PREMEDICINE/PREDENTISTRY

Majors:

- · Bachelor of Science, Predentistry (p. 1)
- · Bachelor of Science, Premedicine (p. 3)

The Bachelor of Science, Predentistry and the Bachelor of Science, Premedicine may be pursued in conjunction with the Neuroscience (http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/programsofstudy/biology/#Neuro) co-major.

Minor.

· Medicine and Society (p. 5)

The Bachelor of Science with a major in premedicine (MED) or predentistry (DEN) is an interdisciplinary curriculum of study. It is distinctively designed to provide a science-based, diverse education as a preparation for admission to any of the health professional schools including medical, dental, physician assistant, anesthesiologist assistant, optometry, pharmacy, veterinary, and chiropractic. Courses in biology, chemistry, mathematics, and physics comprise the science core of the major. A substantial complement of humanities and social sciences courses are also required. Within this framework the curriculum is flexible and can be tailored to suit personal interests. During the first two years, students enroll in courses appropriate for entry into professional schools while they also fulfill basic University requirements.

Admission to professional schools depends upon many factors in addition to the curriculum or major. Academic standing, performance on standardized examinations, practical experience relevant to the profession of interest, and adherence to application procedures are all important. Premedical Programs addresses these factors for premedicine and predentistry majors through our seminar courses including First Year Seminar (ASI 150), Sophomore Seminar (MED 299), and Capstone (MED 480).

Along with the administration of the DEN and MED majors, the Pre-Health Resource Center acts as the focal point for all matters related to admission to any allied health care professional school. It is an information clearing house, functions as a liaison with professional schools, and coordinates the application process. The Pre-Health Resource Center also coordinates a number of internships, health related student organizations, and community based clinical opportunities for students. Students in any major planning to apply to professional schools are urged to maintain a close relationship with this office.

The University automatically enrolls entering premedical or predental majors into our section of First Year Seminar (ASI 150). Each premedicine and predentistry student is assigned to a dedicated premedicine or predentistry advisor. However, advising services are available to all preprofessional students regardless of their major.

In addition to providing advising, the Pre-Health Resource Center offers a seminar series, clinical opportunities, grants for health care related experiences, and scholarships. Since admission to professional schools is highly selective, the program monitors the academic progress of MED/DEN majors, and provides feedback at the end of the first and second year. Transfers to other majors, particularly to science majors, can usually

be accommodated during the first two years without affecting normal progress towards graduation.

FACULTY LISTINGS (https://udayton.edu/artssciences/academics/premedical/faculty-staff.php)

Bachelor of Science, Predentistry (DEN) minimum 120 hours

The Common Academic Program (CAP) is an innovative curriculum that is the foundation of a University of Dayton education. It is a learning experience that is shared in common among all undergraduate students, regardless of their major. Some CAP requirements must be fulfilled by courses taken at UD. Some major requirements must also be fulfilled by courses taken at UD. Students should consult with their advisor regarding applicability of transfer credit to fulfill CAP and major program requirements.

Common Academic Program (CAP) 1

First-Year Human	ities Commons ²	6 cr. hrs.
HUM 101	Chaminade Seminar. Reading and Responding to the Signs of the Times	
HUM 102	Marie Thérèse Seminar. Human Dignity and the Common Good	
Second-Year Writi	ng Seminar	3 cr. hrs.
Oral Communicat	ion	3 cr. hrs.
Mathematics		3 cr. hrs.
Social Science		3 cr. hrs.
Arts		3 cr. hrs.
Natural Science ³		4 cr. hrs.
Crossing Boundar	ies	9 cr. hrs.
Faith Traditions	s (3 cr. hrs.)	
	al Action (3 cr. hrs.) y Investigations (3 cr. hrs.) ⁴	
Advanced Study		9 cr. hrs.
Religious Studi		
Philosophical S Historical Stud	Studies (3 cr. hrs.) ies (3 cr. hrs.)	

Diversity and Social Justice ⁵	3
	cr.
	hrs.
Major Capstone ⁶	0-6
	cr.
	hrs.
Experiential Learning ⁷	0-3
	cr.
	hrs.

