

Student Name: \_\_\_\_\_

ID#: \_\_\_\_\_

Advisor Name: \_\_\_\_\_

Anticipated Graduation Date: \_\_\_\_\_

## CHEMISTRY MAJOR – LIFE SCIENCES EMPHASIS CHECKLIST (122 s.h.) 2023-24 Academic Calendar

THIS CHECKLIST IS INTENDED TO ASSIST STUDENTS AND ADVISORS IN ENSURING THAT ALL REQUIREMENTS ARE MET. IT IS THE RESPONSIBILITY OF THE **STUDENT** TO ENSURE THAT ALL REQUIREMENTS FOR THE GRANTING OF A DEGREE HAVE BEEN MET

### 1. Inquiry: Ways of Knowing - Core Requirements (40 s.h. \*)

\*University Core Requirements are modified for students who transfer in with 57 s.h. or more of initial transfer credit. See Academic Calendar for details (twu.ca/calendar).

✓	COURSE	S.H.	NOTES	✓	COURSE	S.H.	NOTES
<b>FOUNDATIONAL INQUIRIES (25 sem. hrs.)</b>				<input type="checkbox"/>	Academic Writing Requirement <sup>2</sup>		
<i>Academic Research &amp; Writing</i>				<b>WAYS OF KNOWING (15 sem. hrs.)</b>			
<input type="checkbox"/>	ENGL _____	3	Choose 2 courses (6 sem. hrs.) from ENGL 101, 102, 103, 104.	In addition to the courses on the left, students must take an additional 18 sem. hrs., selecting 3 sem. hrs. from each of the following six categories. *At least 9 sem. hrs. must be from outside of the student's major.			
<input type="checkbox"/>	ENGL _____	3					
<i>Foundations</i>				<i>Aesthetic &amp; Performance Inquiry</i>			
<input type="checkbox"/>	FNDN 101	1	Compulsory during the first semester of the first year. <sup>1</sup>	<input type="checkbox"/>	_____	3	Choose 3 sem. hrs. from the Aesthetic & Performance Inquiry category below.
<input type="checkbox"/>	FNDN 102	3	Normally taken before year 3.	<i>Cultural &amp; Linguistic Inquiry</i>			
<input type="checkbox"/>	FNDN 201	3		<input type="checkbox"/>	_____	3	Choose 3 sem. hrs. from the Cultural & Linguistic Inquiry category below.
<i>Logical &amp; Ethical Reasoning</i>				<i>Experiential &amp; Embodied Inquiry</i>			
<input type="checkbox"/>	PHIL _____	3	Choose one of PHIL 100, 103, 105, 106, 109, or 210.	<input type="checkbox"/>	_____	3	Choose 3 sem. hrs. from the Experiential & Embodied Inquiry category below. <sup>3</sup>
<i>Religious &amp; Spiritual Thought</i>				<i>Historical &amp; Archival Inquiry</i>			
<input type="checkbox"/>	RELS 110	3	Compulsory during the first semester of the first year.	<input type="checkbox"/>	_____	3	Choose 3 sem. hrs. from the Historical & Archival Inquiry category below.
<input type="checkbox"/>	RELS 111	3		<i>Quantitative &amp; Computational Inquiry</i>			
<input type="checkbox"/>	RELS 112	3		**	**	**	Satisfied by Program Requirements.
<i>Scientific Method &amp; Lab Research</i>				<i>Social &amp; Global Inquiry</i>			
**	**	**	Satisfied by Program Requirements.	<input type="checkbox"/>	_____	3	Choose 3 sem. hrs. from the Social & Global Inquiry category below.

<sup>1</sup>FNDN 101 is compulsory during the first semester of the first year for all new students unless they have a minimum 24 sem. hrs. initial transfer credit.

<sup>2</sup>**Academic Writing Requirement:** students must take WRTG 100 (native English speakers) or WRTG 101 (non-native English speakers) in their first semester at TWU, unless exempt at the time of admission to the University. WRTG course credit may be included toward a degree program as elective credit.

