



# **SOLAPUR UNIVERSITY, SOLAPUR**

**FACULTY OF ENGINEERING & TECHNOLOGY**

**Master of Pharmacy**

**Second Year M. Pharmacy 2016-17**

**CBCS Syllabus**

Faculty of Engineering & Technology  
**Master of Pharmacy**  
 Choice Based Credit System Structure of Teaching & Examination w.e.f. 2016-17  
**Second Year M. Pharmacy (Semester-III)**

Code	Course	Hrs./Week			Credits	Examination Scheme			
		L	T	P		ISE	ESE	ICA	Total
2.3.1	Research Methodology	4	-	-	4	100	-	-	100
2.3.2	Dissertation Synopsis Seminar	-	4	-	4	100	-	-	100
2.3.3	Research Work	-	-	16	8	-	-	200	200
2.3.4	Dissertation Progress Seminar-I	-	4	-	4	100	-	-	100
	<b>Total</b>	<b>4</b>	<b>8</b>	<b>16</b>	<b>20</b>	<b>300</b>	<b>-</b>	<b>200</b>	<b>500</b>
<b>Second Year M. Pharmacy (Semester-IV)</b>									
2.4.1	Research Work	-	-	16	8	-	-	200	200
2.4.2	Dissertation Progress Seminar-II	-	4	-	4	100	-	-	100
2.4.3	Dissertation Seminar & Viva-voce	-	-	-	8	-	200	-	200
	<b>Total</b>	<b>-</b>	<b>4</b>	<b>16</b>	<b>20</b>	<b>100</b>	<b>200</b>	<b>200</b>	<b>500</b>
<b>Abbreviations:</b> L- Lectures, T- Tutorials, P-Practicals, ISE - In Semester Exam., ESE - End Semester exam, ICA- Internal Continuous Assessment <b>Note :</b> ISE -Three Tests , ESE - University Theory paper shall be of 70 marks of 3 hrs. duration									

## **SOLAPUR UNIVERSITY, SOLAPUR**

### **Second Year M. Pharmacy (Semester-III & IV)**

#### **2.3.1 Research Methodology**

##### **1. Research:**

Meaning and objective of research, types of research (basic, applied and patent oriented research), selecting a problem & preparing a research proposal for different types of research.

##### **2. Literature survey and documentation:**

Methods of Literature survey, Use of library, books, journals, e journals, thesis, chemical abstracts and patent data base, techniques of documentation, importance of documentation, uses of computer packages in documentation.

##### **3. Statistics in research :**

Variables and variation [continuous variables and discrete variables], sample and population, population parameters and sample statistics, random sampling], precision, accuracy and bias; significant figures.

##### **4. Experimental design:**

Meaning, need, features, basic principle and important concepts of experimental design different types of research designs, crossover design and bioavailability / bioequivalence studies.

##### **5. Scientific writing:**

Research report, paper, thesis writing [Title, abstract, key words, methodology, results, discussion, conclusion, acknowledgement, references, errata, foot notes], types of research paper [review article, research papers and short communications and meeting report], detailed study of 'Instruction to Authors' of any one international journal, a thorough understanding of steps involved in submitting articles electronically to the journal [registration, new article submission, tracking the process, submitting revised articles].

Concept of Impact factor, Rating, Indexing and citation etc

##### **6. Presentation:**

Importance, types different skills, contained, format of model, introduction & ending, posture, gestures, eye contact, facial expressions, stage, fright, volume, pitch, speed, pause & language, visual aids & seating, questionnaire.

##### **References**

1. Research in Education- John V. Best, John V. Kahn 10<sup>th</sup> edition
2. Presentation skills - Michael Hallon- Indian Society for Institute education
3. Thesis projects in Science & Engineering – Richard M. Davis.
4. Thesis & Assignment – Jonathan Anderson
- 5 Writing a technical paper- Donald Menzel
6. Protection of industrial Property rights- P. Das & Gokul Das
7. Preparation for publication – King Edward Hospital Fund for London

8. Manual for evaluation of industrial projects-United Nations
9. Manual for the preparation of industrial feasibility studies
10. Pharmaceutical Statistics: Practical and Clinical Applications by Sanford Bolton and Charles Bon,
11. Research methodology: Methods and Techniques by C. R. Kothari, second edition
12. Research in Education by John W. Best and James V. Kahn, 11th edition.

### **2.3.2 Dissertation Synopsis Seminar**

A student shall be expected to carry out intensive literature survey in the field of interest and to select a topic for his/her dissertation in consultation with the supervisor. The student shall then submit a report and deliver a seminar on the problem chosen by him/her to the panel of three departmental PG recognized faculty members. It shall be expected that a student justifies the gravity and also the relevance of the problem through his/her seminar. This shall be for the approval of synopsis from University.

### **2.3.3 Research Work**

Evaluation based on the efforts put in by the student to carry out his/her dissertation work & the results obtained thereof.

### **2.3.4 Dissertation Progress Seminar-I**

The evaluation consisting of submission of progress report and presentation of progress seminar before a panel of three departmental PG recognized faculty members.

### **2.4.1 Research Work**

Evaluation based on the efforts put in by the student to carry out his/her dissertation work & the results obtained thereof.

### **2.4.2 Dissertation Progress Seminar-II**

The evaluation consisting of submission of progress report and presentation of progress seminar before a panel of three departmental PG recognized faculty members.

### **2.4.3 Dissertation Seminar & Viva-voce**

After completing the dissertation work the student shall submit the dissertation report in the prescribed format to the university. Open defense of the student on his/her dissertation shall be arranged by the university. This defense shall be in front of the panel of examiners appointed by university authority.

**Guidelines for Assessment**

- Quality of Literature survey and Novelty in the problem
- Clarity of Problem definition and Feasibility of problem solution
- Clarity of objective and scope
- Quality of work attempted
- Presentation skills