- The credit hours listed reflect what is needed to complete each CAP component. However, they should not be viewed as a cumulative addition to a student's degree requirements because many CAP courses are designed to satisfy more than one CAP component (e.g., Crossing Boundaries and Advanced Studies) and may also satisfy requirements in the student's major.
- May be completed with ASI 110 through the Core Program.
- Must include a lecture course and an accompanying lab.
- New Crossing Boundaries category effective with the 2025-26 Catalog, which incorporates all courses previously approved in the Crossing Boundaries Inquiry or Integrative categories. This new category does not include any restriction that students must take the course outside of their unit or division.
- May not double count with First-Year Humanities Commons, Second-Year Writing, Oral Communication, Social Science, or Natural Science CAP components, but may double count with courses taken to satisfy other CAP components and/or courses taken in the student's major.
- The course or experience is designed by faculty in each major; it may, or may not, be assigned credit hours.
- The course or experience will have variable credit, depending on the intensity and duration of the experience, or where it is housed in existing curricular and co-curricular spaces.

Foundations

Fou	ndations		
Sati	sfies CAP Mat	hematics, Natural Science, and Social Science	
Mathematics			
Ν	NTH 148	Introductory Calculus I 1	
	or MTH 168	Analytic Geometry & Calculus I	
Ν	1TH 207	Introduction to Statistics	
	or MTH 367	Statistical Methods I	
	or PSY 216	Elementary Statistics	
Natı	ural Science		24-27
_	151L	Concepts of Biology I: Cellular & Molecular Biolog and Concepts of Biology Laboratory I: Cellular & Molecular Biology	gy
	152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution Ecology	&
_	HM 123 123L	General Chemistry I and General Chemistry Laboratory	
	HM 124 124L	General Chemistry II and General Chemistry II Laboratory	
	PHY 201 PHY 202	College Physics I and College Physics II ²	

or PHY 206	General Physics I - Mechanics	
& PHY 207	and General Physics II - Electricity & Magnetism	
& PHY 208	and General Physics III- Thermodynamics, Wave Fluids	s, and
PHY 201L	College Physics Laboratory I	
& PHY 202L	and College Physics Laboratory II	
Social and Behav		9
English ³	T, ECO, POL, PSY, SOC, SWK	3
	ive: 300-or 400- level	3
Ethics		3
Select one:		
PHL 312	Ethics	
PHL 315	Medical Ethics	
REL 365	Christian Theology and Environmental Ethics	
REL 367	Christian Ethics & Health Care Issues	
Total Hours		45-48
Major Requireme	nte	
CHM 313	Organic Chemistry	4
& 313L	and Organic Chemistry Laboratory	
CHM 314	Organic Chemistry	4
& 314L	and Organic Chemistry Laboratory	
CHM 420	Biochemistry	4
& 420L	and Biochemistry Lab for the Medical Sciences	-
MED 230	Community Pre-Dental Experience	1
or MED 339 MED 299	International Medical Experience Sophomore Seminar	1
MED 480	Pre-Medicine Capstone (Satisfies CAP Major	1
WED 400	Capstone)	
	e courses, two with accompanying laboratories,	17
from: ⁴		
BIO 309 & 309L	Comparative Anatomy of the Vertebrates and Comparative Anatomy Laboratory	
810 312	General Genetics	
& 312L	and Genetics Laboratory	
BIO 403	Physiology I	
& 403L	and Physiology Laboratory I	
BIO 404	Physiology II	
BIO 411 & 411L	General Microbiology and General Microbiology Laboratory	
8411L BIO 412	Genetics Human Diseases	
BIO 414	Virology	
BIO 415	Neurobiology	
& 415L	and Neurobiology Laboratory	
BIO 417	Neurobiology of Disease	
BIO 427	Immunology	
& 427L	and Immunology Laboratory	
BIO 449	Analysis & Interpretation of Biological Data	
BIO 440 & 440L	Cell Biology and Cell Biology Laboratory	
BIO 442	Developmental Biology	
& 442L	and Developmental Biology Laboratory	
BIO 445	Evolution & Development	

BIO 462

Molecular Biology

7	Total Hours		32
	CHM 458	Metabolism and Human Disease	
	CHM 454	Rational Drug Design	
	CHM 452	General Biochemistry II	
	CHM 451	General Biochemistry I	
	CHM 427	Medicinal Chemistry	
	CHM 302	Physical Chemistry	
	CHM 201 & 201L	Quantitative Analysis and Quantitative Analysis Laboratory	
	BIO 480 & 480L	Principles of Microscopy and Principles of Microscopy Laboratory	
	BIO 475 & 475L	Human Anatomy and Human Anatomy Laboratory	
	BIO 470	Cancer Biology	
	BIO 466	Biology of Infectious Disease	