<sup>3</sup>CHEM 409/410 recommended.

#### **Aesthetic & Performance Inquiry**

Choose 3 semester hours from: ART 181, 182, 250; ENGL 207, 208, 310; HKIN 342; MCOM 211, 221, 231, 369; MUSI 110; PHIL 370; SAMC 111, 370; THTR 130, 161; any Music Ensembles; any Music Lessons.

#### **Cultural & Linguistic Inquiry**

Choose 3 semester hours from: ANTH 210, 395; EDUC 496; ENGL 334, 340, 482; GREE 235; HEBR 245; HIST 237; IDIS 201; POLS 237; RELS 235, 245; SOCI 395; any World Languages & Cultures course (CHIN, FREN, JAPA, RUSS, SPAN).

#### **Experiential & Embodied Inquiry**

Choose 3 semester hours from: ART 305, 306, 307; BIOL 316, 318, 362, 364, 409, 410; BIOT 200, 300, 400, 409, 410; BUSI 395, 396, 49x; CHEM 409, 410; CMPT 409, 410; EDUC 302, 303, 402, 403; GENV 131, 316, 318, 372, 373, 374, 375, 409, 410; HIST 310, 315, 316; HKIN 201, 202, 216, 235, 266, 336, 355, 455, 456, 457, 458, 459, 460; LING 398, 399; MATH 409, 410; MCOM 281, 391, 392, 393; NURS 213; POLS 395, 396; PSYC 322, 497, 498; SOCI 320, 411, 420; THTR 101, 102, 151, 152, 153, 154, 175, 210, 301, 302, 351, 352, 353, 354; any 1 sem. hr. HKIN Activity course; any Travel Study.

#### **Historical & Archival Inquiry**

Choose 3 semester hours from: ART 237, 238; ECON 306; GENV 312; HIST 107, 108, 135, 306, 339, 391; MUSI 131, 132; NURS 230; PHIL 203, 314, 421; POLS 391; PSYC 408; RELS 320, 351, 352, 475; SAMC 112; SOCI 391; THTR 331, 332.

#### **Social & Global Inquiry**

Choose 3 semester hours from: ANTH 101, 302; BUSI 311; ECON 311, 354; EDUC 345, 365; ENGL 348; GENV 111, 212, 322, 354; LING 101, 210, 302; MCOM 111, 171, 251, 313, 315, 317, 372, 491; NURS 227; PHIL 208, 220, 310, 320; POLS 101, 211, 310, 312, 320, 493; PSYC 399; RELS 271, 272, 285, 381, 384, 386, 476; SOCI 101; THTR 348.

## 2. Required Chemistry Courses (44 s.h.)

✓	COURSE	S.H.	NOTES	✓	COURSE	S.H.	NOTES
<input type="checkbox"/>	CHEM 111*	3		<input type="checkbox"/>	CHEM 384	3	Lab also required.
<input type="checkbox"/>	CHEM 112*	3		<input type="checkbox"/>	CHEM 386	3	
<input type="checkbox"/>	CHEM 221	3	Lab also required.	<input type="checkbox"/>	CHEM ____	3	
<input type="checkbox"/>	CHEM 222	3	Lab also required.	<input type="checkbox"/>	CHEM ____	3	Choose from CHEM 321, 322, 341, 342, 370, 372, 409/410**, 431, 432, 461, 469.
<input type="checkbox"/>	CHEM 230	3		<input type="checkbox"/>	CHEM ____	3	
<input type="checkbox"/>	CHEM 240	3	Lab also required.	<input type="checkbox"/>	CHEM ____	3	
<input type="checkbox"/>	CHEM 357	3	Lab also required. Or 358 with instructor's permission.	<input type="checkbox"/>	CHEM ____	3	

\*Includes a 1 semester hour lab as a co-requisite. CHEM 198 is the co-requisite for 103 & 111, CHEM 199 the co-requisite for 104 & 112. Goal is 10 Lab (L) courses. Seven (7) required chemistry courses have labs, choose an additional 3 from: 322, 341, 358, 370, 431, 409/410\*\*

\*\*CHEM 409/410 would meet Experiential and Embodied Inquiry requirements.

