

MS Translational Pharmacology
TOXICOLOGY and SAFETY PHARMACOLOGY Specialization
 Plan of Study Worksheet
 (Revised: 12/19/2023)

AUTUMN ENTRY – Full-time 12-month plan

Please Note: 12-month plan of study is only available to students entering the program in autumn semesters

Year 1 – Autumn

Course	Credit
BIOPHRM 5600: Introduction to General Pharmacology (AU, SP, SU) [2]	3
PHR 7562: Design and Management of Preclinical Studies (AU)	3
PHR 7784: Data Analysis and Interpretation for Clinical and Preclinical Research (AU)	3
PHR 7582: Organ System Toxicology (AU, SP)	3
Total credit hours:	9-12

Year 1 – Spring

Course	Credit
PHR 7580: Principles of Safety Pharmacology (SP)	3
PHR 7583: Advanced Organ System Toxicology and Risk Assessment (SP, prereq 7582)	3
PHR 7584: Applied Pharmacokinetics and Pharmacodynamics (SP)	3
BIOETHC 6010: Biomedical Research Ethics (AU, SP)	3
Total credit hours:	12

Year 1 – Summer

Course	Credit
PHR 5005: Fundamentals of Pathophysiology (SU) [1]	3
PHR 7586: Integrative In Vivo Modeling for Drug Development (SU, prereq 7582)	3
PHR 7588: Toxic Substances (SU, prereq 7582)	3
PHR 7597: Scientific Writing: Preclinical Study Protocol and Manuscript Development (AU, SP, SU)	3
Total credit hours:	9-12

The MS Pharmacology degree requires a minimum of 30 credits. Adjustments may be made to the sample plans of study as follows:

- [1] PHR 5005 is waived for students who have completed pathophysiology coursework at any level (undergraduate or graduate). May substitute HTHRHSC 5500 (Introduction to Pathophysiology, 4 credits, AU, SP)
- [2] BIOPHRM 5600 is waived for students who have completed a general pharmacology course at the graduate level.

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AUTUMN ENTRY – Part-time 24-month plan

Year 1 – Autumn

Course	Credit
PHR 7562: Design and Management of Preclinical Studies (AU)	3
BIOPHRM 5600: Introduction to General Pharmacology (AU, SP, SU) [2]	3
Total credit hours:	6

Year 1 – Spring

Course	Credit
PHR 7582: Organ System Toxicology (AU, SP)	3
PHR 7584: Applied Pharmacokinetics and Pharmacodynamics (SP)	3
Total credit hours:	3-6

Year 1 – Summer

Course	Credit
PHR 5005: Fundamentals of Pathophysiology (SU) [1]	3
PHR 7586: Integrative In Vivo Modeling for Drug Development (SU, prereq 7582)	3
Total credit hours:	3-6

Year 2 – Autumn

Course	Credit
BIOETHC 6010: Biomedical Research Ethics (AU, SP)	3
PHR 7784: Data Analysis and Interpretation for Clinical and Preclinical Research (AU)	3
Total credit hours:	6

Year 2 – Spring

Course	Credit
PHR 7580: Principles of Safety Pharmacology (SP)	3
PHR 7583: Advanced Organ System Toxicology and Risk Assessment (SP, prereq 7582)	3
Total credit hours:	6

Year 2 – Summer

Course	Credit
PHR 7588: Toxic Substances (SU, prereq 7582)	3
PHR 7597: Scientific Writing: Preclinical Study Protocol and Manuscript Development (AU, SP, SU)	3
Total credit hours:	6

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SPRING ENTRY – Part-time 24-month plan

Year 1 – Spring

Course	Credit
PHR 7580: Principles of Safety Pharmacology (SP)	3
PHR 7584: Applied Pharmacokinetics and Pharmacodynamics (SP)	3
Total credit hours:	6

Year 1 – Summer

Course	Credit
PHR 5005: Fundamentals of Pathophysiology (SU) [1]	3
BIOPHRM 5600: Introduction to General Pharmacology (AU, SP, SU) [2]	3
Total credit hours:	6

Year 1 – Autumn

Course	Credit
PHR 7562: Design and Management of Preclinical Studies (AU)	3
PHR 7582: Organ System Toxicology (AU, SP)	3
Total credit hours:	6

Year 2 – Spring

Course	Credit
BIOETHC 6010: Biomedical Research Ethics (AU, SP)	3
PHR 7583: Advanced Organ System Toxicology and Risk Assessment (SP, prereq 7582)	3
Total credit hours:	6

Year 2 – Summer

Course	Credit
PHR 7586: Integrative In Vivo Modeling for Drug Development (SU, prereq 7582)	3
PHR 7588: Toxic Substances (SU, prereq 7582)	3
Total credit hours:	6

Year 2 – Autumn

Course	Credit
PHR 7784: Data Analysis and Interpretation for Clinical and Preclinical Research (AU)	3
PHR 7597: Scientific Writing: Preclinical Research (AU, SP, SU)	3
Total credit hours:	6

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SUMMER ENTRY – Part-time 24-month plan

Year 1 – Summer

Course	Credit
PHR 5005: Fundamentals of Pathophysiology (SU) [1]	3
BIOPHRM 5600: Introduction to General Pharmacology (AU, SP, SU) [2]	3
Total credit hours:	6

Year 1 – Autumn

Course	Credit
PHR 7562: Design and Management of Preclinical Studies (AU)	3
PHR 7582: Organ System Toxicology (AU, SP)	3
Total credit hours:	6

Year 1 – Spring

Course	Credit
PHR 7580: Principles of Safety Pharmacology (SP)	3
PHR 7584: Applied Pharmacokinetics and Pharmacodynamics (SP)	3
Total credit hours:	6

Year 2 – Summer

Course	Credit
PHR 7586: Integrative In Vivo Modeling for Drug Development (SU, prereq 7582)	3
PHR 7588: Toxic Substances (SU, prereq 7582)	3
Total credit hours:	6

Year 2 – Autumn

Course	Credit
PHR 7784: Data Analysis and Interpretation for Clinical and Preclinical Research (AU)	3
BIOETHC: Biomedical Research Ethics (AU, SP)	3
Total credit hours:	6

Year 2 – Spring

Course	Credit
PHR 7583: Advanced Organ System Toxicology and Risk Assessment (SP, prereq 7582)	3
PHR 7597: Scientific Writing: Preclinical Study Protocol and Manuscript Development (AU, SP, SU)	3
Total credit hours:	6

The MS Pharmacology degree requires a minimum of 30 credits. Adjustments may be made to the sample plans of study as follows:

- [1] PHR 5005 is waived for students who have completed pathophysiology coursework at any level (undergraduate or graduate). May substitute HTHRHSC 5500 (Introduction to Pathophysiology, 4 credits, AU, SP)
- [2] BIOPRHM 5600 is waived for students who have completed a general pharmacology course at the graduate level.