Breadth

ASI 150	Introduction to the University Experience	1
Electives ⁵		
Total Hours to t	otal at least	120

- Well qualified students are advised to take MTH 168.
- Well qualified students are advised to take PHY 206-PHY 207-PHY 208 lecture sequence with PHY 201L and PHY 202L.
- Select from any 300 or 400 level ENG course.
- The elective courses must be directly related to the primary field of interest.
- Only general elective courses can be taken under Grading Option Two.

Bachelor of Science, Premedicine (MED) minimum 120 hours

The Common Academic Program (CAP) is an innovative curriculum that is the foundation of a University of Dayton education. It is a learning experience that is shared in common among all undergraduate students, regardless of their major. Some CAP requirements must be fulfilled by courses taken at UD. Some major requirements must also be fulfilled by courses taken at UD. Students should consult with their advisor regarding applicability of transfer credit to fulfill CAP and major program requirements.

Common Academic Program (CAP) 1

First-Year Humanities Commons ²		6 cr. hrs.
HUM 101	Chaminade Seminar. Reading and Responding to the Signs of the Times	
HUM 102	Marie Thérèse Seminar. Human Dignity and the Common Good	
Second-Year Writing Seminar		3 cr. hrs.
Oral Communication		3 cr. hrs.

Mathematics	3 cr. hrs.
Social Science	3 cr. hrs.
Arts	3 cr. hrs.
Natural Science ³	4 cr. hrs.
Crossing Boundaries	9 cr. hrs.
Faith Traditions (3 cr. hrs.)	
Practical Ethical Action (3 cr. hrs.)	
Interdisciplinary Investigations (3 cr. hrs.) ⁴	
Advanced Study	9 cr. hrs.
Religious Studies (3 cr. hrs.)	
Philosophical Studies (3 cr. hrs.)	
Historical Studies (3 cr. hrs.)	
Diversity and Social Justice ⁵	3 cr. hrs.
Major Capstone ⁶	0-6 cr. hrs.
Experiential Learning ⁷	0-3 cr. hrs.

- The credit hours listed reflect what is needed to complete each CAP component. However, they should not be viewed as a cumulative addition to a student's degree requirements because many CAP courses are designed to satisfy more than one CAP component (e.g., Crossing Boundaries and Advanced Studies) and may also satisfy requirements in the student's major.
- May be completed with ASI 110 through the Core Program.
- Must include a lecture course and an accompanying lab.
- New Crossing Boundaries category effective with the 2025-26 Catalog, which incorporates all courses previously approved in the Crossing Boundaries Inquiry or Integrative categories. This new category does not include any restriction that students must take the course outside of their unit or division.
- May not double count with First-Year Humanities Commons, Second-Year Writing, Oral Communication, Social Science, or Natural Science CAP components, but may double count with courses taken to satisfy other CAP components and/or courses taken in the student's major.
- The course or experience is designed by faculty in each major; it may, or may not, be assigned credit hours.
- The course or experience will have variable credit, depending on the intensity and duration of the experience, or where it is housed in existing curricular and co-curricular spaces.

Premedicine/Predentistry

Foundations	
Satisfies CAP Ma	thematics, Natural Science, and Social Science
Mathematics	6
MTH 148	Introductory Calculus I ¹
or MTH 168	Analytic Geometry & Calculus I
MTH 207	Introduction to Statistics
or MTH 367	Statistical Methods I
or PSY 216	Elementary Statistics
Natural Science	24-27
BIO 151 & 151L	Concepts of Biology I: Cellular & Molecular Biology and Concepts of Biology Laboratory I: Cellular & Molecular Biology
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology
CHM 123 & 123L	General Chemistry I and General Chemistry Laboratory
CHM 124 & 124L	General Chemistry II and General Chemistry II Laboratory
PHY 201 & PHY 202	College Physics I and College Physics II ²
or PHY 206 & PHY 207 & PHY 208	, , ,
PHY 201L & PHY 202L	College Physics Laboratory I and College Physics Laboratory II
Social and Behav	ioral Sciences 9
9 credits in AN	T, ECO, POL, PSY, SOC, SWK
English ³	3
Any ENG electi	ve: 300- or 400- level
Ethics	3
Select one:	
PHL 312	Ethics
PHL 315	Medical Ethics
REL 365	Christian Theology and Environmental Ethics
REL 367	Christian Ethics & Health Care Issues
Total Hours	45-48

