

The University Of Toledo

Graduate Program Requirement Revision

* denotes required fields

Contact Person*: Sai HS Boddu Phone: 383-1959 (xxx - xxxx) Email: sboddu@utnet.utoledo.edu

College*: College Pharmacy, Pharm Sciences
 Dept/Academic Unit*: Pharmacy Practice
 Program Name*: MSPS in Industrial Pharmacy

Present

Proposed

Minimum number of credit hours for completion(if changed):

36

Minimum number of credit hours for completion(if changed):

30

List all courses which comprise the certificate or degree and identify term offered (summer/fall/spring):

See attached

List all courses which comprise the certificate or degree and identify term offered (summer/fall/spring):

See attached

Identify delivery method (Online/in class/off campus): In class

Identify delivery method (Online/in class/off campus): In class

Choose File No file chosen

File Type	View File
PresentCourseList	View

Proposed effective term*: 201740 (e.g. 201140 for 2011 Fall)

Please refer to <http://www.utoledo.edu/catalog/> for university catalog.

Comments/Notes:

MSIP curricular changes were made with an intention to:

- 1) Revise the curriculum
- 2) Reduce the total number of credit hours so that students will complete all requirements in two years

Rationale:

- 1) Two new courses PHPR5780: Advanced Drug Delivery Systems -2 (2 Cr) and PHPR6860: Advanced Drug Delivery Lab (2 Cr) are offered in place of PHPR5680: Parenteral Manufacturing (2 Cr) and PHPR6850: Product Development Lab (2 Cr).
Reason: To better prepare our graduate students to move on to PhD programs or to pursue a career in the pharmaceutical industry.
- 2) CHEM6310: Separation Methods (3 Cr) and CHEM6350: Separation Methods lab (1 Cr) are not offered anymore and they are being replaced by CHEM6300: Advanced Analytical Chemistry (4 Cr)
Reason: CHEM6310 and CHEM6350 are no longer offered.
- 3) PHPR5681: Parental Manufacturing Lab (1 Cr) is replaced with MBC 5100: Practices in Pharmaceutical Research (1 Cr)
Reason: Replaced with a new course to teach practical aspects of the research in academic, industrial, and governmental pharmaceutical settings.
- 4) PHPR6950: Seminar course will be taken once instead of two times.
Reason: Reduce credit hours

Program Approval:

Department Curriculum Authority:	Mariann D Churchwell	Date	2016/12/19
Department Chairperson:	Diane Cappelletty	Date	2016/12/19
College Curriculum Authority or Chair:	Frederick E. Williams	Date	2016/12/20
College Dean:	Laurie S. Mauro	Date	2016/12/29
Graduate Council:	Constance Schall (GC 1.24.2017)	Date	2017/01/26
Dean of Graduate Studies:	Amanda Bryant-Friedrich	Date	2017/01/31
Office of the Provost :	marcia king-blandford	Date	2017/01/31

Administrative Use Only

Effective Date:	2017/08/28	 (YYYY/MM/DD)
CIP Code:	43551	
Subsidy Taxonomy:		
Program Code:		
Instructional Level:		

Registrar's Office Use Only

Processed in Banner on:



Processed in Banner by:

Banner Program Code:

Banner Term Code:

