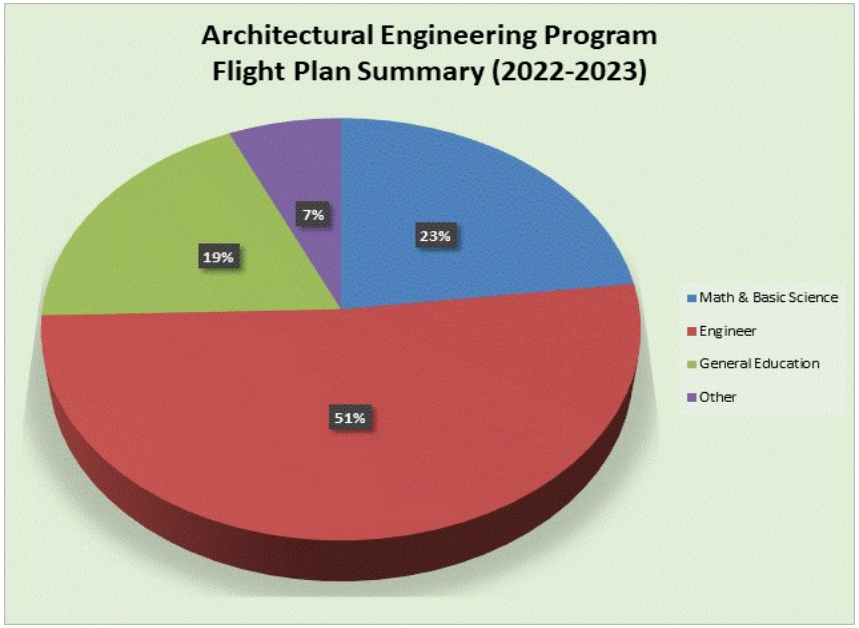
Architectural Engineering Program Flight Plan
For Academic Year (2022-2023)