00		
Total Hou	rs	45-48

Maior	Requirem	ante
iviajoi	Requiren	iciito

CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 314 & 314L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 420 & 420L	Biochemistry and Biochemistry Lab for the Medical Sciences	4
MED 299	Sophomore Seminar	1
MED 210 or MED 220 or MED 339	Premed Community Health Experience Hospital Elder Life Program International Medical Experience	1
MED 480	Pre-Medicine Capstone (Satisfies CAP Major Capstone)	1
Select five science courses, two with accompanying laboratories, from: 4		

BIO 309 & 309L	Comparative Anatomy of the Vertebrates and Comparative Anatomy Laboratory
BIO 312 & 312L	General Genetics and Genetics Laboratory
BIO 403 & 403L	Physiology I and Physiology Laboratory I
BIO 404	Physiology II
BIO 411 & 411L	General Microbiology and General Microbiology Laboratory
BIO 412	Genetics Human Diseases
BIO 414	Virology
BIO 415	Neurobiology
& 415L	and Neurobiology Laboratory
BIO 417	Neurobiology of Disease
BIO 427 & 427L	Immunology and Immunology Laboratory
BIO 439	Analysis & Interpretation of Biological Data
BIO 440 & 440L	Cell Biology and Cell Biology Laboratory
BIO 442 & 442L	Developmental Biology and Developmental Biology Laboratory
BIO 445	Evolution & Development
BIO 462	Molecular Biology
BIO 466	Biology of Infectious Disease
BIO 470	Cancer Biology
BIO 475 & 475L	Human Anatomy and Human Anatomy Laboratory
BIO 480 & 480L	Principles of Microscopy and Principles of Microscopy Laboratory
CHM 201 & 201L	Quantitative Analysis and Quantitative Analysis Laboratory
CHM 302	Physical Chemistry
CHM 427	Medicinal Chemistry
CHM 451	General Biochemistry I
CHM 452	General Biochemistry II
CHM 454	Rational Drug Design
CHM 458	Metabolism and Human Disease

Breadth

Total Hours

ASI 150	Introduction to the University Experience	1
Electives ⁵		
Total Hours	to total at least	120

32

- Well qualified students are advised to take MTH 168.
- Well qualified students are advised to take PHY 206-PHY 207-PHY 208 lecture sequence with PHY 201L and PHY 202L.
- Select from any 300 or 400 level ENG course.
- The elective courses must be directly related to the primary field of
- Only general elective courses can be taken under Grading Option Two.

Minor in Medicine and Society (MDS)

The minor in Medicine and Society provides students with an interdisciplinary approach to 1) understanding contemporary complexities of accessing, delivering, and receiving healthcare, and 2) understanding how issues related to medicine, health, healing and illness impact individuals and communities.

The minor includes courses in the social science fields as well as humanities disciplines. For students planning a career in healthcare, understanding the ethical, anthropological, social, and psychological issues related to medicine can help them become more effective and compassionate providers.

For students with academic or professional interests in the intersections between health and society, the minor offers a collection of perspectives that can inform their future studies and careers. The minor will engage students from all majors who want to better understand the institution and practice of medicine and its position in, effects on, and responses to society.

Students can earn the Medicine and Society minor by completing the two required courses and three additional courses from the approved course list.

The Medicine and Society minor is housed in Premedical Programs.