CURRENT CURRICULUM FOR MSIP PROGRAM			REVISED CURRICULUM FOR MSIP PROGRAM			
	Courses			Courses		Reason for change
Course Number	Course Title	Credit Hours	Course Number	Course Title	Credit Hours	
PHPR5720	Pharmaceutical Rate Processes	3	PHPR5720	Pharmaceutical Rate Processes	3	
PHCL5760	Toxicokinetics	3	PHCL5760	Toxicokinetics	3	
PUBH6000	Biostatistics	3	PUBH6000	Biostatistics	3	
PHPR 5770	Advanced Drug Delivery Systems -1	3	PHPR5770	Advanced Drug Delivery Systems -1	3	
PHPR6950	Seminar	1*	PHPR6950	Seminar	1	
PHPR6850	Product Development	2	PHPR6860	Advanced Drug Delivery Lab	2	Replace PHPR6850
PHPR5680	Parenteral Manufacturing	2	XXXXXXX	Elective**	2-4	Replace PHPR5680
PHPR5681	Parental Manufacturing Lab	1	MBC5100	Practices in Pharmaceutical Research	1	Replace PHPR5681
CHEM6310	Separation Methods	3	CHEM6300	Advanced Analytical Chemistry	4	Replace CHEM6310, CHEM6350
CHEM6350	Separation Methods lab	1	PHPR6960	Thesis Research	6-8*	
PHPR5700	Equilibrium Phenomenon	2		Degree requirement	30	
PHPR5690	Dosage Form Design	3	1) *6 thesis credit hours are the required minimum; more than 6 credit hours can be taken. 2) **Two credit hours of electives must be satisfied by taking courses within the PHPR Department. 3) Successful oral defense of the thesis before the thesis advisory committee (consisting of the thesis adviser and two other members) and presentation of the results of the thesis research in a seminar before the Division of Industrial Pharmacy. 4) Acceptance of thesis by the M.S. thesis adviser and the thesis advisory committee.			
PHPR6960	Thesis Research	6				
* Seminar course must be taken 2 times to meet requirements						
	Degree requirement	36-38				
Electives			Electives			
MBC5620	Biochemical Techniques	2	PHPR 5780	Advanced drug delivery systems-II	2	
PHPR 5710	Selected topics in Pharmaceutical Technology	2-3	PHPR 5700	Equilibrium Phenomenon	2	
PHPR 5990	Problems in Pharmacy Practice	1-6	MBC 5620	Biochemical Techniques	2	
PHPR 6530	Research methods in Pharmacy Practice	3	PHPR 5710	Selected topics in Pharmaceutical Technology	2-3	
CHEM 6810	Material sciences- I	4	PHPR 5990	Problems in Pharmacy Practice	1-6	
CHEM 6980	Material sciences- II	4	PHPR 6530	Research methods in pharmacy practice	2	
CHEM 6980	Special Topics in Chemistry	1-4	CHEM 6810	Material sciences- I	4	
			CHEM 6310	Separation methods	2-4	

Replaced courses, Deleted course, Replacement/New courses added

MSIP curricular changes

1. Overall goals:
 - Revise the curriculum
 - Reduce the total number of credit hours so that students will complete all requirements in two years
2. Two new courses PHPR5780: Advanced Drug Delivery Systems -2 (2 Cr) and PHPR6860: Advanced Drug Delivery Lab (2 Cr) are offered in place of PHPR5680: Parenteral Manufacturing (2 Cr) and PHPR6850: Product Development lab (2 Cr).
Reason: Formerly PHPR5680 and PHPR6850 were taught by Ken Alexander and with his retirement we don't have anyone to offer these courses. Moreover, we are revising the courses to better prepare our graduate students to move on to PhD programs or to pursue a career in pharmaceutical industry.
3. CHEM6310: Separation Methods (3 Cr) and CHEM6350: Separation Methods lab (1 Cr) are not offered anymore and they are being replaced by CHEM6300: Advanced Analytical Chemistry (4 Cr)
Reason: CHEM6310 and CHEM6350 were formerly taught by Dr. Jared Anderson and hence they are being replaced by an equivalent CHEM6300 course.
4. PHPR5681: Parental Manufacturing Lab (1 Cr) is replaced with MBC 5100: Practices in Pharmaceutical Research (1 Cr)
Reason: Replaced with a new course to teach practical aspects of the research environment, safety regulations, legal obligations, and ethical considerations that are encountered in academic, industrial, and governmental pharmaceutical research. Though on the curriculum, PHPR5681 is never offered after moving the Health science campus due to lack of sterile facility.
5. PHPR6950: Seminar course will be taken once instead of two times.
Reason: Reduce credit hours
6. PHPR5690: Dosage Form Design (3 Cr) is deleted
Reason: Reduce the total number of credit hours so that students will complete all requirements in two years and have sufficient time to work on their thesis in the last semester.

These changes result in a drop from 36-38 to 30-32 credit hours. Credit hours were dropped to meet the requirement for COGS to decrease in credit hours.