## 3. Ancillary Requirements (26 s.h.)

✓	COURSE	S.H.	NOTES	✓	COURSE	S.H.	NOTES
<input type="checkbox"/>	BIOL 113*	3		<input type="checkbox"/>	MATH 124	3	
<input type="checkbox"/>	BIOL 114*	3		<input type="checkbox"/>	NATS 482	3	
<input type="checkbox"/>	BIOL 223	3		<input type="checkbox"/>	PHYS 111	3	
<input type="checkbox"/>	MATH 123	3		<input type="checkbox"/>	PHYS 112	3	

\*Includes a 1 semester hour lab as a co-requisite. BIOL198 is the co-requisite for BIOL113; BIOL199 is the co-requisite for BIOL114

## 4. Elective Courses (12 s.h.)

STUDENTS ARE ENCOURAGED, BUT NOT REQUIRED, TO TAKE ELECTIVE CLASSES THAT CONTRIBUTE TO A CONCENTRATION OR A MINOR. IF YOU CHOOSE TO TAKE A CONCENTRATION OR A MINOR, PLEASE ATTACH THE APPROPRIATE CONCENTRATION/MINOR CHECKLIST AVAILABLE AT [twu.ca/advising](http://twu.ca/advising).

✓	SUBJECT	COURSE#	S.H.	NOTES	✓	SUBJECT	COURSE#	S.H.	NOTES
<input type="checkbox"/>					<input type="checkbox"/>				
<input type="checkbox"/>					<input type="checkbox"/>				
<input type="checkbox"/>					<input type="checkbox"/>				

- **NOTE:** A total of 122 s.h. of credit, including a minimum of 42 s.h. (24 s.h. in the major) of upper-level credit is required for graduation. A minimum overall (cumulative) GPA of 2.00 is required for graduation.
- **NOTE:** In order to be eligible for graduation you must complete an Application for Graduation via the Student Portal and submit a completed checklist to the Office of the Registrar by April 30 of the year prior to your completion (there is no fee to apply for graduation). Once your complete application has been received, a degree audit will be completed for you. This audit will confirm which courses are still outstanding in order for you to complete your degree.

		YEAR 1	
✓	s.h.	Fall	
	1	FNDN 101	
	3	RELS 110	
	3	ENGL 103	
	4	CHEM 103 or 111 <sup>1</sup>	
	4	BIOL 113 <sup>1</sup>	
		Semester Total: 15	

		YEAR 2	
✓	s.h.	Fall	
	3	Core <sup>2</sup>	
	3	CHEM 221 <sup>1</sup>	
	3	PHYS 111 <sup>1</sup>	
	3	MATH 123	
	3	Elective <sup>4</sup>	
		Semester Total: 15	

		YEAR 3	
✓	s.h.	Fall	
	3	PHIL <sup>3</sup>	
	3	Core <sup>2</sup>	
	3	CHEM 384 <sup>1</sup>	
	3	CHEM 432	
	3	BIOL 223 <sup>1</sup>	
		Semester Total: 15	

		YEAR 4	
✓	s.h.	Fall	
	3	Core <sup>2</sup>	
	3	Core <sup>2</sup>	
	3	CHEM 240 <sup>1</sup>	
	3	CHEM 357 <sup>1</sup>	
	3	NATS 482	
		Semester Total: 15	

		YEAR 1	
✓	s.h.	Spring	
	3	FNDN 102	
	3	RELS 111	
	3	ENGL 104	
	4	CHEM 104 or 112 <sup>1</sup>	
	4	BIOL 114 <sup>1</sup>	
		Semester Total: 17	

		YEAR 2	
✓	s.h.	Spring	
	3	FNDN 201	
	3	CHEM 222 <sup>1</sup>	
	3	CHEM 230	
	3	PHYS 112 <sup>1</sup>	
	3	MATH 124	
		Semester Total: 15	