Required Courses

Total Hours

ricquired oburde		
ANT 336	Topics in Medical Anthropology	3
SOC/SWK 380	Health and Inequality	3
or HSS 217	Social Determinants of Health	
Choose any 3 of	the following: ¹	9
CMM 372	Communication for Health Professionals	
CMM 411	Health Communication	
ENG 366	Health Literacy and Social Justice	
ENG 373	Writing in the Health Professions	
PHL 315	Medical Ethics	
POL 309	Health Policy	
PSY 366	Health Psychology	
REL 367	Christian Ethics & Health Care Issues	
SPN 326	Spanish for the Health Professions	
SWK 307	Mental Health Services	
SWK 330	Perspectives on Aging	
SWK 331	Death, Dying and Suicide	
VAF 230	Anatomy Drawing for Non-Majors	

- Additional courses may be approved by the Program Director.
- · Bachelor of Science, Predentistry (p. 5)
- · Bachelor of Science, Premedicine (p. 6)
- Neuroscience Co-Major (http://catalog.udayton.edu/undergraduate/ collegeofartsandsciences/programsofstudy/biology/#Neuro)

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Bachelor of Science, Predentistry

First Year					
Fall	Hours		Spring	Hours	
ASI 150			BIO 152 & 152L		4
BIO 151 & 151L			CHM 124 & 124L		4
CHM 123 & 123L		4	MTH 207		3
MTH 148		3	HUM 102		3
HUM 101			PSY 101 or SOC 101		3
		15			17
Second Year					
Fall	Hours		Spring	Hours	
CHM 313 & 313L			CHM 314 & 314L		4
PHY 201			PHY 202 & 202L		4
& 201L ENG 200			& 202L CMM 100		3
MED 299		1	MED 230 or		1
Conial Caiamas alastina			339 Social		3
Social Science elective			Science elective		3
		15			15
Third Year					
Fall	Hours		Spring	Hours	
CHM 420			MED 480		1
& 420L			(CAP Capstone)		
Biomedical Science elective			PHL 312, 315, REL 365, or		3
			REL 367 (CAP Practical Ethical		
			Action and Advanced		
			Philosopical Studies or		
			Advanced Religious		
CAP Interdisciplinary Investigations			Studies) Biomedical		3
			Science elective		
English elective (300-400 level)			Biomedical Science		3
CAP Arts elective			elective Social		3
on mis decire			Science elective		Ü
		16			13
Fourth Year					
Fall	Hours		Spring	Hours	
Biomedical Science elective with lab		4	Biomedical		4
			Science elective with		
CAP Faith Traditions			lab CAP		3
Con Faith Hauthons			Advanced		J
			Philosophical		
			Studies or Advanced		
			Religious		
			Studies (Whiche	ever	
			has not been completed)		

	16	13
General electives	6 General elective	3
CAP Advanced Historical Studies	3 CAP Diversity and Social Justice	3

