

**COLLEGE OF ARTS & SCIENCES**  
**2022-2023 PHYSICAL SCIENCE - PRE-ENGINEERING**  
**3-2 DUAL DEGREE PLAN**

**FIRST YEAR - FRESHMAN**

Fall Semester				Spring Semester			
Dept	Crse#	Course Name	Hrs	Dept	Crse#	Course Name	Hrs
BIB	121	The Life of Christ <sup>1</sup>	2	BIB	122	Acts of Apostles <sup>1</sup>	2
CHE	121	General Chemistry I	3	CHE	122	General Chemistry II <sup>3</sup>	3
CHE	121L	General Chemistry I Lab	1	CHE	122L	General Chemistry II Lab <sup>3</sup>	1
ENG	101	English Composition I <sup>1</sup>	3	ENG	102	English Composition II <sup>1,3</sup>	3
ENS	101	Introduction to Engineering	2	ENS	103	Engineering Graphics	3
MAT	120	Pre-calculus <sup>2</sup>	4	MAT	122	Analytics and Calculus I <sup>3</sup>	4
			<b>15</b>				<b>16</b>

**SECOND YEAR - SOPHOMORE**

Fall Semester				Spring Semester			
Dept	Crse#	Course Name	Hrs	Dept	Crse#	Course Name	Hrs
BIB		Bible	2	BIB		Bible	2
CIS	171	Computer Programming I	3	MAT	224	Analytics and Calculus III <sup>3</sup>	4
MAT	223	Analytics and Calculus II <sup>3</sup>	4	PHS	212	Physics for Sci. & Engrs. II <sup>3</sup>	4
PHS	211	Physics for Sci. & Engrs. I <sup>2,3</sup>	4	<sup>1</sup>			3
<sup>1</sup>			3	<sup>4</sup>			3
			<b>16</b>				<b>16</b>

**THIRD YEAR - JUNIOR**

Fall Semester				Spring Semester			
Dept	Crse#	Course Name	Hrs	Dept	Crse#	Course Name	Hrs
BIB	346	Found. of Faith <sup>1</sup> (or BIB 446)	3	BIB	495	Values in Human Thought <sup>1,3</sup>	3
ENS	231	Engr. Mech. I: Statics <sup>3</sup>	3	ENS	232	Engr. Mech. II: Dynamics <sup>3</sup>	3
<sup>1</sup>			3	MAT	345	Differential Equations <sup>3</sup>	3
<sup>4</sup>			3	<sup>1</sup>			3
<sup>4</sup>			3	<sup>4</sup>			3
<sup>4</sup>			3	<sup>4</sup>			3
			<b>18</b>				<b>18</b>

<sup>1</sup>Liberal Arts Core Requirement

<sup>2</sup>Liberal Arts Core Requirements in *Undergraduate Catalog*

<sup>3</sup>Course has prerequisite. See corresponding *Undergraduate Catalog*

<sup>4</sup>Consult with the pre-engineering advisor for engineering school requirements.

## ADDITIONAL ITEMS RELATED TO THE MAJOR

- Liberal Arts Core courses should be chosen to satisfy FHU and engineering school requirements.
- CHE 321 and CHE 322 may be recommended for Chemical Engineering, check with engineering school.
- ACC 231 and ACC 233 may be recommended for Industrial Engineering, check with engineering school.

**The following guidelines are important. Failure to follow these guidelines may delay graduation.**

1. Plan schedules carefully. Plan to fulfill prerequisites for future courses.
2. Do not alter the sequence of courses without consulting with your academic adviser as not all classes are offered every semester.
3. Before the enrollment period, check to make sure holds will not prevent you from
4. Register for classes early during the registration period to secure classes.

**The 3-2 Dual Degree Plan is a suggested plan of study. This plan does not replace the *Undergraduate Catalog*. The *Undergraduate Catalog* provides the official listing of program requirements.**

### 2022-23 Undergraduate Liberal Arts Core Requirements

I. Biblical Values	III. Broadened Perspectives
<b>A. Bible</b>	<b>A. Behavioral Sciences</b>
BIB 121 & 122 & 346 <b>OR</b> 446 7	BIB/FAM 230 <b>OR</b> PSY 210 <b>OR</b> SOC 241 <b>OR</b> SOC 251 3
<b>II. Basic Skills</b>	<b>B. Natural Sciences</b>
<b>A. Written Communication</b>	BIO 100 <b>OR</b> BIO 105 <b>OR</b> BIO 110 <b>OR</b> BIO 111 <b>OR</b> BIO 112 <b>OR</b> BIO 211 <b>OR</b> CHE 121 & CHE 121L <b>OR</b> PHS 111 <b>OR</b> PHS 112 <b>OR</b> PHS 201 <b>OR</b> PHS 211 3
ENG 101 <b>AND</b> ENG 102 6	
<b>B. Oral Communication</b>	<b>C. Arts and Humanities</b>
COM 140 3	<b>HISTORY:</b> HIS 111 <b>OR</b> HIS 112 <b>OR</b> HIS 221 <b>OR</b> HIS 222 <b>OR</b> HUM 399A <b>OR</b> POL 251 3
<b>C. Quantitative Reasoning</b>	<b>CRITICAL AND CREATIVE WORKS:</b> ART 110 <b>OR</b> ART 201 <b>OR</b> ART 234 <b>OR</b> ENG 215 <b>OR</b> ENG 225 <b>OR</b> ENG 235 <b>OR</b> ENG 299A/399A <b>OR</b> MUS 110 <b>OR</b> MUS 214 <b>OR</b> PHI 243 <b>OR</b> PHI 245 <b>OR</b> PHI246 <b>OR</b> THE 160 <b>OR</b> THE 265 <b>OR</b> THE 299A/399A 3
MAT 100 <b>OR</b> MAT 101 <b>OR</b> MAT 120 <b>OR</b> MAT 122 <b>OR</b> MAT235 3	
<i>Complete course names and descriptions for the Liberal Arts Core Requirements are located in the Undergraduate Catalog.</i>	<b>HUMANITIES CAPSTONE:</b> BIB/HUM 495 3
	<b>Total</b> 34