		YEAR 3	
✓	s.h.	Spring	
	3	RELS 112	
	3	CHEM 321	
	3	CHEM 386	
	3	CHEM 431 <sup>1</sup>	
	3	Elective <sup>4</sup>	
		Semester Total: 15	

		YEAR 4	
✓	s.h.	Spring	
	3	Core <sup>2</sup>	
	3	CHEM 342	
	3	CHEM 461	
	3	Elective <sup>4</sup>	
	3	Elective <sup>4</sup>	
		Semester Total: 15	

## COURSE LEGEND

### Core Courses

2. Core electives should be chosen as follows:

- ONE Aesthetic and Performance Inquiry
- ONE Cultural & Linguistic Inquiry
- ONE Experiential & Embodied Inquiry
- ONE Historical & Archival Inquiry
- ONE Social & Global Inquiry

3. Choose from: PHIL 100, 103, 105, 106, 109, or 210.

### Major Courses

1. Includes co-requisite lab

### Major + Core Courses

### Ancillary Courses

### Ancillary + Core Courses

### Electives

4. Choose a 300- or 400-level elective.

*Summer Sessions are encouraged to reduce semester load and/or repeat courses.*

*This is an example of what a 4-year degree plan might look like. It is not the official program checklist. In the case of any discrepancy between this program plan and the checklist, the checklist shall prevail. It is the student's responsibility to ensure they complete all program requirements as laid out in the approved checklist.*

		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
✓	s.h.	Fall		Fall		Fall		Fall		Fall	
	1	FNDN 101		3	Core <sup>2</sup>	3	PHIL <sup>3</sup>	3	Core <sup>2</sup>	3	CHEM 322 <sup>1</sup>
	3	RELS 110		3	CHEM 221 <sup>1</sup>	3	CHEM 384 <sup>1</sup>	3	Core <sup>2</sup>	3	CHEM 432
	3	ENGL 103		3	BIOL 223 <sup>1</sup>	3	PHYS 111 <sup>1</sup>	3	CHEM 240 <sup>1</sup>	3	NATS 482
	4	CHEM 111 <sup>1</sup>		3	MATH 105	3	MATH 123	3	CHEM 357 <sup>1</sup>	3	Elective <sup>4</sup>
	4	BIOL 113 <sup>1</sup>									
		Semester Total: 15		Semester Total: 12		Semester Total: 12		Semester Total: 12		Semester Total: 12	
		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
✓	s.h.	Spring		Spring		Spring		Spring		Fall	
	3	FNDN 102		3	FNDN 201	3	RELS 112	3	Core <sup>2</sup>	3	Core <sup>2</sup>
	3	RELS 111		3	CHEM 222 <sup>1</sup>	3	CHEM 386	3	CHEM 342	3	CHEM 321
	3	ENGL 104		3	CHEM 230	3	PHYS 112 <sup>1</sup>	3	CHEM 461	3	Elective <sup>4</sup>
	4	CHEM 112 <sup>1</sup>		3	Elective	3	MATH 124	3	Elective <sup>4</sup>	3	Elective <sup>4</sup>
	4	BIOL 114 <sup>1</sup>									
		Semester Total: 17		Semester Total: 12		Semester Total: 12		Semester Total: 12		Semester Total: 12	

## COURSE LEGEND

### Core Courses

2. Core electives should be chosen as follows:  
 ONE Aesthetic and Performance Inquiry  
 ONE Cultural & Linguistic Inquiry  
 ONE Historical & Archival Inquiry  
 ONE Social & Global Inquiry

3. Choose from: PHIL 100, 103, 105, 106, 109, or 210.

### Major Courses

1. Includes co-requisite lab

### Major + Core Courses

### Ancillary Courses

### Ancillary + Core Courses

### Electives

4. Choose a 300- or 400-level elective.

*Summer Sessions are encouraged to reduce semester load and/or repeat courses.*

*This is an example of what a 5-year degree plan might look like. It is not the official program checklist. In the case of any discrepancy between this program plan and the checklist, the checklist shall prevail. It is the student's responsibility to ensure they complete all program requirements as laid out in the approved checklist.*