Total credit hours: 120

Bachelor of Science, Premedicine

ASI 150	First Year Fall	Hours	Spring	Hours	
Biol 151		Hours		nouis	1
### 151L CHM 123	ASI 130				4
CHM 123	BIO 151		4 CHM 124		4
### Second Year Fail	& 151L		& 124L		
MTH 148			4 MTH 207		3
HUM 101			2 HUM 102		2
SOC 101 Socond Year Second Year Fall Hours Spring Hours Hours Spring Social Spring Spr					
Second Year Fall Hours Spring Hours CHM 313 4 CHM 314 4 & 313L 4 PHY 202 4 & 201L 202L 4 ENG 200 3 CMM 100 3 MED 299 1 MED 210, 1 1 Social Science elective 3 Social 3 3 Science elective Third Year Fall Hours Spring Hours CHM 420 4 MED 480 1 & 420L (CAP 2 CAP Interdisciplinary Investigations 3 Biomedical 3 Science elective 3 Science elective 3 Science elective CAP Arts elective (300-400 level) 3 Science elective 3 PHL 312, 315, 33 CAP Arts elective 3 PHL 312, 315, 35, or REL 365, or REL 365, or REL 365, or Advanced Philosopical Studies or Advanced Religious Studies or Advanced Religious Studies or Advanced Religious Studies 3 Studies or Advanced Religious Studies 4 Biomedical Science elective with lab 4 Biomedical Science elective with lab	TIOW TO				J
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CHM 313			0 :		
### \$\frac{8}{201L}		Hours		Hours	
PHY 201					4
ENG 200 3 CMM 100 3 MED 299 1 MED 210, 220, or 339 2 Social Science elective 3 Social 3 Social 3 Science elective 15 15 15 Third Year Fall Hours Spring Hours (CAP Capstone) Biomedical Science elective 2 3 Biomedical 3 Science elective 2 3 Biomedical 3 Science elective 2 3 Biomedical 3 Science elective 2 Science elective 3 Social 3 Science elective 2 Science elective 3 Science elective 2 Science elective 3 Science elective 3 Science elective 4 Science elective 5 Science elective 5 Science elective 6 Science elective 7 Science elective 8 Science elective 8 Science elective 8 Science elective 9 Science 9 Scie					4
MED 299 1 MED 210, 220, or 339 2 2 2 2 2 2 2 2 2					
Social Science elective 3 Social 3 Social 3 Social 5 Socience elective 15 15 15 Third Year Fall Hours Spring Hours Hour	ENG 200		3 CMM 100		3
Social Science elective 15 15 Third Year Fall Hours Spring Hours CHM 420 4 MED 480 1 (CAP Capstone) Biomedical Science elective CAP Interdisciplinary Investigations 3 Biomedical Science elective English elective (300-400 level) 3 Social Science elective CAP Arts elective	MED 299				1
Science elective 15 15 Third Year Fall Hours Spring Hours CHM 420 4 MED 480 1 (CAP Capstone) Biomedical Science elective 3 Biomedical Science elective CAP Interdisciplinary Investigations 3 Science elective English elective (300-400 level) 3 Social Science elective CAP Arts elective CAP Arts elective 3 PHL 312, 315, REL 365, or REL 367, (CAP Practical Ethical Action and Advanced Philosopical Studies or Advanced Religious Studies) Fourth Year Fall Hours Spring Hours Fourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with			·		
Third Year Fall Hours Spring Hours CHM 420 4 MED 480 1 & 420L (CAP Capstone) Biomedical Science elective 3 Biomedical Science elective CAP Interdisciplinary Investigations 3 Science elective English elective (300-400 level) 3 Social Science elective CAP Arts elective 3 PHL 312, 315, 3 REL 365, or REL 365, or REL 367 (CAP Practical Ethical Action and Advanced Philosopical Studies or Advanced Religious Studies) Tourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with	Social Science elective				3
Third Year Fall Hours Spring Hours CHM 420 4 MED 480 1					
Fall Hours Spring Hours CHM 420 & 4 MED 480 1 & 420L (CAP Capstone) Biomedical Science elective 3 Biomedical Science elective CAP Interdisciplinary Investigations 3 Biomedical Science elective English elective (300-400 level) 3 Social Science elective CAP Arts elective CAP Arts elective 3 PHL 312, 315, REL 365, or REL 367 (CAP Practical Ethical Advanced Philosopical Studies or Advanced Religious Studies or Studies or Studies or Advanced Religious Studies Tourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with			15		15
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English elective (300-400 level) 3 Social Science elective CAP Arts elective CAP Arts elective CAP Arts elective 3 PHL 312, 315, 3 REL 365, or REL 367 (CAP Practical Ethical Action and Advanced Philosopical Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours 4 Biomedical Science elective with					
CAP Arts elective CAP Arts elective CAP Arts elective 3 PHL 312, 315, 3 REL 365, or REL 367 (CAP Practical Ethical Action and Advanced Philosopical Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours 4 Biomedical Science elective with lab 4 Biomedical Science elective with	English elective (300-400 level)				3
CAP Arts elective 3 PHL 312, 315, 3 REL 365, or REL 367 (CAP Practical Ethical Action and Advanced Philosopical Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours 4 Biomedical Science elective with	3				
REL 365, or REL 367 (CAP Practical Ethical Action and Advanced Philosopical Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours 4 Biomedical Science elective with lab 4 Biomedical Science elective with			elective		
REL 367 (CAP Practical Ethical Action and Advanced Philosopical Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours 4 Biomedical Science elective with lab 4 Biomedical Science elective with	CAP Arts elective				3
Practical Ethical Action and Advanced Philosopical Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with					
Action and Advanced Philosopical Studies or Advanced Philosopical Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with			,		
Advanced Philosopical Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with					
Philosopical Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with					
Studies or Advanced Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with					
Religious Studies) 16 13 Fourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with			Studies or		
Studies) 16 13 Fourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science elective with					
Fourth Year Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical Science Science elective with					
Fall Hours Spring Hours Biomedical Science elective with lab 4 Biomedical 5 Science elective with					13
Biomedical Science elective with lab 4 Biomedical 5 Science elective with					
Science elective with		Hours		Hours	
elective with	Biomedical Science elective with lab				4