	tan. Code (ABET	Class Name	No Credit Hours	Math & Basic Science	Engineer	General Education	Other	Student's Outcome						
								SO1	SO2	SO3	SO4	SO5	SO6	SO7
preparatory	HUM 012	English Language (1)	2	-	-	2	-	-	-	✓	-	-	-	-
	HUM 081	Computer Skills	0	-	-	-	-	-	-	✓	-	✓	-	-
		General Requirement (Elective - A)	2	-	-	2	-							
	BAS 011	Mathematics (1)	3	3	-	-	-	✓	-	-	-	-	-	-
	MED 022	Principles of Manufacturing Engineering	2	1	1	-	-	✓	✓	-	-	-	-	-
	BAS 021	Physics (1)	3	3	-	-	-	✓	-	-	-	-	✓	-
	BAS 031	Mechanics	4	4	-	-	-	✓	-	-	-	-	-	-
	HUM 011	Arabic Language	2	-	-	2	-	-	-	✓	-	-	-	-
	HUM 013	English Language (2)	2	-	-	2	-	-	-	✓	-	-	-	-
	MED 011	Engineering Drawing & Projection	3	1	2	-	-	✓	✓	-	-	-	-	-
	MED 021	History of Engineering & Technology	1	-	-	1	-	-	-	-	✓	-	-	-
	BAS 012	Mathematics (2)	3	3	-	-	-	✓	-	-	-	-	-	-
	BAS 022	Physics (2)	3	3	-	-	-	✓	-	-	-	-	-	-
	BAS 041	Engineering Chemistry	3	3	-	-	-	✓	-	-	-	-	✓	-
Level 1	ARC 112	Visual Training & Freehand Drawing	3	-	1	-	2	-	✓	✓	-	-	-	-
	ARC 113	Sociography & Perspective	3	-	3	-	-	-	✓	-	-	-	-	-
	ARC 121	History & Theory of Architecture 1	2	-	2	-	-	-	-	✓	✓	✓	-	-
	ARC 131	Building Construction 1	3	-	3	-	-	-	✓	✓	-	-	✓	-
	ELP 111	Principles of Electrical Engineering (Institute Elec A)	2	-	2	-	-	✓	-	✓	-	-	-	-
	HUM 182	Analysis & Research Skills	2	-	-	2	-	-	-	✓	-	-	-	-
	CIS 112	Structural Analysis 1	3	1	2	-	-	✓	-	-	-	-	-	-
	ARC 111	Arts & Architecture (Institute Elec A)	2	-	1	-	1	-	✓	✓	✓	✓	-	-
	CIS 111	Principles of Construction & Building Engineering (Institute Elec A)	2	-	2	-	-	✓	-	-	-	-	-	-
	CIS 141	Behavior of Materials	3	1	2	-	-	✓	-	-	-	✓	✓	-
	ARC 122	History & Theory of Architecture 2	2	-	2	-	-	-	✓	-	✓	✓	✓	-
	CIW 121	Engineering Surveying	3	-	3	-	-	✓	-	-	-	✓	✓	-
	ARC 132	Building Construction 2	3	-	3	-	-	-	✓	-	-	✓	-	-
	ARC 151	Architectural Design 1	3	1	1	-	1	-	✓	-	-	✓	✓	-
Level 2	ARC 252	Architectural Design 2	3	1	1	-	1	-	✓	-	-	✓	✓	-
	ARC 261	Landscape & Urban Design	3	-	2	-	1	-	✓	-	✓	✓	-	-
	ARC 262	History & Theory of Planning	2	-	2	-	-	-	-	-	✓	✓	-	-
	CIS 222	Reinforced Concrete & Foundations	3	-	3	-	-	✓	✓	-	-	-	-	-
	ARC 223	History & Theory of Architecture 3	2	-	2	-	-	-	✓	-	✓	✓	-	-
	HUM 111	Technical Report Writing	2	-	-	2	-	-	-	✓	✓	✓	-	-
	ARC 233	Building Construction 3	3	-	3	-	-	-	✓	-	-	✓	✓	-
	ARC 241	Environmental Control	3	1	2	-	-	✓	✓	-	✓	✓	✓	-
	ARC 242	Acoustics & Illumination	2	1	1	-	-	✓	✓	-	-	-	-	-
	ARC 253	Architectural Design 3	3	1	1	-	1	-	✓	-	-	✓	✓	-
	IEN 131	Monitoring & Quality Control Systems	1	-	-	1	-	-	-	✓	✓	✓	-	-
	ARC 411	Computer Applications in Architecture (Minor Req Elec B)	3	-	3	-	-	-	-	-	✓	-	✓	-
	MEP 342	Air Conditioning in Buildings	2	1	1	-	-	✓	✓	✓	-	-	-	-
	ARC 224	History & Theory of Architecture 4	2	-	2	-	-	-	-	✓	✓	✓	-	-
	HUM 181	Communication & Presentation Skills	2	-	-	2	-	-	-	✓	-	✓	-	-
	291	Field training 1	1	-	1	-	-	✓	-	✓	✓	✓	✓	-
Level 3	HUM 381	principles of Negotiation	2	-	-	2	-	-	-	✓	✓	-	-	-
	IEN 351	Engineering Economics	2	-	1	1	-	✓	-	-	✓	-	-	-
	CIW 331	Environmental Impact of Projects	1	-	-	1	-	-	-	✓	✓	-	-	-
	ARC 327	Architectural Criticism & Projects Evaluation (Minor Req Elec A)	2	-	2	-	-	-	✓	-	✓	✓	-	-
	ARC 331	Working Drawings 1	3	-	3	-	-	-	✓	✓	-	✓	-	-
	ARC 354	Architectural Design 4	3	-	2	-	1	-	✓	-	-	✓	✓	-
	HUM 352	Human Rights	1	-	-	1	-	-	-	✓	✓	-	-	-
	CIS 231	Design of Steel Structures 1	3	-	3	-	-	✓	✓	-	-	-	-	✓
	IEN 314	Project Management	2	-	1	1	-	✓	-	-	-	✓	-	-
