year (Organic Chemistry)

Semester III & IV

With effect from **June-2018**

Step 1: Benzophenone to benzopenone oxime (Addition)
Step 2: Benzophenone oxime to benzanilide (Beckman's rearrangement)
Step 3: Benzanilide to *p*-bromobenzanilide (Bromination)

Prep -7: Synthesis of Methyl Orange from Aniline
Step 1: Aniline to sulphanilic acid (sulphonation)
Step 2: sulphanilic acid to Diazonium chloride (diazotization)
Step 3: Diazonium chloride to methyl orange (coupling reaction)

Prep -8:synthesis of Benzilic acid from Benzaldehyde
Step 1: Benzaldehyde (using thiamine HCl) to Benzoin (condation)
Step 2: Benzoin to Benzil (oxidation)
Step 3: Benzil to Benzilic acid (rearrangement)

All the students must submit the TLC for all the stages of preparation and a photo copy must be pasted in records.

REFERENCES:
1. Practical Organic Chemistry A.I.Vogel (Longmans)

2. Text Book of practical organic Chemistry F.G.Mann & B.C. Sanders.

3. A Manual of Practical Organic Chemistry Day Sitaramam & Govindachari

4. Organic Experiments L.F.Fieser.

5. Practical Organic Chemistry H.T.Openshaw

6. Systematic Identification of Organic Compounds, P.L.Shriner, R.C.Fuson & D.Y.Curtin.

7. Identification of Organic Compounds N.D.Cheronis & J.B.Entrilkin

8. Advanced Organic Synthesis by R.S.Monson Academic Press
9. Comprehensive Practical Organic Chemistry: By V.K. Ahluwalia, R. Aggarwal, V.K. Ahluwalia

CH -O-4: Short Research Project

Literature survey, study of reactions, synthesis, mechanism, isolation of natural products, standardization of reaction conditions, new methods etc.

1. Project allotted to 100% students.
2. Industrial visit is compulsory for all students.
3. CH-O-4 course is annual.
4. 60 marks for External examination.

Marking Scheme:

i. Content – 10 mark
ii. Characterization – 10
iii. Research Work- 20
iv. Power point presentation- 10 mark
v. Result and Observation-10 mark

5. 40 marks internal examination.

Marking Scheme:

i. Literature Survey- 10
ii. Review Writing – 10
iii. Presentation-10
iv. Industrial Visit Report-10

6. Student should submit review report and visit report at the time of annual practical examination.

M.Sc. Part-II Organic Chemistry (Semester - III & IV) subject equivalency between New and Old syllabus			
NORTH MAHARASHTRA UNIVERSITY, JALGAON Syllabus for M.Sc. Part-II Organic Chemistry (Semester - III & IV) **(With Effect from June 2018)** Course Structure for Second Year The following will be the structure for revised syllabus from June 2018 for Semester III and Semester IV		NORTH MAHARASHTRA UNIVERSITY, JALGAON Syllabus for M.Sc. Part-II Organic Chemistry (Semester - III & IV) **(With Effect from June 2015)** Course Structure for Second Year The following will be the structure for revised syllabus from June 2015 for Semester III and Semester IV	
Subject code	TITLE	Subject code	TITLE
SEMESTER – III		**SEMESTER – III**	
CH-350	Organic Reaction Mechanism	CH-350	Organic Reaction Mechanism
CH-351	Spectroscopic Methods in Structure Determination	CH-351	Spectroscopic Methods in Structure Determination
CH-352	Organic Stereochemistry	CH-352	Organic Stereochemistry
CH-353	Free radical, photochemistry, Pericyclic reaction and their applications	CH-353	Free radical, photochemistry, Pericyclic reaction and their applications
SEMESTER – IV		**SEMESTER – IV**	
CH-450	Chemistry of Natural Products	CH-450	Chemistry of Natural Products
CH-451	Synthetic Methods in Organic Chemistry	CH-451	Synthetic Methods in Organic Chemistry
CH-452	**Heterocyclic chemistry, Chiron approach and Medicinal chemistry**	CH-452	**Heterocyclic chemistry, Chiron approach, Chiral drugs and Medicinal chemistry**
ANNUAL		**ANNUAL**	
CH-O-2	Ternary mixture separation	CH-O-2	Ternary mixture separation
CH-O-3	Three stage preparations	CH-O-3	Three stage preparations
CH-O-4	Short Research Project	CH-O-4	Short Research Project