	16	13
General electives	6 General elective	3
CAP Advanced Historical Studies	3 CAP Diversity and Social Justice	3
	Advanced Philosophical Studies or Advanced Religious Studies(Whichever has not been completed)	
CAP Faith Traditions	3 CAP	3

Total credit hours: 120

Courses

MED 210. Premed Community Health Experience. 0-1 Hours

This course focuses on healthcare for under-served populations and provides students with the broader context around social and health inequities. Students meet for class most weeks of the semester and shadow and volunteer at a local medical clinic. Students will learn about the complexities of providing healthcare to under-served populations and develop interpersonal skills to be empathetic and informed advocates for patients. Students must complete some pre-semester requirements. Prerequisites: Sophomore status.

MED 220. Hospital Elder Life Program. 0-1 Hours

This course provides an experiential opportunity to volunteer with the Hospital Elder Life Program at Miami Valley Hospital. HELP is an innovative program designed to improve the hospital experience for older patients. Student volunteers will be trained to carry out bedside interventions and experience a high level of patient contact and responsibility. Students must complete all elements of the presemester training program, which includes online modules and a daylong orientation at MVH before the semester begins. Prerequisites: Sophomore status.

MED 230. Community Pre-Dental Experience. 1 Hour

This course focuses on healthcare for under-served populations and provides students with the broader context around social and health inequities. Students meet for class most weeks of the semester and shadow and volunteer at a local dental clinic. Students will learn about the complexities of providing health and dental care to under-served populations and develop interpersonal skills to be empathetic and informed advocates for patients. Students must complete some presemester requirements. Prerequisites: Sophomore status.

MED 277. Medical Documentation and Scribing. 2 Hours

This course is intended to orient students to the complexities of documentation in electronic medical record. In addition to learning the basics of documentation, students will be provided an opportunity to practice scribing into a medical record.

MED 299. Sophomore Seminar. 1 Hour

This course will orient students to the career options available for MED/ DEN majors, and guide students in planning for matriculation to health professional school. Prerequisite(s): Sophomore status.

MED 309. Medical Terminology for Premeds. 1 Hour

This course will instruct students on the basics of the language of medicine as taught by a practicing family physician. Real-world scenarios and case studies presented from actual clinical practice will enhance the motivated student's ability to learn medical terminology. Skills mastered in this class will remain with the future physician or healthcare worker for the remainder of their career.

MED 339. International Medical Experience. 1 Hour

Exploration of global health issues in preparation for an international experience with a partnering organization. Students must apply through the Center for International Programs and comply with requirements specific to the travel location and partnering organization.

MED 351. Healthy Children: Addressing Social Needs to Improve Health Outcomes. 1 Hour

Examination of the social needs of pediatric patients and families' social needs that most affect children's health. Will include methods of helping families connect with community resources that can assist in meeting these needs. Prerequisite(s): Sophomore Standing, basic orientation to healthcare or human service industries.

MED 401. Global Regulatory and Legal Framework of Quality in Industry and Business. 3 Hours

This course will provide an overview of regulations for the pharmaceutical, medical device, biotech, animal health, and consumer goods industries. Students will be introduced to fundamental concepts in the regulations related to clinical trial development, management, ethics, data integrity, data security, privacy, change control and validation.

MED 402. Product Development and Validation in Life Sciences. 3 Hours This course will give students an understanding of the processes used in the pharmaceutical, medical device, and pharmaceutical industries for the development of new products. Students will learn the scientific

principles used in such developments that ensure that products meet quality standards. Prerequisites: MED 401.

MED 403. Risk and Failure Analysis in Quality Science. 3 Hours

Through the use of historical risk analysis techniques, such as FMEA, Fault Tree, and 5 Why's, students will analyze a holistic set of data (inproduction, across product lines, across equipment, human variability, onmarket, on-stability, validation studies, change control, etc.) and identify effective corrective and preventative actions (CAPA). Prerequisites: MED 401.

MED 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

MED 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

MED 480. Pre-Medicine Capstone. 0-1 Hours

Seminar focuses on reflection and analysis of a clinical experience course, and preparation for applying to health professional school. Course offered in Spring semester. Junior or Senior status. MED or DEN major. Prerequisites: MED 210 or MED 220 or MED 230 or MED 339.