	HUM 351	Professional Ethics	1	-	-	1	-	-	-	✓	✓	-	-	-
	ARC332	Working Drawings 2	3	-	3	-	-	-	✓	-	-	✓	-	-
	ARC 336	Maintenance of Buildings (Minor Req Elec A)	2	-	2	-	-	-	-	✓	✓	-	-	-
	ARC 355	Architectural Design 5	3	-	2	-	1	-	✓	-	-	✓	✓	-
	ARC 371	Architectural & Urban Legislations	2	-	2	-	-	-	-	-	✓	-	-	-
	CIW 232	Sanitary Installations in Buildings	2	1	1	-	-	✓	✓	-	✓	✓	-	-
	HUM Z72	Trends in Contemporary Arts (General Req Elec A)	2	-	-	2	-							
	391	Field training 2	1	-	1	-	-	✓	-	✓	✓	✓	✓	-
Level 4	BAS 212	Statistics & Probability Theory	3	3	-	-	-	✓	-	-	-	-	-	-
	ARC 457	Interior Design (Minor Req Elec B)	3	-	2	-	1	-	✓	✓	-	-	✓	-
	ARC 463	Housing	3	1	2	-	-	✓	✓	-	-	✓	✓	-
	ARC 491	Project 1	1	1	-	-	-	-	-	✓	✓	✓	-	✓
	HUM Z71	Introduction to the History of Civilizations (General Req Elec A)	2	-	-	2	-							
	HUM X73	Recent Egypt`s History (General Req Elec A)	2	-	-	2	-							
	ARC 472	Execution Documents	3	2	1	-	-	✓	-	-	✓	✓	-	-
	ARC 492	Project 2	5	1	3	-	1	✓	✓	✓	-	-	✓	✓
	HUM 221	Business Administration (General Req Elec B)	2	-	-	2	-							
		Total	165	38	85	31	11							
		Minor Requirement												
Elective (A)	ARC 327	Architectural Criticism & Projects Evaluation	2	-	2	-	-	-	✓	-	✓	✓	-	-
	ARC 334	Building Economics	2	-	2	-	-	-	-	-	✓	-	-	-
	ARC 335	Advanced Technical Installations	2	-	2	-	-	-	✓	-	✓	-	-	-
	ARC 336	Maintenance of Buildings	2	-	2	-	-	-	-	✓	✓	-	-	-
	ARC 372	Feasibility Studies of Urban Projects	2	-	2	-	-	-	-	-	✓	-	-	-
Elective (B)	ARC 411	Computer Applications in Architecture	3	-	3	-	-	-	-	-	✓	-	✓	-
	ARC 457	Interior Design	3	-	3	-	-	-	✓	✓	-	-	✓	-
	ARC 458	Sustainable Architecture	3	-	3	-	-	-	✓	-	✓	✓	-	-
	ARC 464	Urban Renewal	3	-	3	-	-	-	-	✓	✓	-	-	-
	ARC 481	Conservation of Urban Heritage	3	-	3	-	-	-	-	-	✓	-	-	-
		Institute Requirements												
Elective (A)	CIS 111	Principles of Construction & Building Engineering	2	-	2	-	-	✓	-	-	-	-	-	-
	ARC 111	Arts & Architecture	2	-	1	-	1	-	✓	✓	✓	✓	-	-
	ELP 111	Principles of Electrical Engineering	2	-	2	-	-	✓	-	✓	-	-	-	-
	ELE 121	Principles of Electronic Engineering	2	-	2	-	-	✓	-	-	-	-	-	-
	MED 111	Principles of Design & Manufacturing Engineering	2	-	2	-	-	✓	-	-	-	-	-	-
	MEP 111	Principles of Mechanical Power Engineering	2	-	2	-	-	✓	-	-	-	-	-	-
		General Requirements												
Elective (A)	HUM x62	Music Appreciation	2	-	-	2	-							
	HUM x71	Introduction to the History of Civilizations	2	-	-	2	-							
	HUM x72	Trends in Contemporary Arts	2	-	-	2	-							
	HUM x73	Recent Egypt's History	2	-	-	2	-							
	HUM x74	Heritage of Egyptian Literature	2	-	-	2	-							
	HUM x75	Arabic & Islamic Civilization	2	-	-	2	-							
	HUM x76	Literary Appreciation	2	-	-	2	-							
E (B)	HUM 121	Introduction to Accounting	2	-	-	2	-							
	HUM 221	Business Administration	2	-	-	2	-							

Nile Higher Institute for Engineering and Technology

Architectural Program

Student Outcome (SO)

- **SO1** An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- **SO2** An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- **SO3** An ability to communicate effectively with a range of audiences.
- **SO4** An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- **SO5** An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- **SO6** An ability to develop and conduct appropriate experimentation, analyse and interpret data, and use engineering judgment to draw conclusions.
- **SO7** An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.